Navigating Corruption Perceptions: Analyzing Corruption Tolerance Evolution from Pre- to Post-COVID Crisis in Latin America

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Abstract

How do crises reshape our tolerance for corruption? This thesis dives deep into the evolution of corruption tolerance in Latin America, tracing its trajectory from before COVID-19 to its aftermath. Using data from the *Latinobarómetro* survey across 17 countries and spanning four key years (2017, 2018, 2020, and 2023), the research applies advanced statistical models to reveal how demographics, politics, and crisis management shape attitudes toward corruption.

The findings show a compelling story. The pandemic, with its devastating mortality rates, exposed institutional failures and heightened public awareness. This led to a decline in corruption tolerance across a part of the region. Yet, long-standing cultural and socio-economic factors, such as Panama's entrenched corruption, maintained acceptance across the periods. Age, education, and political attitudes also played a crucial role.

By examining the dynamics of corruption tolerance during a global crisis, this study contributes to a deeper understanding of how crises influence societal attitudes and institutional trust. Its insights may lead to discussions on governance and anti-corruption efforts in the region, offering a foundation for exploring ways to strengthen public trust and accountability in the future.

Table of Contents

Introduction

Corruption, a complex and omnipresent societal phenomenon, has been a subject of academic research and global concern for centuries. Already a topic of debate between philosophers like Socrates and Plato during the Hellenistic Period (323 – 30 BCE), the concept of corruption has been developed in terms of definition and practices (Mulgan, 2012). Research in the field of corruption took an unprecedented turn with the outbreak of the internet, just before the start of the 21st century. Before that, corruption was not discerned most of the time, and it was often recognized as being essential to conduct business, which rendered the fight against it unproductive and even harmful (Transparency International, 2019). This period also witnessed the rise in the creation of Non-Governmental Organizations (NGOs), such as Transparency International (TI), in 1993.

What is corruption? To define the concept, we first used the definition provided by the organization TI: "Corruption is the abuse of entrusted power for private gain" (Transparency International, 2024b). Even though this definition is general and widely accepted among scholars, corruption's goals are generally driven by money transactions. Therefore, the definition brought by Rose-Ackerman, an expert in the field, seems to capture the essence of modern corruption. In her words, "corruption is the sale by government officials of government property for personal gains" (Rose-ackerman, 1978). This definition brings the term "sale", which clearly shows the monetary objective of corruption. In practice, corruption can take many shapes, but it primarily operates in the form of bribery, extortion, patronage and nepotism (Graycar, 2015). Almost all sectors of an economy can face the phenomenon of corruption. Whereas it is conducted in the health sector, tax administration, environment, or education, corruption is present everywhere, and it can be devastating for the local populations and for the country's development (Graycar, 2015).

Transparency International launched the Corruption Perceptions Index (CPI) in 1995. This index ranks countries by giving them a grade from 0 to 100 (0 being the most corrupt and 100 the least corrupt) based on how experts perceive the corruption of a country's public sector. In January 2024, TI published their 2023 CPI, in which Denmark is perceived as the least corrupt country with 90 points, and Somalia as the most corrupt state with a grade of 11 (Transparency International, 2024a). This report emphasizes how justice systems are key to

holding corrupt officials accountable. For example, in the section on the Americas, where 32 countries average a score of 43, the authors argue that the region's main problem is the lack of independence of the judiciary. This lack strongly impacts people, who become discouraged from reporting corruption as they see the judiciary as an unreliable and corrupt body (Transparency International 2024b, p.14). Because of this discouragement, people tend to distrust their country's justice system, which may make them "tolerate" corruption and reinforce the failure of anti-corruption legislation (Persson et al., 2013).

Corruption tolerance gained increased attention in academic literature in the 21st century. Scholar Joseph Pozsgai-Alvarez defines corruption tolerance as "an individual's moral approval of, or willing participation in, a corrupt event […] regardless of the extent of corruption and the impunity enjoyed by wrongdoers in a given context" (Pozsgai-Alvarez 2022, p.2). A considerable number of researchers on corruption tolerance have claimed that some countries are more corrupt than others because peoples' tolerance of corruption varies across cultures (Heidenheimer 2002) (Persson et al., 2013). According to Jennifer Hasty, some cultures perceive bribery as a form of corruption, while in other societies, it is seen as a gift (Hasty, 2005). Indeed, some authors argue that when corruption is a pervasive and widespread phenomenon within a country, citizens tend to remain silent when they witness an act of corruption. Moreover, they will even be less likely to consider it immoral (Porta & Vannucci, 2017) (Mauro, 2004). These arguments demonstrate how corruption can be deeply rooted in a society's culture. Other authors studied the impact of the economy on corruption tolerance, and they concluded that countries with lower economic development would have higher corruption, which could lead to a higher rate of tolerance because of how deeply rooted the phenomenon is in society (Gupta et al., 2002) (Mauro, 2004). Institutions can also have an indirect impact on corruption tolerance. Scholar Daniel Treisman (2000) argues that more developed economies, countries with Protestant traditions, and countries with a history of British rules tend to lead to less corruption. Therefore, these countries experience less corruption tolerance because of the strict application of the law. This argument joins the one asserting that thorough enforcement of the law with an important reform of institutions must be done to tackle corruption and discourage the population from accepting it (Treisman, 2000).

Another interesting contribution made to the topic of corruption tolerance examined two types of morality. The author, Mikhail Blizniuk distinguishes family morality from public morality. The former prioritizes the interests and well-being of an individual's close circle, such as the family, while the latter defends society's welfare (Blizniuk, 2022). He argues that family morality may encourage an individual to have a tolerant attitude towards corruption. For example, a family member of a corrupt politician will most likely not report it to the authorities. The study of corruption tolerance took a psychological turn through the work of Joseph Pozsgai-Alvarez, who developed a model based on psychological and cognitive characteristics to analyze an individual's attitude towards corruption tolerance (2022) (2015).

When examining the work already published on corruption tolerance, we identified a gap in the study of this phenomenon in times of crisis. We did not find much research projects that tempted to evaluate the influence of crises, such as the 2008 economic crisis or the COVID-19 pandemic, on the population's perception of corruption. The remainder of the paper will attempt to fill this gap.

The central research question we will attempt to answer in the paper is the following: How has corruption tolerance evolved from the pre-COVID-19 period to its aftermath among citizens in Latin America?

As explained in the literature review, research in the field of corruption tolerance reveals a gap in understanding the impact of crises on individuals' perceptions of corruption. This study seeks to address this gap by examining how crises influence corruption tolerance, analyzing the effects, and identifying patterns in the types of individuals who are more (or less) likely to tolerate corruption. To achieve this, we used data from the *Latinobarómetro* survey, which includes observations from 17 different countries across multiple years.

For the statistical analysis, an ordered logistic regression model will be used. This approach is ideal for examining ordinal data, such as responses about attitudes toward corruption. The model takes advantage of the data's structure over time, making it possible to study how corruption tolerance changes while considering factors like demographics, politics, and socioeconomic conditions.

In the following chapters, we will comprehensively explore the interplay between crisis theory, corruption tolerance, and the Latin American context (Chapter 1). Following the

theoretical framework, the next chapter will present the methodology employed in this study, including the research design, data collection methods, and analytical techniques (Chapter 2). The final chapter will present the findings and results drawn from the empirical analysis (Chapter 3). To end the paper, the conclusion will summarize the key findings from the earlier chapters, discuss its implications, and suggest directions for future research.

Chapter 1 - Theoretical Framework

The connection between corruption tolerance and crises is complex and requires a detailed theoretical approach. This research aims to explore how corruption tolerance changes during crises in Latin America. To do so, this chapter will be divided into four sections, each providing important theoretical background. First, we will examine crisis theory to understand better how a crisis is structured regarding political and economic management, how resources are allocated by the state facing the crisis, and how the population generally reacts in crises (1.1). Second, the framework around corruption tolerance will be key to understanding this research. This framework includes ideas from different fields, such as institutional theory, cultural studies, and behavioral economics, to create a solid basis for analysis (1.2). Next, it will be important to understand the Latin American region within its larger context (1.3). Grasping the region's history and relationship with corruption is essential for examining corruption tolerance in times of crisis. Finally, thanks to all these theories, the last subsection will present some hypotheses we will attempt to solve in the following chapters (1.4).

1.1 Crisis Theory

When can we affirm that a country is facing a crisis? "A crisis is a situation that threatens high-priority goals of the decision-making unit, restricts the amount of time available for response before the decision is transformed, and surprises the members of the decision-making unit by its occurrence" (Hermann 1972, p.13). This definition is widely accepted among academic scholars; however, it is relatively power centered in that a crisis only seems to impact those in charge of the country's political decisions. Therefore, it is necessary to render the definition of crisis more global to encompass the social, political, and organizational characteristics a crisis might hold (Rosenthal & Kouzmin, 1997).

Scholars have already remarkably done the work of making Hermann's definition of crisis more adapted to the contemporary world: "A crisis is a serious threat to the basic structures or the fundamental values and norms of a social system, which under time pressure and highly uncertain circumstances, necessitates making critical decisions" (Rosenthal, Charles, and Hart 1989, p.10). This definition is more suitable for our research, as

incorporating values and social norms can be associated with corruption. Indeed, corruption is constantly related to the concepts of values and social norms that are inherently breached when corruption occurs (Rosenthal et al., 2001) (Dong et al., 2009).

Crises at the national level can take different forms. A country can face extreme situations, including security threats, political crises, health crises, and, more commonly, economic crises (Miranda et al. 2020). Analyzing the effect of crises on corruption tolerance is highly relevant since situations of crisis are often associated with a decline in public support towards state officials (Tausendpfund, 2015) (Roth et al., 2016). Moreover, when a country faces a sudden and violent crisis, the highest official can declare a state of emergency and impose "emergency powers." Emergency powers are "special prerogatives that a government or a president can resort to in extraordinary situations such as war, insurgency, terrorist attacks, or other severe threats to the state, environmental calamities, serious industrial accidents, pandemics, or similar situations that threaten a great number of lives." (Dang 2020, p. 1). These emergency powers are supposed to be temporary and usually allocate additional authority in four essential areas. They temporarily restrain or even suppress some constitutional rights. The power is concentrated in the hands of the executive branch, which gives less power to the legislature. Moreover, the power is centralized, which means that sub-national authorities lose their political influence. Finally, emergency powers can provide the right to postpone elections (Dang 2020). Nowadays, nine out of ten countries hold at least some of these emergency powers in their constitutions (Healy 2022).

These theories about crises are pertinent to our research. First, crises are such unforeseen and brutal circumstances for the populations facing them. This could cause them to refrain from supporting their politicians, have doubts about them, and engage in demonstrations to protest against the situation (Miranda et al. 2020). Moreover, in fragile economies, crises and emergency powers tend to lead to higher degrees of corruption within the government because the powers are concentrated within one unit, and the system of checks and balances cannot operate efficiently. This inefficiency then increases officials' impunity, generating more corruption.

The COVID-19 crisis is interesting to study because it was a global event that changed daily life and challenged governments' ability to react. The pandemic led to emergency measures and increased corruption risks, making it a valuable opportunity to understand how crises affect public views on corruption. Studying this period will allow us to gain insights into

how government actions during crises affect public trust and tolerance of unethical practices in governance.

In short, a crisis is an event that disrupts a society's key systems, whether political, economic, or social. While traditional views focus on political leaders, it's essential also to consider how crises affect public values and norms (Rosenthal & Kouzmin, 1997). Crises often lead to a drop in public trust, causing frustration and possibly increasing corruption (Tausendpfund, 2015). Emergency powers, which are meant to respond to urgent issues, can concentrate power in the hands of a few leaders and reduce supervision, creating opportunities for corruption. This understanding is crucial for analyzing how crises, such as the COVID-19 pandemic, shape public attitudes toward corruption. The following section will focus on the framework surrounding corruption tolerance.

1.2 Corruption Tolerance Framework

As was stated in the introduction, corruption is a systemic phenomenon. Indeed, corruption is inherent to our world since over two-thirds of the 176 countries surveyed by Transparency International score below 50% (Transparency International, 2024a) (Vergara, 2021). In her article, Camila Vergara discusses the philosophy surrounding corruption starting from the Renaissance. In many ancient writings, the right to election and political speech leading to hegemony created a way for corruption to subsist in societies. The author references the ideas of Machiavelli, who explains that the domination exerted by the sovereign on its people, thanks to the latter's "(forced) consent," leads to a situation where the ruler has enough power to see their narrative and worldview accepted as legitimate by the populations (Vergara 2021, p. 333). In simple terms, in contemporary systems, socio-economic inequalities and the lack of accountability for the rulers exacerbate the risk of corruption in the political process. Corruption gradually operates "despite the institutions and procedures, and not through them" (Vergara 2021, p. 334). Therefore, it is essential to specify that the population will hardly tolerate corruption because they actively support it, but rather because it is so deeply rooted in their political system and country that they are submissive and cannot undertake actions against the corrupted politicians. However, it is also possible that a part of the population actively supports corruption, because of the private gains that could emanate from it.

Modelling corruption is a difficult task. The prevailing model applied to corruption in the field of political science is called the principal-agent model. This model describes corruption as a criminal behavior operated by corrupt agents, who have been allocated powers to govern and who are entrusted by principals (Groenendijk, 1997). According to the model, the criminal action of corruption could be alleviated by reforming the state's institutions and making the agents more accountable. However, scholar Jan Teorell brings an innovative view on corruption in his article. Indeed, to study corruption as a systemic factor, the author attempts to model it as an institution, emphasizing the horizontal conflicts caused by corruption between the different sectors present in a society (Teorell, 2007). To do so, Teorell metaphorically associates corruption with a regressive tax. A regressive tax is a contribution system that is generally flat, which means that companies or individuals pay taxes at the same rate, regardless of their income. This means that as a share of their income, people earning low salaries will pay more taxes than those with higher wages (Tax Foundation, 2023). Therefore, Teorell is trying to explain that just like a regressive tax, corruption will disproportionally burden low-income individuals, favoring wealthier individuals (Teorell, 2007).

Corruption is a systemic issue shaped by socio-economic inequalities, a lack of accountability, and weak institutions. As Vergara's analysis shows, corruption is not simply supported by the population but tolerated due to its normalization and the power dynamics that make challenging it difficult (Vergara, 2021). The principal-agent model views corruption as an individual issue of misuse of power. Yet, Jan Teorell's perspective emphasizes corruption as a broader structural problem, akin to a regressive tax, which disproportionately affects the lower social classes (Teorell, 2007). This shows the importance of addressing personal responsibility and the systems that allow corruption to persist. Studying corruption tolerance during the COVID-19 crisis highlights the need to examine how people view corruption and the broader factors that shape those attitudes. The following section of this chapter will focus on the specific context of Latin America.

1.3 Latin American Context

Latin America is the region we decided to analyze for this paper. The region offers an essential freedom of analysis thanks to its heterogeneity in political systems, cultures, and economies. The population of over 650 million inhabitants is shared between 20 countries, which are spread over a gigantic surface of 20 million km^2 from the Golfe of California to Antarctica (O'Neill, 2024). Most of these countries are represented in the *Latinobarómetro* surveys. The region's gross domestic product (GDP) approximated to 4.3 trillion U.S. dollars in 2020, and its inflation rate reached 5% in 2023 compared to an approximated rate of 8% after the COVID-19 crisis in 2022, excluding Argentina and Venezuela, which are currently recording abnormal inflation rates (IMF, 2023).

Latin America is also one of the regions with the highest crime rates in the world. As a matter of fact, out of the 50 most violent cities worldwide, 42 are located in Latin America (World Population Review, 2024). Gangs, drug trafficking, and, most importantly, political and economic instability bolster these criminal activities. Therefore, the region seems to be an ideal arena for corruption. Indeed, corruption in Latin American states' election systems has been observed since the middle of the 19th century (Posada-Carbó, 2000). Large scale corruption scandals are quite common in the region (Trautman, 2016) (Lagunes & Svejnar, 2020). Moreover, the strategies of clientelism and patronage heavily influence the region's politics. Clientelism can be defined as the "personalized and discretionary exchange of goods or favors for political support" (Gonzalez-Ocantos and Oliveros 2019, p. 2). In other words, this type of strategy allows the patron, in that case, the politician, to target specific individuals or companies to gain their votes. It is widely argued that the clients are usually poor voters due to their cheap cost and high value for immediate assistance rather than long-term commitments (Gonzalez-Ocantos & Oliveros, 2019). Patronage is similar to clientelism but with less hierarchical relationships between patrons and clients. Moreover, clientelism can become a danger to democracy, as patrons will always seek more support and attempt to reach new clients. While these strategies are not corruption per se, it is argued that these behaviors would likely lead to corruption due to a higher dependency on clients, reinforcing social inequalities (Grindle, 2016). The culture of clientelism in the political structure of Latin American countries is deeply rooted in the populist traditions developed in the mid-20th century in the region, with famous figures such as Juan Perón in Argentina, Getúlio Vargas in

Brazil, and Lázaro Cárdenas in Mexico. Their primary strategy was to implement policies to empower the working class, redistribute wealth, and promote economic nationalism. These leaders gathered significant support thanks to their charismatic leadership and welfare programs (Levitsky, 2007).

Latin America is highly relevant to the research topic due to its history of facing crises. The Latin American debt crisis was one of the most devastating crises in the region at the end of the 20th century. Economic development was seriously impacted, as the debt levels increased by more than one thousand percent. Scholars specialists on the matter even call the 1980s 'the lost decade' (Singer 1989, p.46). In addition to the debt crisis, the region has experienced numerous political, social, and economic upheavals, including military dictatorships, democratic transitions, and structural adjustments imposed by international financial institutions. These crises have led to fragile institutions characterized by poor governance and inequality. Such conditions create opportunities for corruption, as public trust in government declines and people become less inclined to demand accountability. A significant consequence is the weakening of social trust, which, in turn, leads to more corruption and deepens existing inequalities. This ongoing cycle makes people lose even more confidence in the government and political institutions. (Uslaner, 2011).

The COVID-19 pandemic has complicated an already unstable situation by revealing weaknesses in public health systems and worsening socio-economic inequalities. Some scholars, including Diego Herrera and his colleagues, have pointed out the lack of awareness about healthcare corruption. In Ecuador, for example, they argue that the absence of proper accountability fosters corruption, significantly undermining the efficient delivery of essential healthcare services. (Herrera et al., 2021). The crisis further highlighted the deep-rooted challenges of governance in Latin America. Therefore, examining how corruption tolerance evolved during and after this crisis is important to understanding the broader implications of governance, public trust, and political accountability in Latin America.

1.4 Hypotheses

This section builds on ideas from crisis theory, corruption tolerance, and the context of Latin America to look at real-world data. The COVID-19 pandemic was a major global challenge that pressured healthcare systems and changed how people think and act. In Latin America, where political and economic instability often goes hand in hand with corruption, the pandemic allows us to study how public attitudes toward corruption and behaviors like tax evasion have changed. From these ideas, we developed three main hypotheses.

Hypothesis 1: We expect that higher COVID-19 death rates per 1,000,000 inhabitants will be associated with lower tolerance for corruption. The pandemic exposed the urgent need for effective healthcare systems and equitable resource distribution. Thus, we think that citizens became more focused on public health and survival. In Latin America, where corruption has long weakened trust in government, the crisis likely made people more aware of how corruption can delay access to vital resources like healthcare and financial support. As a result, populations may have become less tolerant of corruption, seeing it as a direct hindrance to effective pandemic response and public well-being.

Hypothesis 2: The effect of the pandemic on corruption tolerance differed across Latin American countries, depending on the severity of the crisis and how governments responded. Factors like trust in the government, transparency, crisis management, and a country's history with corruption likely influenced how citizens viewed corrupt practices during the pandemic. For example, we expect that people in Panama are more tolerant of corruption. Panama has a long history of corruption, which may have made corruption seem more acceptable even during the crisis. Therefore, because corruption has been deeply ingrained in Panama's history, we expect that the public's views will not change much during the pandemic.

Hypothesis 3: We expect that individual characteristics such as age, gender, social class, and political ideology will influence the relationship with corruption tolerance. Specifically, we hypothesize that older people and those in the middle to lower social classes will show less tolerance for corruption, possibly due to their greater economic vulnerability during times of crisis. This may make them more sensitive to inefficiencies and mismanagement. Additionally, we think individuals on the right of the political spectrum to exhibit higher tolerance for corruption, especially during the crisis. This could be due to concerns about the economic consequences of anti-corruption measures. Conversely, respondents on the left of the political spectrum would keep low corruption tolerance during all periods.

Chapter 2 - Methodology

This study uses a quantitative research design to explore how corruption tolerance in Latin America changes during times of crisis. A quantitative approach is ideal for this type of analysis because it enables the measurement and comparison of corruption tolerance across different periods. This will help us identifying patterns and connections with crisis events. By focusing on measurable data, this research offers a precise and repeatable approach to studying changes in public attitudes toward corruption, addressing the gap we observed in current research. In this chapter, we explain the data collection process (2.1), the methodology used, and the selection and application of variables, all essential to the analysis (2.2).

2.1 Data Collection

The data for this research will be obtained from reliable sources such as Transparency International, the University of Oxford, the World Bank, and *Latinobarómetro*. The *Latinobarómetro* database will be the primary source for the analysis. *Latinobarómetro*, a prominent non-governmental organization based in Santiago, Chile, was established in 1995. It primary objective is to study the economic and democratic development of 18 Latin American countries and Spain (Latinobarómetro, 2024). The organization conducts detailed surveys yearly, collecting information on public opinions, behaviors, and attitudes about various social, economic, and political issues. This study will focus on survey questions about corruption, especially those that measure how much people tolerate corrupt behavior. These questions provide a broad and representative dataset that shows how people feel about corruption in their country.

The *Latinobarómetro* survey fits perfectly with the objectives of this study because it captures the perspectives of the general population rather than focusing exclusively on expert opinions. This is a crucial distinction when compared to indices such as the Corruption Perceptions Index (CPI) from Transparency International, which is based on the views of specialists in corruption.

Choosing the right time frame is crucial for this study. We are looking at how crises affect people's tolerance toward corruption, with the COVID-19 pandemic as the primary focus. To understand how corruption tolerance changed before, during, and after the

pandemic, we selected 2020 as the starting point, marking the beginning of the crisis. We will also collect the data from two *Latinobarómetro* surveys conducted before the pandemic (2017 and 2018) to establish pre-crisis baseline levels of corruption tolerance. Additionally, data from the most recent survey published in 2023 will be included to evaluate post-crisis trends.

This time frame allows us to thoroughly explore how corruption tolerance changed at different stages: before, during, and after recovery. The study will look at data from 17 countries surveyed by *Latinobarómetro*, offering a broad and representative picture of public attitudes across Latin America. By analyzing this temporal scope, the research aims to identify patterns, shifts, and potential correlations between the pandemic's challenges and societal tolerance toward corruption changes.

2.2 Method

This section outlines the method used to analyze the determinants of corruption tolerance in Latin America during and after the COVID-19 pandemic. It provides a detailed account of the data structure we used (2.2.1), the ordered logistic regression models applied (2.2.2), and the variables included in the analysis: the dependent variables (2.2.3), the independent variable (2.2.4), and control variables (2.2.5).

2.2.1 Longitudinal Data

The *Latinobarómetro* data comprise repeated observations from the same countries over multiple years. This structure is characteristic of longitudinal data, defined as datasets that "follow a given sample of subjects over time and thus provide multiple observations on each subject in the sample" (Moral-Benito, Allison, and Williams 2019, p.2222). The longitudinal structure of the data allows us to track changes in corruption tolerance over time. This enables us to examine how individual factors like age, gender, and socioeconomic status, as well as country-level factors and economic conditions, affect attitudes toward corruption, especially during crises.

To examine the evolution of corruption tolerance among the public in Latin America during times of crisis using data from the *Latinobarómetro*, we will employ ordered logistic regression (ologit) models on the software Stata.

2.2.2 Ordered Logistic Regression Models

The ordered logistic regression model (ologit) is particularly well-suited for this study, as it handles ordinal data, where the response categories have a meaningful order but unequal intervals. This model was formalized in the 1980s by Peter McCullagh, who extended earlier work to address the limitations of linear regression for ordinal outcomes (McCullagh 1980). In this research, the dependent variable measuring corruption tolerance is based on an ordinal scale. This makes the ologit model an appropriate choice for analyzing the varying degrees of tolerance toward corruption.

The ordered logistic regression allows for more accurate modeling of the relationship between corruption tolerance and various explanatory variables, such as demographic factors, political attitudes, and economic indicators. The model also effectively handles longitudinal data, as the *Latinobarómetro* surveys include repeated measures over time. We will run four separate ordered logistic regression models, corresponding to the four years under study: 2017, 2018, 2020, and 2023. This approach will enable a comparative analysis of how corruption tolerance has evolved and how the COVID-19 pandemic may have influenced these shifts across different periods. The model also controls for individual and country-level variables, which is essential for understanding how demographics and context influence corruption tolerance over time.

In order to make the results more reliable, the “robust” option was added to the regression commands. This adjustment corrects for possible issues with varying error terms. This will improve the accuracy of the coefficient estimates and make the conclusions drawn from the analysis more valid.

2.2.3 The Dependent Variables

To analyze corruption tolerance in Latin America, we needed to identify a suitable measure for the dependent variable. Since the survey doesn’t directly ask about corruption tolerance, we used a proxy variable. A proxy is a substitute for something that cannot be directly measured. In this case, the proxy represents people’s attitudes toward corruption, as the survey does not explicitly ask about corruption tolerance in every wave. We decided to use the statement “One can allow some corruption if that is the price to pay to solve problems”

as a proxy for corruption tolerance. This question is available in the surveys conducted for the first three periods (2017, 2018, and 2020). Respondents were asked to rank their agreement from 1 to 4, with 1 being “strongly agree” and 4 being “strongly disagree.” This measure was recoded as the variable *corruption_price* for our analysis.

However, for the 2023 dataset, the survey did not include a similar question on corruption. As an alternative, we chose to use the question “How justifiable do you think it is to evade paying taxes?” as a proxy for corruption tolerance. This question is scaled from 1, meaning “not at all justifiable,” to 10, meaning “completely justifiable”. This variable was recoded as *justif_tax_evasion* and serves as the proxy for corruption tolerance in 2023.

However, we must note that while both variables aim to capture attitudes toward corruption, they do so in different ways. The *corruption_price* variable reflects a broader view of corruption tolerance, while the *justif_tax_evasion* variable precisely measures attitudes towards tax evasion, which is only one of the many components that fit in corruption. Thus, this distinction should be taken into consideration when interpreting the results.

2.2.4 The Independent Variable

To assess the impact of COVID, we collected data on the number of confirmed deaths per 1,000,000 people for each country in both 2020 (*covid_death_2020*) and 2023 (*covid_death_2023*) (University of Oxford, 2024). The two variables represent the total number of deaths per million people since data collection began in March 2020. By adding this data, we aim to see how the severity of the crisis influences changes in corruption tolerance across the countries studied.

2.2.5 Control Variables

To ensure an accurate analysis, it is essential to consider factors other than the COVID-19 crisis that may affect corruption tolerance. The control variables in this study are chosen to reflect key demographic, political, and contextual factors that shape people's views on corruption. By including these variables, the analysis can better isolate the impact of the pandemic. This will offer a clearer understanding of how different factors influence corruption tolerance across Latin America. Here is a summary of the control variables used in this study:

Demographic Variables

Studying demographic variables is essential for understanding the societal factors influencing people's tolerance for corruption. Factors like age, gender, and education can highlight different patterns in how various groups view corruption. For example, younger and older people and those with higher or lower education levels may have different attitudes. Life satisfaction and subjective social class will help show how people's happiness and economic status affect their views on governance and corruption. Additionally, town size, which reflects rural or urban living, will explain how geographic location influences attitudes toward corruption. Including these variables ensures the analysis accounts for the diverse social realities across Latin America, enabling a more nuanced understanding of corruption tolerance. Here is the list of the demographic variables in the regression.

- **Age** (*age*).
- **Sex** (*sex*): This variable is included as a binary variable, where "1" represents male and "2" means female.
- **Life Satisfaction** (*life_satisfaction*): Life satisfaction is measured as an ordinal variable (e.g., 1 = very satisfied, 4 = not at all satisfied).
- **Education** (*education_summary*): Education is included as an ordinal variable, summarizing the level of education attained (e.g., 1 = illiterate, 2 = incomplete primary school, 3 = complete primary school, etc.).
- **Subjective Social Class** (*subj_socclass*): This variable represents individuals' self-assessed social class. It is measured on an ordinal scale (e.g., 1 = upper class, 3 = middle class, 5 = lower class).
- **Town Size** (*town_size*): This variable captures the size of the respondent's town or city, categorized as an ordinal variable (1 = up to 5,000 habitants, 7 = 100001 and more habitants, 8 = capital).

Attitude Variables

Attitude variables are essential for understanding how trust in institutions and political beliefs affect views on corruption. Trust in government and religious organizations explains how much people believe in the credibility of these institutions and how that shapes their opinions. Political stance helps identify if individuals with different political views, such as those on the left or right, have varying levels of tolerance for corruption. Approval of the president's actions directly measures how leadership affects people's attitudes toward corruption. By including these variables, the model can explore how political beliefs influence tolerance for corruption, shedding light on the political factors that play a role in public accountability. Below is a list of the attitude variables included in the analysis.

- **Political Stance** (*political_stance*): Political stance is an ordinal variable measuring individuals' political orientation on a scale from left (0) to right (10).
- **Confidence in Government** (*confid_gov*): This variable is included as an ordinal measure (e.g., 1 = lot of confidence, 4 = no confidence at all).
- **Confidence in Church** (*confid_church*): Similarly, confidence in religious institutions is measured on an ordinal scale (e.g., 1 = lot of confidence, 4 = no confidence at all).
- **Approval of Presidential Actions** (*approval_president_actions*): This variable measures individuals' approval of the actions taken by their country's president in a binary way (e.g., 1 = oppose, 2 = disapprove).

Country-Level Variables

Country-level variables are important because they help capture the differences between countries in Latin America. Including these variables will help us show that people's tolerance for corruption is influenced by their personal characteristics and by each country's political, cultural, and economic conditions. This allows for comparisons between countries and gives a better understanding of how the national context affects public attitudes. Here is the list of the countries studied with their corresponding code:

- **Country** (*country*): Argentina (32), Bolivia (68), Brazil (76), Chile (152), Colombia (170), Costa Rica (188), Dominican Republic (214), Ecuador (218), El Salvador (222), Guatemala (320), Honduras (340), Mexico (484), Nicaragua (558), Panama (591), Paraguay (600), Peru (604), Uruguay (853).

Moreover, we had to use the prefix "i." in front of the categorical variables we used in the regression. This means that some categories were omitted to be set as reference categories. Therefore, we must be cautious with how we interpret our results and try to support them with as much external resources as possible, to avoid making overstatements.

The following and final chapter will begin with a description of the dataset. An analysis of the regression results will follow this, linking the findings to the theoretical frameworks discussed earlier. The chapter will provide insights into how the variables interact and shape the study's conclusions.

Chapter 3 - Results

In this chapter, we will provide a detailed analysis of the results obtained from the statistical models. The discussion begins with a thorough overview of the dataset's key descriptive statistics that lay the foundation for the analysis (3.1). We will then proceed with an in-depth investigation of the evolution of corruption tolerance from pre- to post-COVID-19, over the four time periods (3.2).

3.1 Descriptive Statistics

The dataset used for this analysis consists of 75,012 observations across four time periods: 2017, 2018, 2020, and 2023. The observations are evenly distributed among 17 Latin American countries. The average survey respondent is 40.67 years old, with 52% of respondents being women. Regarding religious affiliation, 57% of the respondents identify as Catholic. For the 17 countries included in the dataset, the average GDP per capita was $8,730.39 in 2017, increasing to $10,228.73 in 2023. Regarding the impact of the COVID-19 pandemic, the average number of deaths per 1,000,000 inhabitants was 731.95 in 2020, rising significantly to 2,324.29 in 2023.

Within the sample, 23.70% of respondents report being either not very satisfied or not at all satisfied with their lives. Regarding social class, 50.31% identify as belonging to the medium-low or low social class, while only 9.24% perceive themselves as part of the medium-high or high social class. Geographically, 17% of respondents reside in their country's capital, and 44.99% live in cities with populations exceeding 50,000 inhabitants. On political orientation, respondents positioned themselves on a scale from 0 (far left) to 10 (far right): 10.91% identified as far left (0), 28.09% placed themselves at the center (5), and 13.31% identified as far right (10). Regarding confidence in institutions, nearly three-quarters of respondents (73.32%) report having little to no confidence in their government. In contrast, 63.77% expressed some confidence in the church. This great contrast highlights the vital role of religious institutions in many Latin American societies. Finally, 60.19% of the respondents do not approve of their president's actions.

These statistics overview Latin American societies during significant political, economic, and social changes. The high levels of dissatisfaction with life and low social class perception reflect the ongoing inequalities in the region. The widespread lack of trust in government is consistent with the history of corruption scandals and governance failures in many countries. On the other hand, the higher confidence in religious institutions shows their important cultural role. The diverse political views indicate a divided political landscape, further complicated by the pandemic. These factors provide an essential context for understanding how public attitudes toward corruption and governance are shaped.

The next section will analyze the ordered logistic models, which help explain the relationships between the variables and corruption tolerance.

3.2 The Effect of the Pandemic on Corruption Tolerance

This research seeks to explore whether the COVID-19 pandemic has affected people's tolerance for corruption in Latin America. The dataset provides a rich set of data, including variables covering various aspects of individual demographics, attitudes, and perceptions.

The analysis will be divided into four subsections, each focusing on a different year: 2017 (3.2.1), 2018 (3.2.2), 2020 (3.2.3), and 2023 (3.2.4), and will apply distinct models to examine the evolution of corruption tolerance over time. Each subsection will explore demographic and attitudinal variables. This allows for a detailed analysis of how these factors influenced corruption tolerance each year. By examining demographics, such as age and education, as structural predictors and attitudes, such as trust in institutions and perceptions of COVID-19, as personal beliefs, the analysis will highlight how these elements interacted in each period.

3.2.1 Corruption Tolerance in 2017

Table 1 (N = 13,918) *Robust*

corruption_price	Coefficient	std. err.	z	P>z
gdp_percapita_2017	.0000411	.0000208	1.98	0.048
age	.0044237	.0010672	4.15	0.000
sex				
Female	.0375885	.0315071	1.19	0.233
life_satisfaction				
Fairly satisfied	.0549043	.0374282	1.47	0.142
Not very satisfied	.0755645	.0458918	1.65	0.100
Not at all satisfied	.0702691	.0944464	0.74	0.457
education_summary				
Incomplete primary	-.047509	.0710876	-0.67	0.504
Complete primary	.0061339	.0692503	0.09	0.929
Incomplete Secondary, technical	-.0016327	.0739514	-0.02	0.982
Complete Secondary, technical	.1275293	.0705115	1.81	0.071
Incomplete high	.3447565	.0817775	4.22	0.000
Complete high	.4528964	.0822268	5.51	0.000
subj_socclass				
Medium High	.1870129	.0976719	1.91	0.056
Half	.1449385	.0804029	1.80	0.071
Medium Low	.150272	.0835846	1.80	0.072
Low	.1180229	.0847687	1.39	0.164
town_size				
5001-10.000 habitants	.0692863	.1095643	0.63	0.527
10001-20000 habitants	-.1599375	.0928924	-1.72	0.085
20001-40000 habitants	-.2379414	.092473	-2.57	0.010
40001-50000 habitants	-.3657299	.1114892	-3.28	0.001
50001-100000 habitants	.0329772	.0892932	0.37	0.712
100001 and more habitants	-.0926707	.0800601	-1.16	0.247
Capital	-.0561428	.0831125	-0.68	0.499
political_stance				
1	.3490052	.1112254	3.14	0.002
2	.1539453	.0905948	1.70	0.089
3	.3191686	.0822216	3.88	0.000
4	.0836882	.0753425	1.11	0.267
5	.1550906	.0584223	2.65	0.008
6	.0917506	.0756751	1.21	0.225
7	.1032381	.0760621	1.36	0.175
8	.0803964	.0807091	1.00	0.319
9	.0461071	.1107492	0.42	0.677
10. Right	.0483976	.0645625	0.75	0.453
confid_gov				
Some confidence	-.076825	.0722081	-1.06	0.287
Little confidence	-.0567713	.0704852	-0.81	0.421

No confidence at all	-.0693922	.0731594	-0.95	0.343
confid_church				
Some confidence	.1470828	.0403365	3.65	0.000
Little confidence	.1218875	.0443619	2.75	0.006
No confidence at all	.2760589	.0567578	4.86	0.000
approval_president_actions				
Disapprove	.0340855	.0380865	0.89	0.371
country				
Bolivia	.113152	.289213	0.39	0.696
Brazil	.6122717	.1621407	3.78	0.000
Chile	-.0492852	.1374012	-0.36	0.720
Colombia	.3815284	.2453555	1.56	0.120
Costa Rica	.1630901	.1249785	1.30	0.192
Dominican Rep.	-.4050733	.2015468	-2.01	0.044
Ecuador	-.357738	.2327465	-1.54	0.124
El Salvador	-.1824743	.27199	-0.67	0.502
Guatemala	.3797897	.265564	1.43	0.153
Honduras	.0700707	.3019326	0.23	0.816
Mexico	.1987213	.1623608	1.22	0.221
Nicaragua	-.0403222	.315375	-0.13	0.898
Panama	-.6696239	.0860221	-7.78	0.000
Paraguay	.4911437	.2377907	2.07	0.039
Peru	.2187398	.2212792	0.99	0.323
Uruguay	0	(omitted)		

Table 1 highlights a positive and significant relationship between GDP per capita and the dependent variable *corruption_price*. As GDP per capita increases, respondents become less likely to agree with the statement, “One can allow some corruption if that is the price to pay to solve problems.” This suggests that wealthier countries might have stronger societal norms against tolerating corruption. This could result from more effective governance or heightened government expectations of transparency and accountability.

As for demographic variables, we can notice that older individuals are generally less tolerant of corruption, which supports our hypothesis. This could reflect generational shifts in values or an increased awareness of corruption within institutions over time, leading to stricter moral standards. However, there is no substantial evidence to suggest that gender or life satisfaction had a significant impact on corruption tolerance in 2017. Looking at the education variable, a strong association emerges between higher education levels and lower tolerance for corruption. This finding aligns with existing research suggesting that education fosters civic responsibility and ethical behavior (Anderson & Tverdova, 2003). Educated

individuals are likely more aware of corruption's damaging effects and are, therefore, more inclined to demand accountability and integrity from public institutions.

The *town_size* variable also presents some interesting patterns. Specifically, towns with populations between 20,001 and 50,000 show significant and negative coefficients, which means that residents of these towns tend to show higher tolerance for corruption. In medium-sized towns, people may experience less efficient government services or face difficulties accessing essential resources. This could lead them to view corruption as a necessary means to navigate these challenges.

When examining respondents' political views, individuals on the left and in the center tend to exhibit significantly lower tolerance for corruption. However, the results for those on the right side of the political spectrum are not statistically significant, making it challenging to make definitive comparisons with this group. Furthermore, the regression reveals that respondents who express either high or low levels of trust in the church tend to disagree with corruption tolerance. These findings could reflect the influence of moral or ethical frameworks often associated with religion, regardless of the respondent's trust in the institution.

The *country* variables show notable differences in corruption tolerance across Latin America. For instance, respondents in Panama exhibit a higher tolerance for corruption. This is demonstrated by a negative coefficient, possibly due to the country's history of institutional corruption and transparency issues. This confirms our hypothesis for the year 2017. The Dominican Republic also shows a significant negative coefficient, indicating a higher tolerance for corruption. This could be linked to particular socio-political dynamics or a widespread perception of ineffective governance within the country. Conversely, countries such as Brazil and Paraguay show significantly lower tolerance for corruption, with positive coefficients, which might indicate stronger norms against corruption or more significant public discontent with corrupt practices in these countries. As a matter of fact, in the case of Brazil, the survey was conducted only a year after the corruption scandals regarding former President Lula and current President Dilma Roussef, who will be destitute on the 31st of August 2016 (Michener & Pereira, 2016) (Lagunes & Svejnar, 2020).

3.2.2 Corruption Tolerance in 2018

Table 2 (N = 14,279) *Robust*

corruption_price	Coefficient	std. err.	z	P>z
gdp_percapita_2018	.0000249	.0000122	2.04	0.042
age	.0028053	.001054	2.66	0.008
sex				
Female	.0034117	.0311094	0.11	0.913
life_satisfaction				
Fairly satisfied	-.0527578	.0363705	-1.45	0.147
Not very satisfied	-.0549301	.0449537	-1.22	0.222
Not at all satisfied	.0054368	.0931208	0.06	0.953
education_summary				
Incomplete primary	.1241354	.0389797	3.18	0.001
Complete primary	.4180362	.046438	9.00	0.000
subj_socclass				
Medium High	-.0328764	.1235662	-0.27	0.790
Half	.0530369	.1145117	0.46	0.643
Medium Low	.1601383	.1155654	1.39	0.166
Low	.0024764	.1181214	0.02	0.983
town_size				
5001-10.000 habitants	.0923708	.1024662	0.90	0.367
10001-20000 habitants	.2117656	.0848499	2.50	0.013
20001-40000 habitants	.1980702	.0827292	2.39	0.017
40001-50000 habitants	.2738909	.0891722	3.07	0.002
50001-100000 habitants	.2379719	.077471	3.07	0.002
100001 and more habitants	.3039223	.0674973	4.50	0.000
Capital	.4742442	.0739849	6.41	0.000
political_stance				
1	-.0205811	.0927544	-0.22	0.824
2	.0047773	.0890588	0.05	0.957
3	-.0999774	.0796168	-1.26	0.209
4	-.0887332	.0752633	-1.18	0.238
5	.0392166	.0557523	0.70	0.482
6	-.0317448	.0737227	-0.43	0.667
7	.0900569	.0774679	1.16	0.245
8	.0213952	.08188	0.26	0.794
9	-.257745	.1260487	-2.04	0.041
10. Right	-.1149259	.0626814	-1.83	0.067
confid_gov				
Some confidence	.1694047	.0751923	2.25	0.024
Little confidence	.1600235	.0734382	2.18	0.029
No confidence at all	.3895297	.0753094	5.17	0.000
confid_church				
Some confidence	.1401397	.040646	3.45	0.001
Little confidence	.1051292	.0432533	2.43	0.015

No confidence at all	.2528419	.0517404	4.89	0.000
approval_president_actions				
Disapprove	.1970886	.0370722	5.32	0.000
country				
Bolivia	.1989859	.1565255	1.27	0.204
Brazil	1.66842	.1263099	13.21	0.000
Chile	.6335857	.1052121	6.02	0.000
Colombia	.4573376	.1335157	3.43	0.001
Costa Rica	.2060454	.0855285	2.41	0.016
Dominican Rep.	-.3334774	.1105752	-3.02	0.003
Ecuador	-.1535804	.1352958	-1.14	0.256
El Salvador	.0334941	.1507142	0.22	0.824
Guatemala	.2376929	.1506751	1.58	0.115
Honduras	-.1189945	.172352	-0.69	0.490
Mexico	.1277907	.0913591	1.40	0.162
Nicaragua	.0747032	.1787267	0.42	0.676
Panama	-.4396071	.0784026	-5.61	0.000
Paraguay	-.0114643	.1295315	-0.09	0.929
Peru	.3658806	.1257336	2.91	0.004
Uruguay	0	(omitted)		

In Table 2, a positive relationship is observed between age, GDP per capita, and the dependent variable. Like in 2017, older people and those living in wealthier countries are more likely to disagree with the idea that corruption is acceptable to solve problems. This shows that age and wealth influence stricter attitudes against corruption. This could possibly be explained by changing values over time and higher standards expected in wealthier societies. This confirms our hypothesis that older people would be less tolerant of corruption. In the 2018 survey, education was assessed based on whether respondents had completed primary school. Both categories yielded positive and significant coefficients. This indicated that individuals in these groups were more likely to disapprove of the statement suggesting that corruption could be tolerated under certain circumstances. However, this conclusion warrants caution, as the categories assessed in the 2018 survey only represent a limited portion of the educational spectrum, unlike the more comprehensive approach used in the 2017 survey. The *town_size* variable shows significant variation compared to the 2017 results. Nearly all categories now reflect significant and positive scores, indicating that regardless of the size of the city in which respondents live, there is a general trend of not supporting corruption. This shift in attitudes could be related to the changes observed in the *country* variable with the case of Brazil, which we will explore in more detail at the end of this subsection.

In terms of attitudes, the relationship between confidence in the church and tolerance for corruption remains consistent with the findings from 2017. However, there is a notable shift in the political stance variable. Specifically, individuals identifying with the right side of the political spectrum, particularly those in category 9, now tend to tolerate a certain degree of corruption if it is perceived as a way to solve problems. Additionally, the *confid_gov* variable reveals that, regardless of respondents' confidence in the government, they ultimately do not support corruption. At the same time, individuals who disapprove of the president's actions are more likely to disagree with the statement regarding the acceptance of corruption.

The results displayed by the country variable also differ significantly from previous years. On the one hand, Peru, Chile, Colombia, Costa Rica, and Brazil have notable results, with strong disagreements regarding corruption tolerance. These findings could be partly explained by the elections in Colombia, Costa Rica, and Brazil in 2018. The coefficient for Brazil is exceptionally high, as the country held one of its most significant presidential campaigns in recent history. The election resulted in the victory of Jair Bolsonaro, the right-wing candidate, who capitalized on the corruption scandals surrounding the opposing political party. Bolsonaro successfully rallied many voters by focusing his campaign on an anti-corruption and transparency platform (Schneider, 2020). The coefficient for Brazil could have influenced the one of the *town_size* variable since it is by far the most populated country in the region. These recent events demonstrate our development made in Chapter 1, where we explained that corruption was deeply imbedded in Latin America.

On the other hand, the Dominican Republic and Panama continue to show significant results, indicating higher tolerance for corruption. While Brazil saw a substantial increase in its coefficient, Panama's coefficient remained relatively stable despite the eruption of one of its largest corruption scandals. In 2016, the International Consortium of Investigative Journalists revealed millions of official documents that exposed how heads of state and celebrities used offshore tax havens, such as Panama, to conceal their wealth (Trautman, 2016). The fact that Panama's coefficient remained essentially unchanged suggests that corruption is deeply embedded in Panamanian citizens' daily lives and perceptions, again confirming our hypothesis. However, it is again relevant to cite the work of Vergara (Vergara, 2021). In the case of Panama, it does not mean that the people actively support corruption. It is possible that these behaviors became common to someone's life.

3.2.3 Corruption Tolerance and the Outbreak of the Pandemic in 2020

Table 3 (N = 15,085) *Robust*

corruption_price	Coefficient	std. err.	z	P>z
covid_death_2020	.0000895	.0000328	2.73	0.006
gdp_percapita_2020	.0000452	7.23e-06	6.25	0.000
age	.0009472	.0010364	0.91	0.361
sex				
Female	-.0471313	.0302223	-1.56	0.119
life_satisfaction				
Fairly satisfied	.0094579	.0345613	0.27	0.784
Not very satisfied	.0221478	.0436081	0.51	0.612
Not at all satisfied	.1150191	.0871955	1.32	0.187
education_summary				
Incomplete primary	-.0680663	.0839117	-0.81	0.417
Complete primary	.0883612	.0752951	1.17	0.241
Incomplete Secondary, technical	.1887369	.0809717	2.33	0.020
Complete Secondary, technical	.3527409	.0760158	4.64	0.000
Incomplete high	.5559477	.0855223	6.50	0.000
Complete high	.743033	.0829697	8.96	0.000
subj_socclass				
Medium High	.4237995	.1285951	3.30	0.001
Half	.3454994	.1193065	2.90	0.004
Medium Low	.4726011	.119666	3.95	0.000
Low	.4267253	.1206981	3.54	0.000
town_size				
5001-10.000 habitants	.0838397	.0988295	0.85	0.396
10001-20000 habitants	-.063753	.0801072	-0.80	0.426
20001-40000 habitants	.0378326	.0747609	0.51	0.613
40001-50000 habitants	.2431796	.097145	2.50	0.012
50001-100000 habitants	-.0062578	.073829	-0.08	0.932
100001 and more habitants	.1439906	.065086	2.21	0.027
Capital	.1757923	.0674478	2.61	0.009
political_stance				
1	.0098118	.0949141	0.10	0.918
2	.145108	.0870231	1.67	0.095
3	.069301	.075258	0.92	0.357
4	.0759271	.0746445	1.02	0.309
5	.1273349	.054237	2.35	0.019
6	.0550908	.0775711	0.71	0.478
7	.1356786	.0824689	1.65	0.100
8	.0752424	.0879209	0.86	0.392
9	.3059941	.1155851	2.65	0.008
10. Right	-.0104723	.0642815	-0.16	0.871
confid_gov				
Some confidence	.1611066	.0715023	2.25	0.024

Little confidence	.3123073	.0745823	4.19	0.000
No confidence at all	.3798615	.0795227	4.78	0.000
confid_church				
Some confidence	.096673	.0403832	2.39	0.017
Little confidence	.060423	.0416827	1.45	0.147
No confidence at all	.2756678	.0510241	5.40	0.000
approval_president_actions				
Disapprove	.0004222	.0644436	0.01	0.995
country				
Brazil	1.365162	.1012631	13.48	0.000
Chile	.2704567	.0810371	3.34	0.001
Colombia	.2976063	.0714447	4.17	0.000
Costa Rica	.1924793	.0842256	2.29	0.022
Dominican Rep.	-.5448906	.0766825	-7.11	0.000
Ecuador	-.3099573	.0677574	-4.57	0.000
El Salvador	-.0709849	.0945533	-0.75	0.453
Guatemala	-.104668	.0914493	-1.14	0.252
Honduras	-.1151236	.0989542	-1.16	0.245
Mexico	-.4137461	.0632079	-6.55	0.000
Nicaragua	-.0534512	.1045223	-0.51	0.609
Panama	-.4385081	.0741769	-5.91	0.000
Paraguay	.0547978	.0828697	0.66	0.508
Peru	0	(omitted)		
Uruguay	0	(omitted)		

Looking at the results for 2020 (Table 3), GDP per capita continues to show a positive but weak coefficient. This suggests that wealthier countries are more likely to reject the statement on corruption tolerance, though the relationship remains weak. Additionally, the regression introduces a new variable: confirmed COVID-19 deaths per million inhabitants in each country. Similar to GDP per capita, this variable also shows a positive relationship with the dependent variable. As the number of deaths per million increases, people are more likely to reject corruption tolerance. This finding supports the first hypothesis, suggesting that higher death tolls lead to lower tolerance for corruption due to the need for quick and efficient responses to the pandemic. However, the relationship remains weak.

Our hypothesis that older individuals would be less tolerant of corruption is not supported for 2020, as the result is not statistically significant. The education variable shows positive relationships between those with incomplete secondary education and those who completed high school. In contrast, only individuals with high school education had positive and significant results in the 2017 regression. This shift might be explained by increased public

awareness, especially following corruption scandals in the region. These scandals likely raised awareness of the harmful effects of corruption, causing more people, even those with lower education levels, to view it as a significant issue. This shift in attitudes may also stem from changes in the regression model, particularly with the implementation of the COVID-19 deaths variable. Indeed, the pandemic became such a global issue that no matter people's education, they quickly realized how serious the crisis was.

The variable *subj_socclass* shows positive and significant results across all social classes categories in 2020. This means that respondents, regardless of their social class, generally disagree with the statement on corruption tolerance. This supports our hypothesis that middle- and low-income individuals are less tolerant of corruption. Interestingly, this variable was not significant in the pre-COVID-19 regressions. It is possible that the pandemic heightened individuals' awareness of their social class, reinforcing the values and perspectives tied to it. Finally, regarding *town_size*, the analysis indicates that residents in mid-size towns, large cities, and capitals are more likely to disagree with the statement on corruption tolerance.

The variable reflecting respondents' political stance shows a significant change compared to 2018. In 2020, individuals who identified with categories 5 and 9 disagree significantly with the statement on corruption tolerance, even though category 9 had a negative coefficient in the previous regression. We, therefore, cannot confirm our hypothesis, stating that people on the right side of the political spectrum would tolerate corruption more during these times. Confidence in the church and the government did not change compared to year 2018.

As for the countries of Brazil, Chile, Colombia, and Costa Rica, there is a significant disagreement with the statement, maintaining the trend observed in the previous regression analysis. However, Ecuador and Mexico have joined the Dominican Republic and Panama in exhibiting a negative relationship with the dependent variable. This indicates that citizens in these countries tend to tolerate corrupt behaviors more in 2020. In Ecuador, the early stages of the COVID-19 pandemic revealed significant failures in the healthcare system, especially in Guayaquil, where hospitals were overwhelmed. The government's poor response, coupled with reports of corruption in procuring medical supplies, eroded public trust (Herrera et al., 2021). These factors, combined with a very low GDP per capita (approximately $5,450 in 2020), could have contributed to a higher tolerance for corruption, as citizens grappling with

the crisis may have become more accepting of corrupt behaviors due to disillusionment with government institutions and their inability to address the pandemic effectively (World Bank, 2024). In their article, Goldstein and Drybread explain that in some contexts, even the most marginalized can benefit from corruption (Goldstein & Drybread, 2018). However, this benefit is only temporary as corruption will most likely benefit the official in the long run. This shift in behavior could also support the crisis theoretical framework in which we highlighted the work of some scholars explaining that crisis situations negatively impact trust among political officials (Tausendpfund, 2015) (Roth et al., 2016).

3.2.4 Corruption Tolerance During the Recovering Phase (2023)

Table 4 (N = 13,382) *Robust*

justif_tax_evasion	*Coefficient*	*std. err.*	*z*	*P>z*
covid_death_2023	-.0000941	.0000397	-2.37	0.018
gdp_percapita_2023	-.0000466	.0000138	-3.38	0.001
age	-.007559	.0009754	-7.75	0.000
sex				
Female	.0197882	.0291324	0.68	0.497
life_satisfaction				
Fairly satisfied	.0789358	.0344361	2.29	0.022
Not very satisfied	.1746982	.0430934	4.05	0.000
Not at all satisfied	.2031568	.089624	2.27	0.023
subj_socclass				
Medium High	-.1575389	.1163448	-1.35	0.176
Half	-.4652062	.1053373	-4.42	0.000
Medium Low	-.5079479	.1070245	-4.75	0.000
Low	-.5533484	.1103601	-5.01	0.000
town_size				
5001-10.000 habitants	-.1804284	.0958264	-1.88	0.060
10001-20000 habitants	-.110868	.0856395	-1.29	0.195
20001-40000 habitants	-.1966839	.0819439	-2.40	0.016
40001-50000 habitants	-.1790304	.1006368	-1.78	0.075
50001-100000 habitants	-.2056248	.0793329	-2.59	0.010
100001 and more habitants	-.244418	.069804	-3.50	0.000
Capital	-.1675559	.0713696	-2.35	0.019
political_stance				
1	.1515246	.1001338	1.51	0.130
2	.3696931	.0825326	4.48	0.000
3	.588258	.0720806	8.16	0.000
4	.5815665	.071105	8.18	0.000
5	.4509942	.0610692	7.38	0.000
6	.6044649	.0732712	8.25	0.000
7	.6332624	.077041	8.22	0.000
8	.7124442	.0767997	9.28	0.000
9	.8170928	.1031842	7.92	0.000
10. Right	.5843053	.0775147	7.54	0.000
confid_gov				
Some confidence	.0454191	.0616725	0.74	0.461
Little confidence	.1470671	.0621773	2.37	0.018
No confidence at all	.0043594	.065466	0.07	0.947
confid_church				
Some confidence	-.2110891	.0385319	-5.48	0.000
Little confidence	-.0911508	.04025	-2.26	0.024
No confidence at all	-.2024242	.0503755	-4.02	0.000
approval_president_actions				
Disapprove	.0088738	.0359257	0.25	0.805

country				
Bolivia	-.4491258	.2340896	-1.92	0.055
Brazil	-.4767495	.1041195	-4.58	0.000
Chile	-.4564858	.057338	-7.96	0.000
Colombia	-.2589428	.1609047	-1.61	0.108
Costa Rica	-.450318	.0948006	-4.75	0.000
Dominican Rep.	.0807247	.1979993	0.41	0.683
Ecuador	-.6359193	.1925186	-3.30	0.001
El Salvador	-.437628	.2637715	-1.66	0.097
Guatemala	-.6112253	.2394322	-2.55	0.011
Honduras	-.2296691	.2739386	-0.84	0.402
Mexico	.3433704	.0873627	3.93	0.000
Panama	.2027755	.0872644	2.32	0.020
Paraguay	-.2365603	.1720862	-1.37	0.169
Peru	0	(omitted)		
Uruguay	0	(omitted)		

As a reminder, some changes were made in this regression. Since the question regarding the price of corruption was not included in the 2023 survey, another proxy variable was used to closely resemble the dependent variable employed in the other three regressions. The most suitable alternative identified was: “On a scale of 1 to 10, where 1 is ‘not at all justifiable,’ and 10 is ‘completely justifiable,’ how justifiable do you think it is to evade paying taxes?” It is important to note that this proxy focuses specifically on a single corrupt behavior, tax evasion, rather than addressing corruption as a broader concept. As a result, the interpretation of these results must be approached with caution. Furthermore, because the categories in this proxy are ordered inversely compared to the *corruption_price* variable, a negative coefficient indicates lower tolerance for the corrupt act of tax evasion, and a positive coefficient reflects greater tolerance.

The regression results align with the tendencies observed in the other models. The variables *covid_death_2023*, *gdp_per_capita_2023*, and *age* are associated with a lower tolerance for tax evasion. These findings indicate that older individuals, wealthier nations, and societies more affected by the COVID-19 pandemic may exhibit stricter attitudes toward unethical behaviors. The results reflect strengthened expectations for responsibility and ethical governance. Therefore, we can confirm our hypothesis that higher deaths from COVID-19 would lead to lower tolerance for corruption. As for the *age* variable, our hypothesis that older people would be less prone to support corruption is also confirmed for this year. Life satisfaction shows a more noticeable association with the new dependent variable, implying

that individuals who report lower life satisfaction are more inclined to justify tax evasion. This shift may reflect the pandemic's impact on societal values, including disillusionment with government institutions. It could also be due to the nature of the dependent variable, which focuses only on tax evasion rather than broader forms of corruption. It would be interesting to know if respondents view tax evasion as a form of corruption or not and to compare it with the perception on the action of bribery explained in Chapter 1 (Hasty, 2005).

On the other hand, respondents identifying as belonging to the "middle," "lower middle," and "lower" social classes generally view tax evasion as less justifiable. This aligns with a stricter moral stance on such behaviors. This trend is consistent with the 2020 results. Additionally, this confirms our hypothesis, and the observation made in the previous subsection that the pandemic might have reinforced people's awareness of their social class. The variable *town-size* yields similar results to those observed during the last regression. Residents of mid-sized to large cities, including those living in capital cities, tend to view tax evasion as unjustifiable.

The results for 2023, especially the *political_stance* variable, present some surprising findings. Regardless of political affiliation, respondents are more likely to justify tax evasion. This shift contrasts the 2020 results. Therefore, caution is needed when interpreting these changes. This shift may be due to respondents not equating tax evasion with corruption. It could also result from differences in model specifications. As a result, we cannot confirm our hypothesis that individuals on the political right are more tolerant of corruption during times of crisis, nor can we verify that those on the left are less tolerant.

Additionally, respondents who express little confidence in their government appear to find tax evasion more justifiable, a reversal of the pattern observed in 2020. This shift could be attributed to the frustration many felt during the COVID-19 crisis, with some potentially believing that they had to fend for themselves and, thus, justifying tax evasion. Alternatively, the shift might be due to changes in the model that affected how the relationship between government trust and tax evasion was captured. Finally, the categories associated with confidence in the church strongly reject the justification of tax evasion, indicating that those who trust religious institutions are less likely to support such behaviors.

Coming down to the last cross-country analysis, Brazil, Chile, Costa Rica, and Guatemala show significant disagreement with the justification of tax evasion. Guatemala, however, is new to this group. This shift may not be directly linked to the COVID-19 pandemic.

Instead, it could be attributed to Guatemala's political change following the 2023 presidential elections. Bernardo Arévalo, the new president of the Social Democratic Party, succeeded Alejandro Giammattei. The latter's administration was widely criticized for corruption. This political shift may have contributed to a change in public attitudes, as citizens are now more inclined to reject practices like tax evasion (Font, 2024). The most intriguing result comes from Ecuador, which now shows significant intolerance toward the justification of tax evasion, whereas, in 2020, there was an agreement with the statement about the price of corruption. Like Guatemala, it is not prudent to directly associate this shift with the pandemic.

In 2023, Ecuador went through a significant political change with the election of Daniel Noboa as president. Noboa campaigned on a political project to tackle economic and security challenges, including rising crime and corruption. One of the key elements of his agenda was to strengthen legal procedures in cases of tax evasion. The aim was to improve the country's fiscal integrity and reduce financial crises (Mila Maldonado & García Mayoral, 2023). His victory marked the end of Guillermo Lasso's presidency, which had been criticized for his handling of the pandemic, corruption, and economic inequality. Finally, the results from Panama and Mexico in 2023 were comparable to the 2020 regression, with both countries showing trends that lean towards the justification of tax evasion. The fact that the coefficient for Panama remained associated with higher tolerance for corruption from pre- to post-covid confirms our second hypothesis.

Conclusion

This study explored how perceptions of corruption tolerance evolved in Latin America during the COVID-19 crisis. This analysis was realized using data from the *Latinobarómetro* surveys. The research attempted to fill an academic gap in understanding the impact of crises on public attitudes toward corruption. The central research question focused on how corruption tolerance changed from the pre-COVID period to its aftermath among Latin American citizens. Data from *Latinobarómetro* surveys traveling 17 countries in 2017, 2018, 2020, and 2023 were analyzed to explore this question.

The study gives us several essential insights. First, higher GDP per capita was consistently linked to lower tolerance for corruption. It implies that wealthier nations tend to show more inflexible attitudes toward corruption. Additionally, while the effects were modest, higher COVID-19 death rates per million inhabitants were generally associated with lower corruption tolerance in both 2020 and 2023, confirming our main hypothesis that high numbers of deaths caused by the virus would lead to lower support for the statements defining our dependent variables. Respondents with low confidence in their government were more inclined to justify tax evasion in 2023.

The research also highlighted significant differences in corruption tolerance across countries. For example, Panama and the Dominican Republic both demonstrated higher tolerance levels, while countries like Brazil, Chile, and Costa Rica showed more substantial resistance to corruption. These variations cannot be solely attributed to the COVID-19 crisis. Indeed, political developments, such as elections in Brazil and Ecuador, most likely shaped public attitudes. While the pandemic may have amplified issues in some countries, the political context most likely influenced these attitudes. This supports our hypothesis that Panama would consistently demonstrate higher levels of corruption tolerance, even after the pandemic's outbreak. This suggests that when corruption is deeply rooted in a society, it is more challenging to initiate meaningful change.

Despite these valuable findings, the study does show its limitations. The use of proxy variables, particularly in the 2023 survey, may affect the comparability of results across different years. Having the same proxy variable accounting for corruption throughout the study would have provided more substantial results. The existence of data from 2021 and 2022 would also have helped us provide better conclusions. Additionally, limiting the focus to

Latin America means the conclusions may not be applicable to other regions. To address these issues, future research could incorporate qualitative research methods to better understand the reasons behind changes in corruption tolerance. Moreover, exploring different types of crises, such as economic crises, political shifts, or natural disasters, could offer a broader perspective on how various crises impact public views on corruption.

In conclusion, this study highlights the significant role that crises play in shaping public attitudes toward corruption. While the pandemic might not be the only reason explaining these shifts, it undoubtedly had a severe impact on the region's inhabitants, on political structures and on society in general. The findings emphasize the need for transparency, anti-corruption governance, and strong institutions in maintaining public trust, particularly during times of crisis. By further exploring the dynamics of corruption tolerance, future research can contribute to the development of more effective anti-corruption strategies and policies. Understanding the factors that influence shifts in corruption tolerance is essential for fostering integrity and accountability in governance, especially in regions facing complex political and economic challenges.

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