



**Roots of  
Underdevelopment**  
A New Economic and  
Political History of Latin  
America and the Caribbean

*Edited by*  
Felipe Valencia Caicedo

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*Editor*

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## PRAISE FOR *ROOTS OF UNDERDEVELOPMENT*

“This fantastic new book maps the latest and most interesting methodological advances in the fields of historical economics and historical political economy onto the history of Latin America. The result is a fascinating new understanding of the persistent effects of historical phenomena in the region – including institutional and cultural changes – on each country’s path to development and economic prosperity, or lack thereof.”

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“In this thrilling and challenging book, a new generation of brilliant Latin American economic historians, standing on the shoulders of giants, offer new perspectives on the history of Latin America. They contribute with new data and new approaches to unravel our past, identifying the deep roots of our present and providing the needed perspective to tailor our future.”

—Omar Licandro, *Professor of Macroeconomics at the University of Nottingham, RIDGE Executive Director*

“A phenomenal synthesis with new insights on the roots of Latin American political economy. A vital read to grasp the origins of macroeconomic management and populism, the stubbornly high inequality, and social tensions.”

—Elias Papaioannou, *Professor of Economics and Academic Codirector of the Wheeler Institute for Business and Development at London Business School, coeditor of The Long Economic and Political Shadow of History, and Joint Managing Editor of The Review of Economic Studies*

“A path-breaking volume that provides fundamental insights into the deep roots of development—and underdevelopment—of economies across the entirety of Latin America. *Roots of Underdevelopment* is sure to become the go-to text for those interested in the historical determinants of Latin American economic development and politics.”

—Jared Rubin, *Professor of Economics at Chapman University and author of How the World Became Rich and Rulers, Religion, and Riches*

“This book constitutes a hugely impressive contribution to our understanding of the historical political economy of Latin America. There is really no existing book to match this one in terms of both the scope and depth of coverage. The distinguished list of contributors is testament to the editor’s determination to produce a book that will be widely cited and used in the classroom.”

—Shanker Satyanath, *Professor of Politics at New York University*

“A superbly curated volume of illuminating essays on the historical roots of economic [under]development in Latin America. This is new economic history at its best: data-driven, rigorous, engaged and indispensable reading to understand the challenges the continent faces today.”

—Moritz Schularick, *Professor of Economics at Sciences Po Paris, President of the Kiel Institute, Director of the MicroFinance Lab*

“This fascinating and innovative book brings together contributions by leading scholars who use cutting-edge empirical methods to study different aspects of development in sixteen Latin American societies. The volume also provides the big picture in a magisterial introduction by Felipe Valencia Caicedo and a broad historical overview by Luis Bértola and José Antonio Ocampo. These studies—weaving together past and

present, deeply-rooted factors and more recent changes—will be essential reading for anyone who wants to understand the diversity and complexity of Latin American development in light of contemporary research in political economy and economic history.”

—Enrico Spolaore, *Seth Merrin Chair and Professor of Economics at Tufts University*



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# Historical Development in Latin America

*Felipe Valencia Caicedo*

“The past reappears because it is a hidden present... The history of every people contains certain invariable elements, or certain elements whose variations are so slow as to be imperceptible.”

Octavio Paz, *The Labyrinth of Solitude and Other Writings*.

## 1 INTRODUCTION

Some of the finest literary minds of the continent can help us approach the problem of historical persistence in Latin America. Mexican Nobel Prize winner Octavio Paz, quoted above, writes about a hidden present

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I thank Humberto Laudaes for his many conversations about the underdevelopment of our region, which led to the creation of this book, Pedro dal Bo, Leopoldo Fergusson, and Aldo Musacchio for comments, as well as Francisco Eslava and Moises Pedrozo for research support. I take responsibility for the editorial shortcomings of this volume.

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in our modern reality and how certain elements are invariable or have variations that are so small which make them imperceptible. William Faulkner went further in *Requiem for a Nun* stating that, “The past is never dead. It’s not even past.” Though set in the US South, Faulkner’s mythical territory of Yoknapatawpha County resembles that of Garcia Marquez’s Macondo somewhere in tropical Latin America and Onetti’s Santa Maria, further south into the Andes. James Baldwin forcefully added that, “The great force of history comes from the fact that we carry it within us, are unconsciously controlled by it in many ways, and history is literally present in all that we do.” The economic history of a region is, in essence, that one of its people.

We now know from modern physics that time is both relative and malleable. More poetically, T.S. Elliot stated that, “Time present and time past/Are both perhaps present in time future/And time future contained in time past.” The idea here, which we take in this book, is that certain events, such as slavery or conflict, have an outsized impact on a given place and society. These events may last the same time, in terms of years and months, but their impact could be detected decades and even centuries later in various ways. History could even serve as a cleansing mechanism, in a Hegelian sense, distilling in the future what was truly important about today. Borges stated more beautifully that we can know the past, though the present remains forbidden, and that the present will be known to historians, one day.

An analogy can be drawn between historical persistence and a stone dropped in the water or the wake of a boat. The size of the waves will depend on the weight of the object or the stern of the ship, but also the conditions of the water, the wind, and the currents. In some places, it would be fairly easy to see the shock waves from a given event, in others, because of higher mobility, economic convergence, or effective social policy, it would be harder. But being able to observe the aftereffects themselves will also depend on the vantage point of the researcher: How many years have passed since the historical shock, with which methods are the observer, like the naturalist, examining the phenomenon of interest, how disaggregated is the data at hand, and what are the appropriate variables to analyze? Oftentimes, the data itself will speak, as in the case of coerced labor and underdevelopment or human capital formation and missionary activity. In others, the relationships will appear murkier or mistier. With time, and continuing with the metaphor, more and more boats can pass through a given place, generating waterways, in what we

term path dependence in economics, as has been beautifully illustrated by Paul David (1985) by Bleakley and Lin (2012) for urban locations in the US Northeast. Many of the roads around the world were created that way, such as the Roman roads in Europe, the Silk Road in Central Asia, and the Inca ones in South America—and their legacies can be seen even today.

In a way, persistence is everywhere. It often determines the language we speak, the food we eat, and the religion we profess. It shapes the places we inhabit in the domestic sphere, the design of our houses at the micro-level, and of our cities and towns at the macro-level, as hinted by the cover of this book. It determines the laws that govern us and even the socio-economic inequities that we face, many times segmented along gender or racial lines, as stressed in the conclusion. Still, this is not a defense of historical determinism. Marx saw history as a constraining artifact, stating that, “Men make their own history, but they do not make it as they please; they do not make it under self-selected circumstances, but under circumstances existing already, given and transmitted from the past.” *Yo soy yo y mis circunstancias*, declared Ortega y Gasset, in Spanish.<sup>1</sup> Understanding historical forces and processes, just like with geographic and political factors, can help us get a better sense of our modern societies and economies. We can think of these forces as being part of the superstructures and structures that constrain our choice sets. Ultimately, persistence is an invitation to know ourselves and our societies better. One can be for or against gravity, but can only ignore it at one’s own peril. Such research could even help inform policymakers to improve the targeting and effectiveness of their policies. Even someone as grounded in reality as William Churchill reportedly said that, “the farther back you look, the further ahead you can see,” reflecting the relevancy of history for policymakers. In many cases, it is precisely the lack of such effective policies which has led to the perpetuation of inequities and patterns of underdevelopment from colonial or pre-colonial times. One could thus see persistence as a triumph of history or as a failure of policymaking.

There are certain elements by which this book stands, in its modern approach to economic history. First, it is very much empirical, and cares about data, following the earlier contributions by the Cliometrics revolution in US economic history. There also is a new attempt to identify

<sup>1</sup> I am I and my circumstances, in translation.

causal effects, which was not present in previous economic history studies, through the usage of econometric techniques and theoretical models, in line with Valencia Caicedo (2021). This is important, not only for academic sake, to better understand the phenomena analyzed, but also to make more appropriate policy recommendations. Such models and regressions also help us pin down specific mechanisms of transmission, which are crucial in persistence studies Voth (2011). We bring to the table new topics such as elite formation, migration, and multinationals, that had been overlooked before. The literature has gone beyond documenting persistence to trying to understand how this persistence is enacted or when are its forces diminished (Nunn and Giuliano, 2021).<sup>2</sup> Hence, there is an important emphasis on mechanisms of transmission. Not every chapter will have all of the elements described here; but as a corpus, the book follows the modern literature in economic history, which we revisit next.

## 2 LITERATURE

This book is built upon the model of historical development, first summarized by Nathan Nunn as early as 2009 in his *Annual Review of Economics*, followed by an Economic Growth Handbook Chapter in 2014 and more recently in scientific format, in 2020. Nunn asserted the importance of history for economic development, coined the term “Historical Development,” and pointed toward its historical roots, in these respective texts. Nathan himself was summarizing a literature with a long pedigree, dating back at least to Douglas North in economics. There have been other attempts to summarize the burgeoning literature, most notably by Enrico Spolaore and Romain Wacziarg on the “Deep Roots” of economic development in the *Journal of Economic Literature* in 2013 as well as a CEPR e-book edited by Stelios Michalopoulos and Elias Papaioannou (2017a, b).<sup>3</sup> The latest attempt by Alberto Bisin and Giovanni Federico (2021) is an edited volume on what they term Historical Economics,

<sup>2</sup> I have grappled with these issues, in the urban context ever since our work with William Maloney, published in the *Economic Journal*, Maloney and Valencia Caicedo (2016).

<sup>3</sup> Separately, Michalopoulos, and Elias Papaioannou (2020) focus on the historical legacies of African development, a model we follow here for Latin America.



further broadening the field in terms of methods and topics. The work of Oded Galor also fits into this category (2022).

It is important to recall that some of the seminal articles of the economic history discipline had Latin America as its main object of study. Indeed, the question of the divergence between North and Latin America was the key puzzle that Engerman and Sokoloff tried to answer in various ways. Their hypothesis that it is the natural endowments and their relation to institutions which ultimately drive economic growth remains an important answer to the conundrum of Latin American underdevelopment. This qualitative hypothesis was further developed econometrically, putting an emphasis on institutions by Acemoglu, Johnson, and Robinson (2001, 2002) for world colonies. In the modern economics literature, Melissa Dell's study of the long-term impact of the *mita* published in *Econometrica* in 2010 shined as a lone star in the methodological universe. As late as 2017, Stelios Michalopoulos and Elias Papaioannou's excellent survey volumes of the long economic and political shadow of history, only contained three papers on Latin America. In a way, the last quinquennium has seen an explosion of the persistence literature in Latin America, not that different from the five crucial years that passed from Nunn's 2009 and 2014 surveys. At least three of the articles covered in this book have been published in so-called top five journals in economics. There appears to be now at least one such "persistence" study for almost each country in the region, and in several cases it was hard to pick just one. It thus seems that this is a history that will have to be rewritten or updated every five to ten years, and this is just a first volume.

The closest work conceptually to this book are the two part volumes edited by Stephen Haber.<sup>4</sup> The first one, *How Latin America Fell Behind: Essays on the Economic Histories of Brazil and Mexico, 1800–1914* appeared in 1997 after a first conference on the topic at Stanford University in 1992. As the subtitle suggests, the book contains eight essays on the economic history of the two major economies in Latin America, six of which pertained to Mexico. It also contains a now classic article by Stanley L. Engerman and Kenneth L. Sokoloff entitled "Factor Endowments, Institutions, and Differential Paths of Growth Among New World Economies: A View from Economic Historians of the United States." This foundational chapter would later reappear in various ways

<sup>4</sup> I thank Stephen Haber for his reading and positive assesment of this work.

(Engerman and Sokoloff, 2000, 2002) providing the intellectual foundation for theories that are still being tested today (Nunn, 2008; Laudares and Valencia, 2022). The second part of this endeavor was published in 2000 and was edited and introduced by Stephen Haber. It looked again at Brazil, with two new chapters, but also expanded to Cuba, with a chapter by Alan Dye. It contained three continent-wide essays on: foreign capital, by Alan Taylor; schooling and suffrage, another classic piece by Elisa Mariscal and Kenneth L. Sokoloff; with concluding remarks by Douglas C. North and Barry R. Weingast.

Other social sciences books have also explored similar topics in times past and present and histories of the region have a long pedigree. In a way they go back to the first chronicles, such as those of Christopher Columbus himself and Bernal Díaz del Castillo, reaching as much esteem as Alexander von Humboldt's *Political Essay on the Kingdom of New Spain* (now Mexico). More modern efforts started with the Cambridge History of Latin America, edited in several volumes by Leslie Bethell (1984). This monumental endeavor starts with colonial Latin America in Volume 1 and ends with modern Brazil after 1930. Historian Jeremy Adelman (1999) explores the problem of persistence and change in Latin American. This book, in turn, follows the tradition of Stein and Stein's (1970) classic *Colonial Heritage of Latin America*, one of the cornerstones of dependency theory. Cardoso and Faletto (1969) provided a now famous Latin American counterpart. Focusing on Brazil, Dauril Alden edited a similar book in 1973 entitled *Colonial Roots of Modern Brazil*, providing political and socioeconomic perspectives on the colonization of the country. Bortz and Stephen (2002) focused on Mexico from 1870 to 1930. Many regional and national histories, as well as monographs, have complemented these first efforts.

In political science, Centeno (2002), using a Tillian framework, argues that Latin America did not develop its state capacity due to the relative low prevalence of international conflicts, a sobering conclusion. Mazzuca (2021) further explores the topic of weak states, tying it to underlying economic structures and elites, especially after independence.<sup>5</sup> More generally, the field of historical political economy has also exploded and will be summarized in a forthcoming Oxford University Press handbook (Jenkins and Rubin, 2023). In their edited volume, economists

<sup>5</sup> We take these topics at heart, in ongoing work on the "Bourbon Reforms and State Capacity in the Spanish Empire" in Chiovelli et al. (2021).

Kehoe and Nicolini (2021) present a monetary and fiscal history of Latin America from 1960 to 2017. In a way their book starts where this one ends. They continue the legacy of the Dornbusch and Edwards now classic *The Macroeconomics of Populism in Latin America* (1991). In turn, Armendáriz and Larrain (2017) focus on contemporary Latin America, but devote the first chapters to deep-rooted factors, demonstrating their importance even for modern debates. The Oxford *Handbook of Latin American Economics*, edited by Ocampo and Ros (2011), looks at development paradigms in the long-term growth performance of the region, macroeconomic and finance topics, and the region's integration into the world economy. Last, but not least, Luis Bértola and José Antonio Ocampo (2012) provide a chronological history of Latin America since independence. This is perhaps the closest existing book and the author's first chapter in the current volume provides a link to their previous important research. We proceed more thematically than chronologically here, accepting the implied trade-offs.

Though we build upon previous contributions, I would like to stress some of the fundamental differences between the present book and these seminal works, especially with regards to *How Latin America Fell Behind* and *Political Institutions and Economic Growth in Latin America*. First there is an obvious one in terms of geographic scope. The first volumes covered two to three countries at most, while this one surveys sixteen different countries, along with a continent-wide chapter. There is also no delimitation with regard to the time period—as in history—though some of the chapters cover colonial times, other focus on the convulsed nineteenth and twentieth centuries, while other look at even more recent interventions. Empirically, the studies present a natural evolution in terms of more disaggregated data, and more modern econometric methods, along the conceptual lines of Valencia Caicedo (2021). By isolating specific mechanisms of transmission, academic findings could be more valuable for policymakers. Not all of the chapters are persistence studies, but all look at an issue that is still relevant for modern times, be it education, democracy, and corruption. The sheer number of studies has expanded the topics covered, from finance, institutions, and infrastructure to colonization, slavery, missions, migration, land reform, multinationals, and elite formation, among others. Rather than emanating from a single conference, the process of production has been more atomized, especially

in times of COVID.<sup>6</sup> I provide a summary of this book next, covering its individual chapters, and finishing with some unifying themes.

### 3 BOOK PLAN

The book itself is composed of twenty chapters, covering fifteen different countries and one unincorporated territory (Puerto Rico), from the southern border of the United States to Argentina and Chile.<sup>7</sup> This introduction summarizes the key contributions by the different teams of authors for their assigned countries, elucidating the purpose of this new volume, and providing some recurrent themes for the current and future research agenda of the economic history of the region. After that, there is one introductory regional chapter, written by Minister of Finance and Public Credit of Colombia José Antonio Ocampo and Uruguayan economic historian Luis Bértola, providing a panoramic overview of the economic history of the region. As mentioned before, this chapter, described later in more detail, also serves as a swivel that connects this book with the last great economic history of the region (Bértola and Ocampo, 2012). There are then seventeen country-specific chapters. The concluding chapter, written by Alberto Diaz-Cayeros,<sup>8</sup> is another attempt to synthesize the body of work presented in this book, while providing a deep reflection about the political economy behind the production of data and research in economic history. This political angle, in my view, is fundamental to better understand the complex and rich history of our region.

The authors were selected because of their expertise about particular countries and topics and given full editorial liberty to develop their own contributions. As a result, the book incorporates many different topics,

<sup>6</sup> Still, there are a series of conferences and organizations that have been fundamental in the development and spread of these ideas, including LACEA's Economic History Network, RIDGE's Historical Development and Towards Sustained Economic Growth Workshops, the Stanford-LSE-Andes long-range development in Latin America conferences, the LANE-HOPE online seminar, and, UBC's Culture and Persistence Group and the Association for the Study of Religion and Culture.

<sup>7</sup> We could have covered Faulkner's South, but we intended to keep the book Latin American. In alphabetical order, the book covers Argentina, Bolivia, Brazil, Chile, Colombia (two chapters), Costa Rica, Ecuador, El Salvador, Guatemala, Mexico, Paraguay, Peru, Puerto Rico, Suriname, Uruguay, and Venezuela.

<sup>8</sup> The current Director of the Center for Latin American Studies at Stanford University.

writing and research styles. As such, it does not follow a chronological structure, detailing the history of each country over time, but rather focuses on specific and fundamental topics for a given nation. I summarize in this introduction these diverse contributions and provide some unifying themes and approaches. The chapters are approximately 10,000 words long and attempt to crystallize the most up-to-date knowledge of a particular topic in a country's history. The extensive bibliography provides a resource for the interested reader to take a more in-depth investigation of a given issue or country. The chapters themselves are of different styles as well. Some of them offer expert summaries about a given topic, such as the legacy of the Pinochet regime in Chile or the role of colonial government in Peru. Others provide concise summaries of specific papers, published in some of the best journals of the discipline, such as Eduardo Montero's work on land reform in El Salvador (*Journal of Political Economy*, 2022) and Esteban Méndez and Diana van Patten's work on the United Fruit Company in Costa Rica (*Econometrica*, 2022). Lastly, other chapters offer completely new empirical analyses such as the long-term impact of the *concertaje* colonial system in Ecuador or the interplay of public education and natural endowments in Puerto Rico. There are still important narrative thread lines, such as the role of international migration, colonial institutions, elites, and land tenure patterns.

### 3.1 Chapter Summaries

As mentioned before, the first chapter provides an overview of the economic history of the region as a whole. It is written by no less than the authors of the last major economic history of the region, Bértola and Ocampo. It is an honor to have their contribution in this volume, which also serves as a connecting vessel with the historiographic past of the region. I hope that the reader can appreciate both the value of this opening chapter, as well as some of the new approaches, such as network theory, Regression Discontinuity Design, Instrumental Variables, and mathematical models offered in the other contributions. Economic historians Bértola and Ocampo,<sup>9</sup> stress how the economic history of Latin America has been characterized by strong economic fluctuations and a

<sup>9</sup> Coincidentally, I wrote my first chapter along with Nancy Birdsall and Augusto de la Torre on the Washington Consensus for the "The Oxford Handbook of Latin American Economics" edited by José Antonio Ocampo and Jaime Ros (2011). This traditional

process of economic divergence with respect to the world leaders. This unfortunate pattern appears to persist up to today. This, in part, is due to the commodity boom and bust cycles in a natural-resource intensive region, which has not been able to fully integrate into a more modern and technologically advanced global market. These traditional fluctuations, which have affected our economies for centuries, have now been exacerbated by the socioeconomic effects of the COVID-19 pandemic, leaving the countries in the region in a state of deep economic, social, and even political crisis. To build their argument, the authors bring to bear new data and long time series on GDP, human development, inequality, and poverty. Though the outlook is gloomy, this useful panoramic chapter represents the best of the economic history tradition of the Latin American region. As Finance Minister of Colombia, one can only hope that José Antonio can contribute with his expertise and take informed policy decisions that can improve the welfare of the Colombian economy and its citizens.

After this continental overview of the economic history of Latin America, the book presents a series of chapters by young researchers. Focusing on individual countries and regions, the chapters bring together state-of-the-art methodologies and highly disaggregated data to examine the economic impact of specific economic phenomena such as migration, slavery and plantation economies, colonial institutions, elite formation, and land tenure patterns, to name a few. This emphasis on rigorous empirical work is an important methodological thread line of this volume. In that sense, the book is more methodological and empirical, than ideological compared to previous publications. Armed with these methods, the authors can provide more targeted, and hopefully useful answers.

A good example of this modern approach is the chapter by Fernando Arteaga for Mexico. The importance of Mexico in Latin American colonial history cannot be overemphasized. New Spain (Mexico) was one of the two initial Spanish viceroyalties in the Americas, along with Peru. Fernando provides an overview of Mexican state formation almost since the arrival of Cortes. He focuses on two critical junctures, (1) its origins after the Spanish conquest of Mesoamerica in the 1518–1535 period, which required a careful but steady incorporation of indigenous communities into a Spanish state; and (2) the global conflicts that led to

view, of looking at the role of generalized policy reform for the continent, is criticized by Diaz-Cayeros in the conclusion, defending a more country specific approach.

Mexico's secession from the larger Hispanic community in 1808–1821, by which the empire imploded after failed governmental reforms that aimed toward centralization. To make progress on these important questions and structure the historical analysis, Fernando develops a simple theoretical framework, that, in the words of the author, “emphasizes the co-evolution of institutions that foster trade, exchange, and markets and institutions that limit conflict and predation.” These forces, in tandem, produce different stable equilibria. Aside from the model, Fernando contributes with highly disaggregated data on indigenous settlements and Spanish cities in the eighteenth century. This combination of theory and data epitomizes a modern approach to economic history. In the historical account, Fernando stresses the role of trade routes and the importance of the Bourbon reforms, in line with Ellingsen (2021) and Chiovelli et al. (2021). Overall, his chapter for Mexico is a great example of modern historical political economy, a booming field.

The other main seat of Spanish power in the Americas was Peru.<sup>10</sup> In her chapter for this important colonial center, Jenny Guardado focuses on the role of provincial governors, known as *corregidores*. Jenny has studied this topic extensively and has several publications in political science on Peruvian colonial offices. Here she provides an excellent summary of this scholarship, while contributing with a new empirical analysis. Namely, she documents how changes in key vertical and horizontal checks and balances influenced the value of this position between 1687 and 1751. In particular, relying on temporal variation in the composition of key fiscal and judicial oversight bodies of *corregidores*,<sup>11</sup> as well as the cross-provincial distribution of treasuries, parishes, and bishop seats, she estimates the relative effect of each for office prices. Exploiting this variation, she finds that *audiencias* and the density of parishes are a more relevant determinant of prices vis-à-vis other fiscal and religious actors. Given the correlation between valuation and performance, the case of Peru shows that the colonial framework of competing and overlapping jurisdictions was not always ineffective in constraining officials' behavior at the time. This revisionist take on a classic topic is valuable in the modern analysis of Spanish colonial administration, which is already influencing modern scholarship in the region. The lessons for colonial Peru are

<sup>10</sup> The omission of Cuba is discussed in the concluding remarks.

<sup>11</sup> Namely, the *audiencia* and the *Tribunal de cuentas*.

of general political and economic interest, for developing countries that are now attempting to improve the inner workings of their bureaucracies.

In his chapter for Ecuador, Alex Rivadeneira scrutinizes the long-term effects of the *concertaje* colonial labor institution. This is a classic persistence paper, looking at a fairly overlooked system of colonial debt peonage of *hacienda* workers. As such, the paper has a strong resemblance with Melissa Dell's path-breaking contribution on the *mita* labor system in Peru and Bolivia (2010). Alex's academic contribution includes the collection and digitization of historical tax records from Ecuador's Spanish colonial regime. For identification, he exploits variations provided by the relative intensity of labor requirements of different crops, following modern research in this area and classic thinking on factor endowments. He first finds that an increase of 10 percentage points in *concertaje* rate increases contemporary poverty by almost 5 percentage points, which is sizable. He then explores several channels of persistence that might explain these baseline findings. As *hacienda* workers inherited their status to children, they typically substituted school for work.<sup>12</sup> Consequently, districts with higher *concertaje* rates have been historically associated with lower educational levels. In addition, the voting restrictions against illiterates casted them away from public affairs, leading to a reduced provision of public goods such as roads. As a result, Alex finds a higher fraction of people working nowadays in the agricultural sector. In a companion piece, Alex is working with *individual* level data, to assess the impact of *concertajes* at this higher degree of disaggregation, a very promising way forward. This chapter constitutes a full-blown research article that expands our understanding of the colonial institutions of the Spanish empire, which ranged from slavery and plantation regimes to indigenous missions.

In his chapter for Bolivia, José A. Peres-Cajías studies the case of public education and indigenous people from the 1880s to the 1950s. This is an important topic, which has been examined in other contexts, since the seminal work of Alesina and La Ferrara (2005). However, despite the evidence for Africa, Europe, and the United States, very little is known about this central issue for Latin America. The author uses the micro-level data from the 1976 Bolivian census to (1) quantify the evolution of literacy levels at the department level (the second administrative

<sup>12</sup> This mechanism is reminiscent of work for Colombia by Galán (2018) and Uribe-Castro (2020).



unit in Bolivia); (2) describe the evolution of literacy levels of three different ethnic groups; and (3) trace the evolution of literacy levels at the provincial level (the third administrative unit in Bolivia) in one Bolivian department. The high degree of disaggregation allows the author to go beyond the department level and, most importantly, to study trends by different ethnic groups (predominantly Aymara and Quechua). With these data, the author scrutinizes different educational reforms that took place during the first half of the twentieth century. He finds a large degree of heterogeneity, from a regional, ethnic, and gender perspective. Though descriptive, this chapter provides a very important first step in quantitatively answering an important debate in the Bolivian historiographical literature. In follow up work, one could think about expanding the econometric analysis, perhaps exploiting the regional rollout or implementation of the reform. José is already working on extending these topics with Liliana Serrate.

In their chapter for Argentina, Federico Droller, Martin Fiszbein, and Santiago Perez write an authoritative account of the age of mass migration in Argentina. This is a fundamental topic, not only for Latin America, but also world economic history. Though much is known about migratory flows during the age of mass migration to the United States from Europe (Abramitzky and Boustán, 2022; Sequeira et al., 2020) relatively less is known about how these flows impacted Latin America. The chapter gathers three notable experts of this topic for Argentina to provide both a summary of this crucial phenomenon for the South American nation and new facts about the selection of Italians. Argentina was the second largest destination country during the Age of Mass Migration, receiving nearly six million migrants. The authors first summarize recent findings characterizing migrants' long-term economic assimilation and their contributions to local economic development. The reviewed evidence shows that Europeans experienced rapid upward mobility in Argentina and immigration contributed positively to the process of economic development. Immigrants in Argentina were not only more likely to exhibit upward mobility than those in the United States, but also less likely to exhibit downward mobility. The authors then provide a new analysis of the selection patterns of Italian migrants to Argentina—the largest migratory group to this main destination. Their analysis of this initial stage of the migrants' history shows that Italians who moved to Argentina were positively selected on the basis of literacy with respect to the general Italian population, complementing existing evidence of rapid

upward mobility and contribution to economic growth at destination. This chapter consolidates an important body of knowledge and offers an example to follow for other countries in the region. Migration remains, in my view, a core element of long-term economic growth, and its distribution among Latin American regions could well explain a large part of our heterogeneous development patterns.

In a similar vein, André Lanza, Manas Maniar, and Aldo Musacchio study the impact of European migration in Brazil. They focus on São Paulo, one of the three classic poles of Latin American development according to Hirschman (1968). In terms of migration, Brazil received over 4.5 million people, mostly from Italy, Spain, and Portugal. São Paulo alone received around 2.5 million migrants, most of them through a state-sponsored program. In their chapter, the authors present a new analysis of this phenomenon, focusing on the impact in agriculture, from 1898 to 1920. There are two novel angles in this context, relative to Argentina, first the focus on rural areas, and especially coffee, and second the interplay that existed in Brazil between migrant and formerly enslaved labor. Their chapter contributes to the historiography of immigration and agriculture in Brazil in at least three ways. First, they document in a systematic way some of the traditional insights of the Brazilian historiography around coffee production, which highlighted the importance of the expansion in the coffee frontier to explain the improvement in productivity in Brazil. Second, they are the first ones to examine systematically the role of European migrants as drivers of agricultural productivity and mechanization of coffee farms—using plows, harrows, cultivators and eventually tractors. Third, they provide plausible hypotheses of why coffee farms in São Paulo, by 1920, started to adopt tools and machinery to substitute labor. These findings are important for what constitutes one of the most productive agricultural (coffee) regions in the world, and the eventual pole of industrial development of the largest economy in South America. They also complement those of Argentina, as well as Rocha et al. (2017) on the persistence of human capital and long-term development in Brazil.

The first chapter for Colombia, by Javier Mejía, is a great example of the usage of modern methods applied to a classic economic history question. Javier focuses on the consolidation of economic elites in Antioquia, Colombia, one of the other three canonical poles of development according to Hirschman. He focuses on the relationship with banking, from 1870 to 1930. This is a traditional topic that has been studied extensively since the seminal historical contribution of Twinam (1982). Mejía

contributes with new data and modern network analysis, to pinpoint the tight relationships between the economic and financial elite of one of the most important and economically productive regions of the country. In the words of the author, “the paper shows that the network position of an individual determined his likelihood to be a banker and the performance of her banking portfolio.” Local connectivity was useful for having access to investment opportunities in the banking business, but it did not represent an advantage for their success. Bankers that were close to industrialists in the social network were more successful; meanwhile, those closer to politicians were less successful. In the long term, bankers amalgamated with industrialists. This was done through an intricate network of marriage, friendship, and political connections as well as through the systematic use of commercial houses to control banks and channel their resources to industrial projects. This novel and careful approach to the study of elite formation and persistence in Colombia offers a path-breaking and fruitful avenue of future research for other countries in the region.

In their chapter for Colombia, Leopoldo Fergusson and Juan F. Vargas tackle the important nexus between democracy and conflict. Leopoldo and Juan Fernando themselves are two of the most prominent Colombian experts in the areas of political economy and conflict. Here they study one of the major reforms since Colombia’s independence: the 1853 Constitution. The authors argue that such reforms often failed to curb violence and sometimes even actively, though perhaps unintentionally, exacerbated violent political strife. Democratic reforms were unable to set the ground for genuine power-sharing. They were often implemented amidst a weak institutional environment that allowed powerful elites, the reforms’ *ex-ante* political losers, to capture the state and offset the benefits of the reforms for the broader society. They conclude by highlighting the implications of the argument for other countries facing democratic reforms, as well as for Colombia’s current peace-building efforts. I agree with the authors in this assessment and think that the Colombian case may well be one that applies to neighboring Venezuela, as described next. Needless to say, the consolidation of democracy and the reduction of violence are key objectives for the Latin American region, one of the hardest hit in terms of crime globally (Sviatschi, 2022).

Dorothy Kronick and Francisco Rodríguez offer a broad overview of the role of political conflict and economic growth in Venezuela. On the

policy side, as the director of Oil for Venezuela, Rodriguez is also a prominent personality in the thorny Venezuelan reality. The authors examine three economic crises since the independence of this country, in the nineteenth, twentieth, and twenty-first centuries. But rather than focusing on class conflict and resource dependence, the authors focus instead on intra-class conflict. Venezuela passed from producing almost four million barrels per day in the 1970s to less than one million barrels in 2020. They argue that the root of the different crises in these three epochs was not a pitting of rich against poor, but rather elites fighting against each other. In the words of the authors, “Others posit that Venezuelan political institutions failed to sustain growth because they were insufficiently inclusive; we suggest instead that they inadequately mediated intra-elite conflict.” This argument for Venezuela echoes the one that Mazzuca (2021) expounds for other countries in Latin America in his book. Reading the chapter for Venezuela, I could not stop thinking about the parallels with the Colombian case, just described.<sup>13</sup>

It is a pleasant surprise to count with a contribution from one of the South American Guyanas, in this case the former Dutch colony of Suriname. I have to confess here my South American ignorance about three countries that are geographically in the continent, but are covered in a halo of mystery, gravitating more toward their former European colonizers than our more stereotypical Latin American realities. Still, once one starts exploring their histories, one finds common threads such as slavery and the plantation economy, which is a fundamental aspect of the economic history of Brazil (Laudares and Valencia, 2022) and other countries in the region. In their chapter, Abe de Jong, Tim Kooijmans, and Peter Koudijs describe the development of the colonial plantation economy of Suriname under Dutch rule with emphasis on the second half of the eighteenth century. They discuss the early years of the colonies, the plantation growth years in the second half of the eighteenth century, and the long-term consequences in the nineteenth century of the slave-based plantations in Suriname. In particular, they discuss in detail a large set of plantations financed through two Amsterdam bankers’ intermediary companies. The exercise is valuable as it both reviews the Dutch and English language literatures, while conducting an original archival data exercise. I can only hope that this chapter encourages people to give

<sup>13</sup> See, for instance, the similarities between the *Punto Fijo* accords in Venezuela and the Colombian *Frente Nacional*.

more consideration to our forgotten South American neighbors and spurs more economic research on their fascinating colonial and post-colonial histories, which often reach us through European sources and narratives.

In their chapter, Felipe González and Mounu Prem, two experts of the Chilean economic history literature, provide a superb summary of the legacy of the Pinochet regime. Such a complete summary could not come at a better time, while Chile debates and votes to change its constitution, another legacy of the dictatorial regime, fifty years later. The authors masterfully balance the more than thirty years of Chilean democracy, that came after the almost two decades of dictatorship, from 1973 to 1990. Their chapter provides an overview of the dictatorial legacies with an emphasis on the distribution of economic and political power, as viewed from the most recent literature in economics. It also describes the waves of discontent which have attempted to change the most important legacies during the past twenty years. They end with a discussion of the current path of institutional change that could put Pinochet's legacy to an end, offering an important message of hope. The chapter is a joy to read, as the authors have written some of the most important research pieces in the topic. It also adds a fundamental *political* dimension to the book, in this case by exploring the economic legacies of one of the most brutal dictatorships in the southern cone. The piece complements work on other dictatorships such as the Argentinian and Brazilian ones (Klor et al., 2021; Ferraz et al., 2020) and would hopefully spur more research on this topic, for instance, in Paraguay, Uruguay, and Central America.

In our chapter for Paraguay, along with Moisés Pedrozo, we had a twofold objective. First, we present a summary of two contributions: Valencia Caicedo (2019) on the role of Jesuit missionaries in fostering human capital accumulation in the Guaraní lands, and Alix-García et al. (2022) on the multifaceted impact of the War of the Triple Alliance on the Paraguayan society in the short, medium, and very long run. In municipalities where Jesuits carried out their apostolic and educational efforts, median years of schooling and literacy levels remain higher by 10–15%. These differences in attainment have also translated into higher modern *per capita* incomes (or lower poverty rates) of nearly 10%. The second part of the chapter looks at the legacies of the Triple Alliance War, which generated an extreme sex ratio of three women per men. We show how this unprecedented sex ratio imbalance approached unity relatively quickly, while leading to higher out-of-wedlock births. In the medium term, female educational outcomes increased in areas more affected by

the conflict. The long-term results indicate that females living in areas more exposed to biased sex ratios are more likely to be raising a child without a partner today and modern households are more likely to be headed by a woman.

Our second objective, beyond econometric identification, was to present or expand on new results that were overlooked in the original contributions. For the Guarani Jesuit missions, we expand on cultural mechanisms of persistence. These include occupational persistence, inter-generational knowledge transmission, and indigenous assimilation. These types of credible transmission mechanisms are fundamental to better understand the economic persistence of historical shocks, well beyond the Paraguayan case. These cultural mechanisms, especially with regard to gender norms, are also crucial in the case of the Triple Alliance War. For that piece, we expand on the role of marriage markets in the aftermath of the conflict. We find, using marriage records, an increase in brides age, a decrease in grooms age, and a corresponding decrease in the marriage age gap, in line with a competition marriage model. This demographic channel for conflict complements the more political or economic mechanisms stressed in the conflict literature. The chapter ends by suggesting avenues for future research on Paraguayan economic history, including the role of its strongmen.

In their chapter for Uruguay, economic historians, Emiliano Travieso and Alfonso Herranz-Loncán, examine the role of urban primacy in the consolidation of a monocentric economy. They document the extreme concentration of economic activity in Montevideo, while showing how this phenomenon extends to other countries in Latin America, to a lesser extent. Here it is important to note that Latin America is one of the most urbanized regions in the world, well above what would be predicted by its level of economic development. The authors draw a historical parallel with Argentina and examine colonial, geographic, and agricultural production patterns that might have led to this urban reality. They emphasize instead the role of transportation infrastructure in general and the particular role of railroad development. The authors conclude by looking at the potential role of policy for alleviating the costs of monocentric economies. I was happy to read a solid contribution about a country that has been oft overlooked in modern economic history, perhaps because of its size. To the best of my knowledge, there is no economic analysis of the important Cisplatine War (1825–1828) just to give an example. The focus on transportation infrastructure is key for the region and has been studied

extensively in more developed areas, such as United States and Europe (see, for instance, Donaldson and Hornbeck (2016) or Hornung (2015)).

I am particularly proud of the contributions for Central America and the Caribbean, regions which are often forgotten in the academic and policy debates about the continent. In his chapter for El Salvador, Eduardo Montero provides a summary of his job market paper on the lasting development consequences of the 1980s land reform. Truth be told, we knew surprisingly little before this article about one of the key policy instruments that has been long debated and sometimes implemented in Latin America. Eduardo contributes with new data and a clever identification strategy, that exploits the 500-hectare threshold for redistribution. In the words of the author, “Comparing similar properties just above and below this ownership threshold, I present evidence on the lasting impacts of cooperative property rights on crop specialization, productivity, and worker equity in El Salvador.” He finds that land reform cooperatives are i) less likely to produce cash crops and more likely to produce staple crops; ii) less productive when producing cash crops but more productive when producing staple crops; and iii) have more equitable worker incomes compared to properties that did not become cooperatives. The results highlight the equity-efficiency trade-offs associated with land reforms in El Salvador, and beyond. Eduardo’s work was recently published in the *Journal of Political Economy*. A series of articles have now explored similar cases in Peru, Colombia, and Chile. I highlight here the provocative book by Michael Albertus (2015) suggesting that more land reforms were enacted during dictatorial regimes in Latin America, a controversial conjecture worth exploring in other contexts.<sup>14</sup>

Esteban Méndez and Diana Van Patten provide another summary of a high-level contribution in their chapter for Costa Rica. Rather than land reform, they focus on the effects of one of the largest multinationals in the Americas, the United Fruit Company (UFCo). The reputation of this company transcends economics and figures prominently (and tragically) in Gabo’s fictional town of Macondo in *One Hundred Years of Solitude* and Colombia’s history. The authors focus on Costa Rica, where the firm was given a land concession between 1899 and 1984. Using historical records along with census data, they find that the UFCo had a positive

<sup>14</sup> See also Eslava and Valencia Caicedo (2023).

and long-lasting impact on living standards in the regions where it operated. Moreover, satellite data shows that regions within the concession's boundary are more luminous at night (appear richer) than those outside the UFCo region even today. Historical accounts suggest that investments in local amenities carried out by the UFCo to attract workers are the main drivers behind its positive effects. The chapter then discusses the role of institutions and labor mobility in determining the UFCo's effect, and how it might differ in other Latin American countries. This last point is crucial and could help explain the darker realities associated with the UFCo in other Central and South American countries, suggesting fruitful avenues for further research. This article just came out in *Econometrica*, showing how rigorous historical work of understudied and overlooked regions can succeed at the highest level of the economics profession.

In her chapter for Guatemala, prominent philosopher and religious scholar Rachel McCleary provides a very detailed account on the role of religious missionaries from 1880 to 1950 in the Central American country. This angle is different from the focus on Catholic missionaries in Mexico and Paraguay, during earlier colonial times.<sup>15</sup> Rachel's chapter is part of a broader book project on a topic she has been studying for decades. I am grateful that she shared some of her preliminary findings for this book and can only recommend her forthcoming contribution. Here she offers a fascinating account on Pentecostalism arrival to Guatemala, starting in the 1880s. The tale details an intrigue that includes missionaries, their mother congregations, as well as local and political authorities. As such, it delves into the political economy of religion, one of Rachel's forte (evinced in her joint work with Robert Barro *The Wealth of Religions*, 2019). She shows how both the Catholic Church could not compete with the Protestant offensive and how the US mission boards encouraged doctrinal heterogeneity. Though Rachel focuses on Guatemala, her expertise, the lessons from this chapter resonate with other countries such as Brazil and a Latin American region that is recently becoming less Catholic, and more Protestant, and even some countries in Africa.

<sup>15</sup> In previous work, Rachel had already shown that in low-literacy areas, when missionaries started using the radio for their evangelizing activities, there was little impact on human capital acquisition (McCleary and Pesina, 2011).



In their final chapter for Puerto Rico, Matthew Curtis and Mateo Uribe-Castro look at the expansion of public education in the island.<sup>16</sup> The authors show the hardships that Puerto Rico had in expanding its system of public education, and how there were pronounced regional differences in increased schooling. They exploit variations in crop suitability as well as detailed records from the US colonial government, making this an ideal setting to explore the role of agriculture in education. The chapter presents a newly constructed panel dataset of enrollment and attendance rates from 1907 to 1943. With this detailed data, the authors find that “differing agricultural production technologies, alongside policy decisions and rates of urbanization, help explain why the growth rate of education varied across regions.” The findings extend well beyond Puerto Rico, and echo the findings of Mateo’s careful work on the role of coffee and human capital in Colombia (Uribe-Castro, 2020). The chapter thus provides a credible and modern empirical test of Engerman and Sokoloff’s factor endowments hypothesis, centered on human capital acquisition.

### 3.2 *Unifying Themes and Lessons*

Having covered the individual chapters, I wanted to synthesize some of the unifying themes of the book. Some are fairly classic in the Latin American historiography, such as the role of slavery and plantation economies in Suriname and natural endowments for Puerto Rico, along the lines of Engerman and Sokoloff. Still, these chapters bring to the table new archival work and solid empirical analysis. Something similar can be said about the study of colonial Mexico, Ecuador, and Peru, where the authors contribute with theoretical models, new data, identification methods, and in general a new way of looking at specific colonial labor institutions and bureaucracies, advancing the literature forward by moving beyond national institutional or state capacity measures. A great example of this is the contribution for El Salvador’s land reform, a topic that has been discussed *ad nauseam* in Latin America, but never before studied with econometric rigor, perhaps due to the lack of high-quality data. Just as

<sup>16</sup> I rather not enter a debate on whether Puerto Rico, technically an unincorporated territory of the United States, is part of Latin America or not. Beyond its cultural heritage, I thought that some of the issues and problems in the island certainly resonate with those of the continent. Being part of the United States, I must say, also means that Puerto Rico has excellent administrative records.

the case of one of the largest US multinationals and its impact in Costa Rica during the twentieth century.

I also wanted to stress some topics which had not been studied as intensely before and offer new answers to the question of why are some areas of Latin America poorer than others, and ultimately, help to explain the roots of our underdevelopment. I think that migration certainly fits this category, with two excellent studies for Argentina and Brazil, which could pave the road for other countries. At the end of the day, missionaries were also migrants in the cases of Paraguay and Guatemala. But there are also other key topics, such as ethnicity, best expounded in the chapter for Bolivia, which also plays a key role in the missionary groups of Guatemala and Paraguay. Another fundamental topic which I think had been overlooked before was that of elite formation, in the very modern chapter for Colombian networks, as well as the discussion of inter-elite conflict in Colombia and Venezuela. This last chapter for Colombia, as well as the one for Paraguay, also brings conflict to the center of the development agenda for the region, though more remains to be analyzed.<sup>17</sup> I believe that this is important in a continent that has suffered fairly little in terms of international wars, but extensively from foreign intervention, civil wars and, most recently, urban crime (Blattman et al., 2021; Sviatschi, 2022). A good exploration of some of these long ignored topics is the chapter for Costa Rica, on a canonical US multinational. On a different note, the chapter on urban primacy and infrastructure development in Uruguay also offers a promising avenue for more spatial research, and very much resonates with the cover of this book, by award-winning illustrator Daniel Liévano.

More broadly, the book offers three fundamental lessons. The first one is methodological and relates to the importance of good data, appropriate causal methods, and credible mechanisms of transmission. Such methods are important to advance on causality and identification, but also to have a more productive dialogue with policymakers. The second is an invitation to go deeper into the histories of the different Latin American countries. Many contemporary phenomena appear to have deep roots, going back to the colonial past. Here the interaction with more recent historical shocks as well as with political forces is important. The third, stressed in the conclusion, is to design policies that are country specific, and respect the

<sup>17</sup> See Huaroto, (2022) for a novel analysis of the Pacific War.

particular histories and idiosyncrasies of the nations that its current citizens inhabit. For instance, within the institutional agenda, the discussion can be moved forward when talking about specific colonial institutions and their legacies. This country-specific paradigm, often aided with sub-national data, offers a way forward when thinking about the development agendas and the democratic processes of the region.

### 3.3 *Teaching Plan*

As a student in American universities, the author was surprised to see that serious economic history and Latin American Studies courses were still taught using Galeano's *Open Veins of Latin America*. The economic history of the region has also been strongly influenced by dated Marxist and dependency theory analyses, from which we depart, as unsatisfactory or incomplete explanations of underdevelopment. Admittedly, these are also not the times of the Washington Consensus anymore, where one-size-fits-all policies were pushed throughout the region (see Birdsall et al., 2011; Goldfajn et al., 2021 and Diaz-Cayeros, this book). We hope to offer a more scholarly and less ideological alternative to instructors in Latin America, the United States, and beyond.

To this end, the book as a whole could be used for a semester long course on Latin American economic history, as we plan to develop at the University of British Columbia. A special summary module would also be incorporated in a virtual class on the topic organized by the University of Pennsylvania.<sup>18</sup> The instructor could choose to proceed either thematically or chronologically. Parts of the book could also be used for modules on Central America, South America, or the Caribbean, as well as thematically covering some of the core topics stressed above, such as colonial institutions migration, elite formation, or conflict. The chapters will also be available separately, so they can complement specific discussions on any of the sixteen countries analyzed, or the more general Latin American chapter. The level itself could go from an advanced undergraduate, masters, or topics course on Latin American or developing countries economic history, similar to the one currently taught at Harvard College. We hope that the volume can be reprinted and translated into Spanish and Portuguese, for now it is in English, the de facto *lingua franca*

<sup>18</sup> For more information on this initiative, see <https://www.pismlatamcourse.org/>

of the economics profession. But why not dream, as a potential author suggested, and think about eventual translations in Quechua, Aymara, Mapuche, or Guarani? We also hope that this is just the first volume, and that future editions could cover some of the gaps, discussed later.

#### 4 ACKNOWLEDGEMENTS

To write a new economic history of a world region is a monumental challenge, a task that becomes almost Gargantuan for a region as complex and convulsed as Latin America. I believe that there is no better (or other) way to do this effectively, than as a team effort. An edited volume is as good as its set of authors, so first and foremost I would like to thank each and every one of them, in alphabetical order: Fernando Arteaga, Luis Bértola, Matthew Curtis, Abe de Jong, Alberto Díaz Cayeros, Federico Droller, Leopoldo Fergusson, Martin Fiszbein, Felipe González, Jenny Guardado, Alfonso Herranz, Tim Kooijmans, Peter Koudijs, Dorothy Kronick, André Lanza, Manas Maniar, Rachel McCleary, Javier Mejia, Esteban Méndez, Eduardo Montero, Aldo Musacchio, José Antonio Ocampo, Moisés Pedrozo, Santiago Perez, José Péres Cajías, Mounu Prem, Alex Rivadeneira, Francisco Rodríguez, Emiliano Travieso, Mateo Uribe-Castro, Diana Van Patten, and Juan Fernando Vargas. The debt of gratitude is even larger, when the task was performed *ad honorem*, so sincere thanks for your time, effort, and support for this project, which finally sees the light. Ultimately, this book is not more than an academic conversation among friends, about topics that we all feel passionate about, pertaining the development, or lack thereof, of our beloved region. Perhaps the most important contribution behind this book is the consolidation of a group of young and established scholars working on the rich economic history of the region.

A special thanks to Francisco Eslava, who helped me read all of the chapters, providing insightful comments that improved the flow of the interconnected pieces. He also helped me organize a team of more than thirty researchers, making this a veritable joint and global effort. Moisés Pedrozo also provided diligent research assistance. A series of country experts provided specific feedback about individual chapters. Each chapter went through two to three rounds of editing and refereeing before publication. Though no process is perfect, this was to ensure both a proper standard of quality as well as to try to harmonize and connect the different contributions. For their help in doing all this, I want to

thank Gustavo Tovar Albuquerque, Carlos Archer, Pablo Astorga, Giorgio Chiovelli, Raul Duarte, Nicholas Gachet, Idaliya Grigoryeva, Felipe Grosso, Eduardo Hidalgo, Daniel Jaramillo, Humberto Laudares, Omar Licandro, Nicolás Lillo Bustos, Luis Roberto Martínez, Marcos Martínez Sugastti, Ben Milner, Patricia Paskov, Juan Felipe Riaño, Fernando Secco, Pablo Selaya, Francois Seyler, Juan David Torres, German Vega, and Tatiana Zárate. I hope to see them, especially the more junior ones, as contributors in their own right in the not to distant future.

A special thanks to Daniel Liévano, a young and successful artist and dear friend, who illustrated the book. I first thought that it would be good to have Frida Kahlo's *Roots* painting (1943). I had also thought about Uruguayan artist Joaquin Torrez Garcia, and his upside down map of the region, which is also the symbol for RIDGE. This led to conversations with art collectors, copyright holders, and artists. I had followed Daniel's career from afar, illustrating for *The Economist*, the *New Yorker*, the *New York Times* and Haruki Murakami's novels, and never thought we could actually work together. After a few conversations about the book, the individual chapters, and our region, Daniel came up with five designs from which it was very hard to pick from. We jointly decided on an image that does show the roots of the Kahlo painting, but has a lot more economic meaning, as these roots become themselves the traces of the cities we inhabit. Now, if I were to pick only one image to illustrate economic persistence in the region, this would be it.

I would like to thank our initial editor, Elizabeth Graber, for her encouragement and patience, dating back from a fruitful conversation with Humberto Laudares at a conference in Boston, many years back. Her unwavering support for this project is one of the main reasons you can read these pages today. I also thank two anonymous referees, who gave a positive verdict as well as insightful comments about the original publishing proposal, I sincerely hope that we have fulfilled their expectations and assuaged their misgivings. Thanks as well to the entire editorial team at Palgrave/Macmillan, for continuing to believe in this daring project, especially Bronwy Geyer.

## 5 DISCUSSION AND CONCLUDING REMARKS

The central question of this book is the same that drove Adam Smith and David Landes to explore the drivers of the wealth (and poverty) of nations. A question, with some variants, to which many of us have

devoted our lives to, perhaps quixotically. Since we all well know that no scientific or academic corpus will be enough to give us a final response, yet we spend our lives in their pursuit. Still, we attempt to provide a sketch of an answer here, focusing on Latin America and the Caribbean region, through the prism of economic history in general and historical development in particular. Perhaps rather than give one answer that fits all cases, we go more humbly, like plumbers or country doctors into the particular malaises that affect the individual countries that constitute the Latin American reality. The richness of topics and approaches covered is only a reflection of the immensity and complexity of the region. The book is not meant to be exhaustive, but provocative, and inspiring. We provide some tentative answers with respect to migration, colonial institutions, elites, and land tenure patterns, but hopefully generate even more questions. I can only hope that both experienced and especially young researchers can learn about some of the general lessons that emerge from this book and can scrutinize them in their own countries or regions of interest.

There are also some idiosyncrasies, inherent to a multiyear long process. I would have hoped to have at least one extra contribution, both for Brazil and Mexico, the largest economies in the region, but this was not possible at the end. Colombia ended up having two chapters, perhaps reflecting the bias and personal connections of the editor with his home country. I also tried very hard to have chapters for Cuba and Haiti, but again this proved untenable, at least for this first version of the book. Cuba has a fascinating and troubled history of colonialism, slavery, sugar plantations, and Communism (Dye and Sicotte, 2004) which is very much worth exploring. The case is similar for Haiti, with slavery, the first independentist revolution in Latin America and the crippling legacy of its odious debt (Gulati et al., 2021). It would also be good to know more about the economic histories of Nicaragua, Honduras, Panama, Belice, the other Guyanas, the Dominican Republic, and other islands in the greater Caribbean. There are no contributions here on the Panama Canal, the rule of Trujillo in the Dominican Republic's past, or Ortega and Bukele in El Salvador's and Nicaragua's present. Having said this, I remain deeply grateful to the authors that collaborated with their time and knowledge to this volume, and can only hope that future editions could expand on the topics covered here.

Though the book is now complete, by no means is it comprehensive, despite the immense efforts. First, by stressing one aspect of the economic history of each of the countries, many others are left aside. There is no

discussion of Peruvian mining, Brazilian slavery, or the Mexican Revolution, just to mention some glaring omissions. This was an editorial decision, where the country experts were given full liberty to develop the topic of their interest. The focus was more economic, with its new approaches in terms of methodology and topics, making the political dimension second order, as reflected in the subtitle. Only the chapters for Chile, Colombia, and Venezuela tackled these issues head on, perhaps offering an interesting direction for future research. In the conclusion, Alberto Diaz-Cayeros provides a way forward, incorporating these key dimensions, especially with regard to class and racial divides. He also makes a profound reflection about the endogeneity of data availability, research questions, and national borders. I thank Alberto for his “closing” words, which really just open new directions and possibilities, as they should.

Overall, I think that the time was ripe to write a new economic (and political) history of the region. The state of the literature is strong and the future, one hopes, promises to be bright. I hope that the final product is more than the sum of its parts, and would prove helpful for casual and advance readers of these fascinating topics. I hope that consumers and researchers appreciate this novel approach of historical development, but as always in academia, remain open to constructive criticism and suggestions. Please consider getting involved in future iterations of this project. For now, I hope you enjoy this founding volume. In closing, I remember the silver letters in the revamped Royal Museum of Central Africa, in Brussels, where a shared history of colonialism reminds the visitor that, “Everything passes, except the past.”

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# Latin American Economic History in the Light of the Recent Economic Cycles

*Luis Bértola and José Antonio Ocampo*

## 1 INTRODUCTION

Latin American economic history during most of its independent life has been characterized by strong economic fluctuations and political instability. Over the long term, the region has experienced a process of divergence with the world leaders, which concentrated in most countries in the decades after Independence and since the debt crisis of the 1980s. Over the last four decades, it has also experienced a reduction in its share in world economic activity. However, economic fluctuations often blur the long-term trends, as periods of fast economic growth, usually linked to commodity booms and abundant external financing, create the illusion of convergence. This is a general pattern that we highlighted in our *The Economic Development of Latin America since Independence*, and in

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a shorter article published in a Global Economic History book (Bértola and Ocampo, 2012, 2016, respectively).

Unfortunately, the historical pattern seems to persist. At the productive level, the bulk of the Latin American countries have not been able to leave their natural-resource-based production patterns completely behind, and to overcome a pattern of trade specialization with limited access to more technologically dynamic segments of the global market or the segments in which the growth of demand is more robust. Despite having a similar resource base, other countries and regions have been able to leverage their natural resource endowments in ways that have enabled them to bring about sweeping economic changes. This is the case of the so-called Western Offshoots (the United States, Canada, Australia, New Zealand) and of some European Nordic countries. In turn, Latin American countries have not been able to go through a process of fast and sustained industrialization and structural change, as some Asian countries have. And despite some progress in human development, lags in education and high levels of income inequality continue to affect the region.

Most recently, it can be added that the end of the last commodity boom generated one of the worst quinquennium in the region's history, on top of which came the dramatic economic and, particularly, social effects of the COVID-19 crisis. As a result, Latin American countries are now facing deep economic, social and, in several cases, political crisis, that create skepticism about their future.

After this introduction, the second section of the chapter looks at Latin America's position in the world economy through its major phases of historical development. In the third, we will focus on external factors that have led to a sequence of crises, a phenomenon that has been severe over the past four decades. The fourth section analyzes regional trends in human development, inequality and poverty. The last presents the major regional challenges in the light of history and recent trends. Unfortunately, due to lack of adequate statistical information, data concentrates in some cases only in the twentieth and twenty-first centuries, or even on shorter time periods.

## 2 LATIN AMERICA IN THE WORLD ECONOMY: CONVERGENCE AND DIVERGENCE

### 2.1 *Regional Pattern*

Over the past two centuries, per capita GDP in Latin America has fluctuated around the world average while going through four major phases: a decline between Independence and about 1870 relative to the world leaders in the industrialization process (which we will also call the West, that includes the Western offshoots); a small convergence with those countries during the export age based on natural resources in 1870–1929; small changes relative to the developed countries during state-led industrialization period in 1929–1980; and another divergence since the 1980s (see Table 2.1). This general pattern does not always hold for the Southern Cone countries (Argentina, Chile and Uruguay) that, as we will see, performed better in the post-Independence period but showed a process of divergence since the first decades of the twentieth century. On the other hand, Latin America has far outpaced Africa in terms of economic growth and continues to do so up to the present. It also outdistanced Asia until the mid-twentieth century, but since 1980 just the opposite has been true. This is reflected in the rising region’s share in the world’s GDP, from 2.5% in 1870 to 5.2% in 1929 and 9.8% in 1980, and in the high levels of Latin America’s per capita GDP relative to the world average in 1929–1980, according in both cases to Angus Maddison’s historical statistics. This was followed by a decline in the region’s share in world GDP, from 8.6% in 1980 to 6.2% in 2020 according to more recent series based on United Nations, and in the fall in the region’s per capita GDP relative to the world average.

According to Maddison’s series, during the colonial period of most countries in the region (sixteenth to early nineteenth centuries), the gap of Latin America with the West was sizable but not widening. This was, of course, a period of slow world economic growth in the leading countries. With the (now called “first”) industrial revolution, the West’s growth accelerated thanks to large productivity gains, and although the growth pace picked up in some Latin American countries, the region’s gap with the now developed countries widened to substantial proportions. Consequently, although the original gap and the legacy of the colonial period are subjects that attract a great deal of interest, the fact remains that new growth patterns emerged after the industrial revolution that radically

**Table 1** Latin American countries: Per capita GDP, 1820–2019

	<i>Bértola-Ocampo (1990 International Geary-Khamis dollars)</i>											<i>UN 2015 market prices</i>			
	1820	1870	1913	1929	1940	1950	1973	1980	1990	2007	2007	1990	2007	2019	
Group 1															
Bolivia						2045	2604	2695	2197	2841	2841	1744	2314	3317	
Colombia	607	676	845	1589	1868	2161	3546	4244	4826	6270	6270	3654	4888	6391	
Ecuador			815	1055	1109	1607	3258	4109	3903	3802	3802	4270	5048	5858	
El Salvador				1216	1298	1739	2653	2454	2449	2917	2917	2070	3397	4007	
Guatemala				1613	2571	1955	3140	3772	3240	4381	4381	2676	3522	4012	
Honduras				1544	1195	1353	1715	1971	1857	2280	2280	1719	2141	2497	
Mexico	733	651	1672	1696	1788	2283	4831	6164	6085	7972	7341	7341	9219	9832	
Nicaragua				1694	1328	1564	2813	2095	1437	1652	1652	1258	1675	1976	
Paraguay				1569	1419	2015	2015	3218	2381	3190	3190	3553	4208	5806	
Peru		840	1024	1892	1895	2289	4001	4248	3008	4970	4970	2700	4438	6612	
Group 2															
Brazil	597	694	758	1051	1154	1544	3758	5178	4920	6196	6196	6263	7937	8556	
Cuba	695	1065	2327	1688	1244	2108	2312	2724	2957	3625	3625	4982	6241	8091	
Dominican Republic						1071	1982	2403	2471	4303	4303	2688	5274	8302	
Panama						1854	4068	4824	4466	6410	6410	5206	9169	15,038	
Venezuela	460	570	1010	2813	2879	5310	9788	10,213	8313	10,263	10,263	10,430	12,526	4897	
Group 3															
Argentina	998	1468	3962	4557	4342	5204	7966	8367	6433	10,407	10,407	8697	14,009	13,818	
Chile	710	1320	3058	3536	3312	3755	4957	5660	6401	12,894	12,894	5440	11,283	13,888	
Costa Rica				1555	1733	1930	4230	4902	4747	7868	7868	5987	9534	12,273	
Uruguay		2106	3197	3716	3536	4501	5034	6630	6465	9129	9129	7917	11,245	16,380	



	<i>Bértola-Ocampo (1990 International Geary-Khamis dollars)</i>										<i>UN 2015 market prices</i>		
	1820	1870	1913	1929	1940	1950	1973	1980	1990	2007	1990	2007	2019
Average	683	790	1559	1956	1993	2442	4451	5441	5067	6791	5903	7879	8354
Average Developed countries	1231	2155	4194	5247	5695	6740	13,963	15,903	19,500	26,411	28,853	40,062	44,539
World	672	880	1538	1789	1958	2108	4083	4512	5150	7468	6715	9145	10,867
Average LA Average / Developed countries	55.5%	36.7%	37.2%	37.3%	35.0%	36.2%	31.9%	34.2%	26.0%	25.7%	20.5%	19.7%	18.8%
World Average	101.6%	89.8%	101.4%	109.3%	101.8%	115.8%	109.0%	120.6%	98.4%	90.9%	87.9%	86.2%	76.9%

*Source* Bértola and Ocampo (2012), Maddison (2010) and the United Nations statistical database. For the first two sources, developed countries refers to the “West”

changed the economic landscape and international relations. It would therefore be difficult to argue that the region's recent history is nothing more than a reflection of its colonial past.

Between 1870 and 1929, Latin America experienced the export age, inserting itself successfully as an exporter of natural resources during the first globalization.<sup>1</sup> As we will see, this process positively affected all countries in the region, though it started earlier in some countries and lagged in others. The shift of global hegemony from Great Britain to the United States after the First World War had significant effects, generating a slow-down in those that heavily depended for their external markets on the first of these countries but benefiting those that were close to the second. Overall, growth significantly accelerated during this period and the share of Latin America in world production doubled. The region average per capita GDP increased relative to the world average, and the gap with the West stopped widening.

The collapse of the first globalization with the Great Depression of the 1930s forced Latin American countries to look inward. Industrialization, which had started in several countries during the export age, now became more widespread, although benefiting in particular the countries with larger domestic markets. The role of the states in supporting industrialization was critical in this regard, and was accompanied by the expansion of that role in many other areas—in social development, in the expansion of infrastructure and in domestic financial development. The period can, therefore, be characterized as “state-led industrialization”, a term that better reflects the broader role of the state and the fact that industrialization was not only based on protectionism—the narrow focus of the traditional term “import substitution industrialization”.<sup>2</sup>

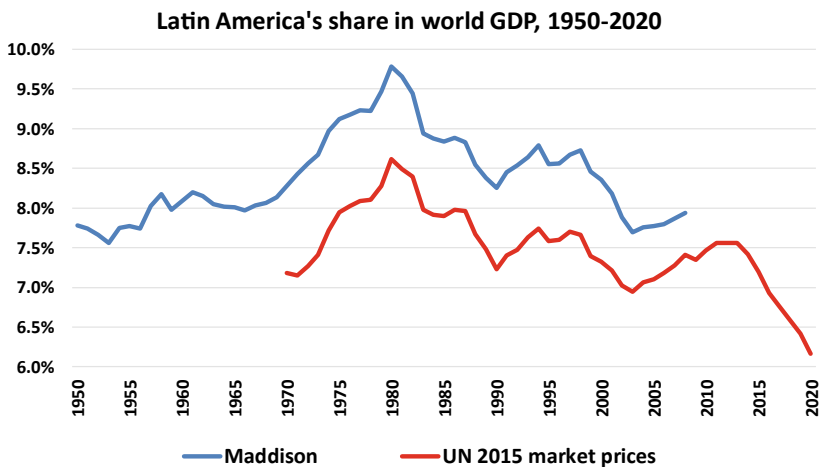
During the Great Depression and the Second World War, regional growth was slightly better than the world average. After this transition, growth accelerated substantially, generating in fact the fastest rate in the region's history: 5.5% a year according to data from the United Nations Economic Commission for Latin America and the Caribbean (ECLAC).

<sup>1</sup> The terminology used here is in line with the recent tendency to refer to the worldwide economic expansion of the late nineteenth century and the early twentieth century as the first globalization.

<sup>2</sup> This concept was developed in a project directed by Rosemary Thorp on the economic history of Latin America in the twentieth century. See Thorp (1998) and Cárdenas, Ocampo and Thorp (2000).

This was reflected in an upward trend in the share of Latin America in world's GDP (Fig. 1), following a trend that had started during the export age—though with a relative stagnation in the second half of the 1950s and through most of the 1960s, associated with a period of weak commodity prices. However, since population growth also accelerated, the region's per capita GDP increased at a rate comparable to the world average, and the gap with the West remained fairly stable.

The debt crisis of the 1980s marked the end of the relative success that the region had experienced for more than a century. It was accompanied by widespread market reforms, a process that had started in the Southern Cone in the second half of the 1970s (Chile, in particular, and to a narrower extent in Argentina and Uruguay) but spread throughout the region since the mid-1980s. The region was able to insert itself in a relatively successful way into this second globalization, in most countries (mainly those of South America) as exporters of natural resources, and in a few (Mexico, in particular) as exporters of manufactures. However, despite this success, the standing of Latin America in terms of per capita GDP fell substantially, both with respect to the developed countries but also to the world at large, reflecting in the latter case the rapid growth of China and India, as well as other Eastern and Southern Asian countries.



**Fig. 1** Latin America's share in world GDP, 1950–2020 (*Source* Maddison [2010] and United Nations statistical database)

In fact, in 1990–2019 the growth rate of Latin America fell to 2.7% a year according to ECLAC data, half of that achieved in 1950–1980. It was also the slowest growing region in the developing world.<sup>3</sup> As a result, the share of Latin America in world’s GDP fell substantially. In fact, as Fig. 1 indicates, the collapse in the share of Latin America in world economic activity took place during three major crises: the debt crisis of the 1980s, the effects of the crisis of a broad group of developing countries that started in East Asia in 1997—generally simply called the East Asian crisis—and the end of the commodity boom in the mid-2010s (see section III below). Since the 1980s have been called the “lost decade”, the latter two periods can be called “lost half-decades”; however, due to the effects of the COVID-19 crisis, which in 2020 hit Latin America and Western Europe hardest, the second period has been the beginning of another lost decade, which will cover 2015–2024 or even longer, and could be in fact worse in terms of GDP growth than that of the 1980s.

## 2.2 *Regional Diversity*

Growth patterns have been diverse among countries in the different phases of development that the region has experienced. For this purpose, a regional typology might be useful, but it is extremely difficult to find one that provides equally useful insights into their development process through the two centuries since Independence. One typology may be more informative in one period but may contribute less to the analysis of another. Despite these difficulties, there are various specific features in the region that have remained in place over time and that even today keep a certain explanatory power. A typology based on these characteristics can be mixed with another, based on size, to understand the diversity of growth patterns among countries.

As discussed by Cardoso and Pérez Brignoli (1979), Latin American societies have been shaped by the interaction of three different societies that came together in the Americas: those of the pre-Columbian indigenous population, African slaves and European migrants. Drawing upon the ideas of these authors, who in turn based their work on many other attempts to construct regional typologies (Furtado, 1976; Sunkel and

<sup>3</sup> According to UN data, Africa did better in terms of GDP growth but slightly worse than Latin America in per capita terms (1.0 vs. 1.2% in 1990–2019), due to rapid population growth.

Paz, 1970; Cardoso and Faletto, 1971), we developed our own typology that is useful for Latin America, based on two criteria (Bértola and Ocampo, 2012).<sup>4</sup>

The first is the different ways in which the transition to the wage-based labor market typical of modern capitalist economies took place. Cardoso and Pérez Brignoli (1979) have identified three major types of transitions. The first type was made by the “Indo-European” regions, where indigenous and mestizo groups constitute a large portion of the population. The relevant countries are located in what were the major centers of indigenous civilizations. Various forms of forced labor were used in these countries in colonial times and in some cases until well into the twentieth century. Another type of transition was seen in the “Euro-African” regions, where the development of slave-labor-based economies and the complex process involved in the abolition of slavery were pivotal factors. Finally, the “Euro-American” societies were located on the temperate zones of the Southern Cone, where European immigration has been the main factor in the growth of the population, or in enclaves within one of the other two types of societies.

The second criterion is the main type of commodity exported: mining, agriculture or forestry. In the case of mining, gold and silver were major activities in colonial times, and continued to be crucial in several countries after Independence, but new industrial minerals became important in the nineteenth and twentieth centuries (nitrates but later oil and copper, among others). In the case of agricultural products, there was an important difference between temperate and tropical climates, arising by the nature of the production processes and the types of competition or complementarity of production from these climatic zones in the world economy. Tropical products implied competition with regions with abundant and thus relatively inexpensive labor (Asia and Africa), whereas temperate zone products competed with developed countries with higher wage levels (Lewis, 1969; Bértola and Williamson, 2006). By far the most important experience in forest products was rubber in the Amazon jungle shared by several countries. The capacity of different economies to alter

<sup>4</sup> Additional criteria that we suggest in Bértola and Ocampo (2012) could be the (i) type of colonial power (Spanish or Portuguese) and (ii) the type of market into which each society is most fully integrated (e.g., Great Britain vs. the United States, as we have pointed out). Size was also important, particularly during state-led industrialization.

and diversify their export structure in ways that increase value added was related to the main type of commodity that each one produced.

Based on these two criteria, Table 2.1 reproduces a typology that captures a large part of the conditions existing in Latin America, especially up to the early decades of the twentieth century. Group 1 are the countries where the hacienda, the indigenous communities and mining (in a few countries, agricultural) activities predominated, in primarily Indo-European societies. Some of them—Mexico, Peru and to some extent Colombia—were the centers of the Spanish colonial economy and concentrated more than three-fifths of the population of Latin America in 1820. Group 2 are those where tropical plantations have been the predominant economic activity in what for the most part were Afro-American societies. Finally, Group 3 includes the Euro-American societies, where export structures based on temperate zone agriculture or mining have predominated.<sup>5</sup> The word “predominant” has been used repeatedly because, in many cases, there was a mixture of these traits.

This typology is useful to understand the historical development, particularly during the first two periods mentioned previously. We will illustrate it with general trends and those of large and medium-sized countries, but also some passing references to smaller ones.

During the first period, economic growth was also affected by the political instability generated by state and complex nation-building in some countries, with Mexico as the most complex case. In contrast, Brazil had a peaceful transition to Independence, as it became a new empire under the Portuguese king’s son, and Cuba remained a Spanish colony.<sup>6</sup> Average per capita GDP growth was, on average, minimal, but there were a few exceptions, of countries that grew based on their export activities (Table 2.1). Two Group of 3 countries for which we have information, Argentina and Chile, started to grow during this period, and Uruguay kept the highest per capita GDP in 1870. In the case of Argentina, this involved a significant shift of its economy from the northwest and the Córdoba region toward Buenos Aires. One country in Group 2, Cuba,

<sup>5</sup> We include Costa Rica in this group, rather than in Group 2, as we did in our previous work, as some of its labor market trends and social development institutions coincide more with those of Group 3.

<sup>6</sup> This was also true of Puerto Rico, but we will leave it aside in our analysis because it effectively became part of the United States after its Independence in the early twentieth century.

did well in terms of export and economic growth, as it became the center of the Caribbean sugar industry after it collapsed in Haiti due to the 1791 slave revolution. It is important to highlight that this country was able to expand its slave economy, as it was, together with Brazil, the latest to abolish slavery, in 1886 and 1888, respectively; this institution had been abolished in a few countries early in the Independence period and others in the mid-nineteenth century. In Group 2, Brazil and Venezuela also grew, but at a very slow rate. In the case of Brazil, this involved a significant shift from the northeast to the Rio de Janeiro region, which became the center of its most dynamic export sector, coffee.

In contrast, Group 1, performed very poorly. Mexico was the worst performer, as it experienced a crisis of its silver industry, strong political instability, a European military intervention and a loss of a significant part of its territory to the United States. Colombia started to build a diversified export economy in the mid-nineteenth century that replaced the slave-producing gold production of its Pacific region. In the case of Peru, although its silver mining was also affected by Independence, it experienced an early export boom in the 1840s and 1850s based on the exploitation of guano,<sup>7</sup> which also gave the country good access to external financing, but this process was in decline by the end of this period. By 1870, the per capita GDP of Group 3 was, on average, more than double that Group 1 for the countries for which we have information, whereas the difference had been small in 1820. Group 2 had also surpassed on average the per capita GDP of Group 1.

It must be added that in terms of population growth, Group 3 started to be the most dynamic, while Group 1 lagged significantly behind. This trend accelerated during the export age, when the sharpest growth in population was, once again, that of Group 3, whereas the Group 1 countries continued to experience slower growth—although they still accounted for two-fifths of the region's population in 1929. Argentina and Brazil were the main destinations for European labor but, relative to its smaller size, Uruguay was also an important destination. Entrepreneurs and technicians coming from Europe were also important in countries that did not receive massive migration flows. Migrants from Asia, and especially from China and India, also headed for the plantations of Cuba and Peru, where they worked as indentured laborers. There were also

<sup>7</sup> Guano is an excrement of seabirds and bats that was used as fertilizer at the time.

intraregional migration flows, which included the movement of black laborers from the Antilles who went to work on the banana plantations of Central America, the Cuban sugarcane plantations and the construction of the Panama Canal.

During this second period, exports soared, growing at an annual rate of 4.2% at constant prices between 1870–1874 and 1925–1929. There was, however, a significant break in export trends with the First World War, associated with the slowdown of the European economies and the transition to a world economy led by the United States. Another major effect was the Mexican revolution of 1910. Between the 1870s and the start of the First World War, the most striking upswing in exports was that of Argentina, but all Group 3 countries did very well, and as a group continued to outpace the others. In Group 2, Cuba continued to be a very dynamic export economy, whereas Brazil and Venezuela lagged behind. In Group 1, the greatest positive trend was the rapid export growth of Mexico when political stability was established, although under a dictatorial regime that would lead to the 1910 revolution. In this Group, Colombia continued to do well, but Peru fell behind, affected among other reasons by the loss of territory in the 1879–1884 War of the Pacific, which included the nitrate mines that had replaced guano as an export commodity. As time went by, however, all the countries benefited from the region's increasing integration into the world economy. This included smaller economies, based on different commodities: coffee in Guatemala, cacao in Ecuador and tin in Bolivia, for example. In any case, this period was one of increasing economic divergence among different countries in the region, particularly due to the rapid growth of Group 3 countries, following the trend that had started in the post-Independence period. Regional economic disparities peaked around the start of the First World War.

The period between that War and the Great Depression had significant effects on the regional dynamics. The Southern Cone countries were affected by the slowdown of the European economies. The loss of the strong dynamics of Argentina was particularly remarkable. Cuba was also affected by United States protection of its sugar industry and became one of the laggards of Latin American development since then. Finally, Mexico's economic growth was affected by its revolution, which strongly affected its major new export sector, oil, which would be eventually nationalized (in 1938). In contrast to these negative trends, Brazil, Colombia, Peru and Venezuela boomed, based on different commodities



(coffee, cotton, oil), ample access to the New York financial market and a gradual growth of their domestic economies. Several smaller economies also grew well, to a large extent based on export dynamics that had started in the late nineteenth and early twentieth centuries, and now including new products (bananas, in particular).

The Great Depression of the 1930s led to the collapse of world trade and world finance. Latin America was strongly affected but started to recover after a strong recession that lasted around three years. As in other parts of the world, this implied in most countries a transition to more active macroeconomic policy and broader state intervention. Although countries in the region responded to the opportunities that the recovery of world trade provided, they were very limited and had to rely on a process of industrialization and agricultural development based on protected domestic markets. The recovery was quite uneven, and benefited the two largest economies, Brazil and Mexico, as well as Colombia and Venezuela, among the medium-sized ones, while the Southern Cone countries, Cuba and Peru lagged behind. The new focus on the domestic market was reinforced by the scarcities of industrial goods in world markets during the Second World War, which also provided Mexico some export opportunities.

The focus on industrialization continued and was, in fact, reinforced after the War, as part of a global trend that viewed industrialization as the key to economic development. This implied stronger protectionism as well as development financing and state investment in some industrial and mineral activities. However, smaller economies looked earlier for opportunities to diversify their export base, generally toward new commodities. The large and several medium-sized countries also increasingly complemented industrial development for the domestic market with export diversification, which included in several cases a more active exchange rate policy. Regional integration also became an important part of the development model, starting with Central America Common Market in 1960, the Latin American Free Trade Association in 1961 (a framework for bilateral agreements that transformed into the Latin American Integration Association in 1980) and the Andean Group in 1969. Size became a more important determinant of development than in previous periods, as the industrialization strategy benefited countries with the largest domestic markets: Brazil and Mexico, in particular, followed by Argentina and Colombia, with Chile and Venezuela also benefiting but with a heavier weight of industrial activities associated with their major export sectors

(copper and oil, respectively). Peru was more reluctant to adopt protectionist policies but embarked on that trend in the late 1960s under the military governments. Cuba, in turn, was radically changed by the 1959 revolution that soon brought into the Soviet bloc.

The return of private external financing since the late 1960s and particularly the mid-1970s became the source of a borrowing boom that ended in the debt crisis of the 1980s. Macroeconomic imbalances—fiscal deficits and inflation, in particular—which had been a characteristic of Brazil and Southern Cone countries since the late 1950s, became a broader feature in the 1970s due to the borrowing boom and the broad-based world inflationary trends.

The crisis was strong and fairly generalized after the Mexican default in August 1982. The major exception was Colombia, which entered the 1980s with lower debt levels; there was also an earlier recovery of Chile and Costa Rica facilitated by stronger support to these countries by the international financial community. The crisis was accompanied by massive fiscal adjustments and monetary and other policies to control the rise of inflation in several countries, including hyper-inflations in some of them. A tradition of stronger fiscal and anti-inflationary policies was established by the 1990s, with only a few countries (Argentina and Venezuela, in particular) facing major macroeconomic imbalances in later decades. There was also a transition to market reforms, following the leadership of those adopted by the Southern Cone countries in the late 1970s and the shift in the agenda of the international financial institutions toward market reforms. Latin America became the leader of market reforms in the developing world, with most countries moving to adopt different variants of those reforms in the second half of the 1980s and the first half of the 1990s. Integration processes also revived after the crises they experienced in the 1980s, and the Southern Common Market (Mercosur, according to its Spanish acronym) was created in 1991. This led to a boom in intraregional trade in the 1990s, followed by limited growth and crises in some processes in the early twenty-first century.

As we have pointed out previously, market reforms were successful in terms of export development but not in terms of economic growth. Slower growth was associated with what has come to be called a “premature deindustrialization”, as the share of manufacturing started to fall at per capita GDP levels than those where a similar process had taken place in the developed countries (Palma, 2005; Rodrik, 2016). That share peaked in most Latin American countries in the mid-1970s or around 1980 and

then experienced a downward trend. The two largest economies were very strongly hit by the growth slowdown, and in the case of Mexico despite its successful insertion into the international value chains, supported by the North American Free Trade Agreement, signed in 1992 and in effect in 1994. Among the medium-sized economies, Chile was a success story in the 1990s and Peru in the early twenty-first century, with Colombia and Argentina experiencing slower growth. In turn, Venezuela was the worst case, and experienced the worst collapse of any Latin American economy in history: 62% between 2013 and 2019 and more than 70% if 2020 is included. A surprising trend was that smaller economies performed better than the larger ones. Indeed, some of them grew 4% or more in 1990–2019 (Panama, the Dominican Republic, Costa Rica and Bolivia, in that order), a rate of growth that only Chile and Peru among the medium-sized economies reached during this period.

Growth during these decades was subject to strong crises, a point that we previously made and that will be analyzed in more detail in the following section. The COVID-19 crisis hit all countries, after a quinquennium of poor economic growth which involved strong recessions in some countries (Argentina, Brazil and, of course, Venezuela), negative growth rates in some years in others (Ecuador, Mexico and Nicaragua) and a broad-based slowdown in most other economies.

### 3 CRISES AND THEIR ASSOCIATION WITH EXTERNAL DETERMINANTS

#### 3.1 *The Terms of Trade*

An essential feature of Latin American development over the past two centuries, which has been dramatic over the past four decades, has been the frequency of crises. An important issue in the literature on the region has been the association of crises to the links with the global economy, and particularly with commodity price cycles and fluctuations in capital flows. The effects of external shocks are compounded in some cases by procyclical fiscal and macroeconomic policies, which exacerbate rather than dampen external shocks (Kaminsky et al. 2004; Ocampo, 2008, 2016). Crises generate, of course, social and political tensions, and, in some cases, their origin and intensity have been associated with domestic political crises and transitions.

Latin American countries have relied primarily on their natural resources as a means of positioning themselves in the global economy. This strategy seems quite understandable for a region that is rich in natural resources. Also, as we saw above, exporting agricultural, mineral and forest products also brought successful growth for the region in the 1870–1929 period. But the supply and demand for these resources are subject to ups and downs that generate commodity price cycles. In addition, the concentration of countries' production and, particularly, export structures in a relatively small number of commodities makes them more vulnerable to changes in demand and price. Unfortunately, such concentration—and, in several cases, extreme concentration—has characterized several Latin American economies through a large part of their history.

The specialization pattern of Latin America has been a subject of debate for many years. In the tradition of the structuralist school of development thought, which has its roots in ECLAC, it has been seen as the main reason for the region's failure to grow more rapidly. If we look at growth trends over the past decades, it becomes clear that the fastest-growing economies in the developing world have been those that have diversified their production and, in particular, have increased high-technology manufacturing exports (Hausmann et al. 2007; Ocampo et al. 2009).

In macroeconomic terms, the basic issue is to what extent the specialization pattern will generate balance-of-payments problems that would constrain economic growth. In this vein, and according to ECLAC, the fundamental problem of commodity exporters is that the income elasticity of the demand for imports of Latin American countries will be higher than the income elasticity of the demand of their exports abroad. The economy's growth rate will be determined by its relative propensities to export and import. Structural changes would be needed: only if Latin America started to produce other products—namely those with higher-income elasticity of demand in foreign markets and higher technological contents—the balance-of-payments problems could be avoided and higher growth rates could be achieved.<sup>8</sup>

The trend in the terms of trade of commodities relative to manufactures has also been a central theme of this literature, following the Prebisch-Singer hypothesis, formulated by these authors in 1950 (Prebisch,

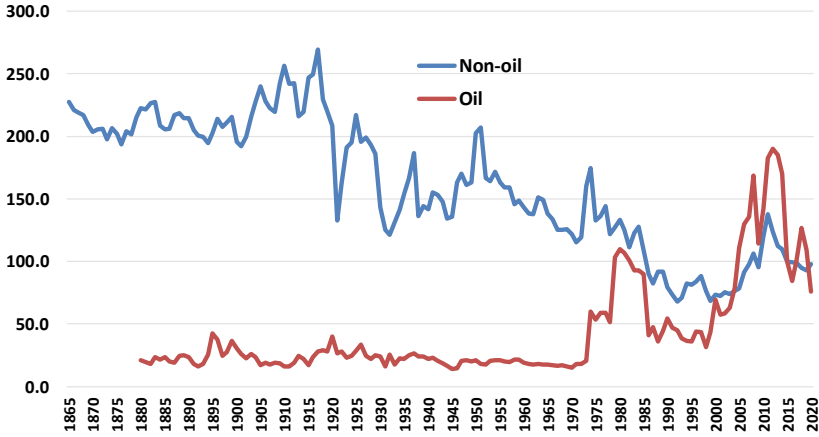
<sup>8</sup> For relevant analyses for Latin America along this line of thought, see Bértola and Porcile (2006) and Cimoli and Porcile (2011).

1950; Singer, 1950). The central issue, according to this view, is that there is a long-term downward trend in the terms of trade associated with a mix of the low-income elasticity of demand for primary goods (particularly for agricultural commodities) and the wage dynamics in developed vs. developing countries, where a surplus labor would tend to generate a downward pressure on wages.

The evidence indicates that there was no downward trend of real commodity prices in the nineteenth century.<sup>9</sup> Figure 2 shows that, in the late nineteenth century and in the early years of the twentieth century, the real prices of non-oil commodities trended upward. Then, in the aftermath of the First World War, this trend began to reverse, generating a negative long-term trend that lasted through the rest of the twentieth century. There were, in particular, two strong collapses (Ocampo and Parra, 2010). The first took place in the 1920s and covered all commodities. The second one was in the 1980s and 1990s and was characterized by a sharp drop in the prices of agricultural goods and a more moderate one in mining products. As a result, between the decade leading up to the First World War and 1998–2003, the terms of trade for non-oil commodities fell by 60%, with tropical agricultural products being the hardest-hit and mineral products affected the least. Real oil prices also fell, but that decrease came later than the drop in non-oil commodity prices and, although they also plunged in the 1980s, they maintained a substantial part of the ground gained during the two oil shocks of the 1970s. In contrast, there has been no downward trend in commodity prices in the early twenty-first century, and rather an upward trend, particularly of metal and oil prices. This indicates that the downward trend was a feature of the twentieth century but not of the nineteenth and twenty-first centuries.

An alternative way to read the history of commodity prices is that they experience long cycles around their long-term trend: upward pressures during some periods—now called “super-cycles”—followed by downward ones (Erten and Ocampo, 2013). According to this interpretation, there

<sup>9</sup> It is difficult to think of a worldwide trend of commodity prices prior to the 1860s, which is when transportation costs had generated standard world prices. In any case, prior to that there was a mix of the downward pressure of the prices of manufactures during some periods (notably textiles in the first half of the nineteenth century) and the need to build up new sources of raw materials, that may have generated even an upward trend of commodity prices.



**Fig. 2** Real commodity prices (2015 = 100) (*Source* Updated series from Erten and Ocampo [2013]. The deflator is the price of manufactures in international trade according to UN series)

is an association between price cycles and world GDP: super-cycles are associated with the acceleration of world economic growth—or in some major economies—and the intensity of the downward phase is linked to the strength of downward trends in world growth.

Following this line of thought, there have been four super-cycles since the late nineteenth century. The first one took place in the late nineteenth and early twentieth centuries, and was associated with faster growth of the world economy and, particularly, of international trade. Another upswing took place during the post-Second World War reconstruction in Europe, augmented by the economic emergence of Japan. A third was a shorter one during the 1970s. And the fourth took place in the early twenty-first century, associated with the rapid industrialization of China. This super-cycle covered in particular the 2004–2014 period, shortly interrupted by the 2008–2009 North Atlantic financial crisis.<sup>10</sup> The long-term cycles of oil prices were generally different from those of non-oil prices until the

<sup>10</sup> This crisis is generally called the global financial crisis or the great recession, but since it centered in the United States and Western Europe, we will refer to it here (following other authors) as the North Atlantic crisis.

1960s but have been synchronized since then, with greater intensity for oil price cycles.

The downward phase of the recent commodity price cycle is behind the weak growth of Latin America in 2015–2019. Interestingly, the COVID-19 shock generated a fall in oil and a very short one of metal prices, but not those of agricultural goods, and there has been a strong recovery in all prices since the second semester of 2020, with a strong recovery of non-oil prices. As this chapter is being written, there is talk of whether this is associated with the disruptions in global trade generated by the pandemics or are in the early stages of a new super-cycle. The only interesting case in that regard is that of the minerals that are essential for the production of goods that are highly demanded in the development of green technology, particularly copper, cobalt, lithium, nickel and rare earths.<sup>11</sup>

### 3.2 *Financial Crises*

The procyclical nature of international capital flows to developing countries—and, particularly, the “emerging economies”—is another important factor that contributes to the volatility of economic growth. This was pointed out by Triffin (1968) in respect of the first globalization and, according to a vast literature,<sup>12</sup> has also been a central issue during the second one. As a result, when international trade has positive growth effects, economic activity is boosted further by capital inflows; in turn, when the international business cycle enters a downturn, the effects of the slump in demand for commodities and in commodity prices are amplified by the sudden stop and even the reversal of capital flows.

A major effect of these fluctuations in capital flows is the frequency and severity of financial crises, which tend to follow periods of hefty capital inflows. Figure 3 shows the five periods with most intense crises (which, for comparative purpose, are shown as ten years since the outbreak of

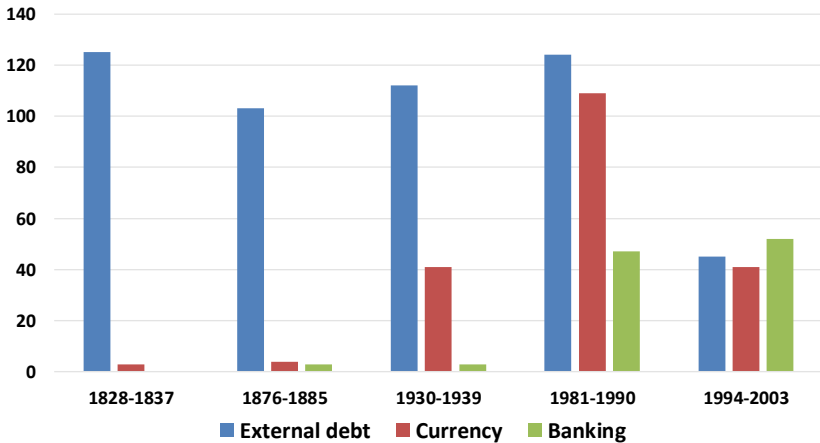
<sup>11</sup> See, for example, this analysis of the *Financial Times* dated June 7, 2021: <https://www.ft.com/content/40907aa6-354e-42f8-8d51-8cc01f0e9687>.

<sup>12</sup> See, particularly for Latin America, Marichal (1989), Stallings (1987) and, for the more specific case of the debt crisis of the 1980s and the years leading up to it, Devlin (1989). For the global situation, see also the now classic work of Charles Kindleberger (a recent edition can be found in Kindleberger and Aliber, 2005) and the more recent analysis of Reinhart and Rogoff (2009).

the crisis): the collapse of external financing that took place after Independence; the international crisis of 1873; the Great Depression of the 1930s; the Latin American debt crisis of the 1980s; and the East Asian crisis of 1997 that in Latin America had its precedent in the Mexican financial crisis of December 1994. As it can be seen, these crises coincided in several cases with periods of international turbulence but in others were specific of Latin America. They also involve a large number of Latin American countries (and, in some cases, all 19 of them<sup>13</sup>) in one way or another.

Only three major international financial booms have not been followed by financial crises in the region: the boom that preceded the First World War, the one that led to the North Atlantic financial crisis, and the one that preceded the COVID-19 pandemic. The last two did generate sudden stops in private external financing, but they were relatively short—about 12 and only 2 months, respectively.

Figure 3 also shows how the composition of these crises changed over time. Debt crises have been the most common problem in Latin



**Fig. 3** Major financial crises (Number of country/years by type of crisis) (*Source* Bértola and Ocampo [2012] based on data from Reinhart and Rogoff [2009])

<sup>13</sup> From the 1960s on, the figure does not include Cuba and thus covers 18, rather than 19 countries.



America since Independence; as we will see below, cooperation to support indebted countries has been in the international agenda during the worst debt crises. Steep exchange rate depreciation associated with balance-of-payments crises have been frequent since the Great Depression of the 1930s—with precedents during the First World War. Finally, domestic banking crises were also important in the 1980s and during the Asian crisis, but have tended to decline thanks to stronger domestic financial regulations. As a result, since the 1930s, most major crises have been “dual” (combined debt and balance-of-payments crises), and in the two most recent episodes they became triple crises (the above two plus banking crises).

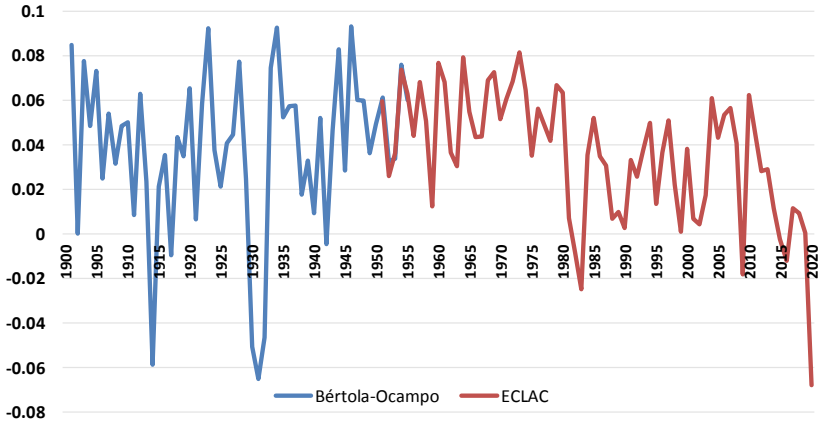
There has also been a conjunction of trade and capital flow cycles. Crises are usually triggered by sudden export collapses that occur in the midst of critical international conjunctures (1873, 1929 and 1979, in particular, to which we could add 1997), which also coincided with a contraction in the supply of external financing.

### *3.3 Major Latin American Growth Collapses and Their Links to External Shocks*

An interesting way to complement the previous analysis is look at periods when Latin America has faced growth collapses and look at their links with relevant trade and financial events. Figure 4 provides an overview of annual GDP growth rates of Latin America since the early twentieth century, the period for which we have reliable data. A first interesting feature that stands out is the fact that the 1945–1980 has been the most stable period in history in terms of growth rates, while 1900–1945 and 1980–2019 have been periods of significant instability.<sup>14</sup>

As Fig. 4 indicates, there are five episodes during which Latin American GDP has fallen substantially: in 1914, 1930–1932, 1982–1983, 2009 and 2020. If half-decades of low growth are included, two additional episodes can be identified: the one that followed the East Asian crisis, with annual growth of only 1.3% in 1999–2003, and the five-year period

<sup>14</sup> The relevant standard deviations of GDP growth rates are 3.5% in 1901–1945, 1.8% in 1946–1980 and 2.2% in 1981–2009. Since the last period is also that of slowest average GDP growth rates, the coefficient of variation of growth rates is actually quite similar to that of the earlier twentieth century: 1.00 vs. 1.07.



**Fig. 4** Annual GDP growth rates (*Source* Bértola and Ocampo [2012], Statistical appendix for ten Latin American countries [Argentina, Brazil, Chile, Colombia, Cuba, Ecuador, Mexico, Uruguay and Venezuela], and ECLAC series for the whole of Latin America since 1950)

before the COVID-19 crisis, 2015–2019, during which the Latin American economy grew at a rate of only 0.1% per year, with slightly negative figures in 2015 and 2016. The last quinquennium has been, in fact, the worst after the Second World War, and only surpassed by those at the start of the Great Depression of the 1930s; if we estimate average growth in 2016–2020, to include the COVID-19 crisis, the average growth rate, -1.2%, is one of the two worst quinquennia in history, together with 1929–1933.

Crises have differed in their intensity and duration, the degree to which they spread through the region, and the international context in which they took place. The first crisis, that of 1914, was very much centered on the Southern Cone, especially Argentina, which only regained its 1913 level of GDP in 1922, while Chile and Uruguay did so much faster. The combination of external financing and the outbreak of the First World War explains this outcome. Mexico's economy was already relatively stagnant as a result of its revolution. Other countries were partially affected in 1914, but generally continued to grow, albeit very unevenly in the cases of Cuba and Venezuela.

The other crises spread to a larger set of countries in the region. Two of them were long-lasting: the one caused by the Great Depression of the 1930s and the Latin American debt crisis that gave rise to a lost decade of development. As we have already pointed out, the poor 2015–2019 quinquennium and the COVID-19 crisis will lead to a new lost decade, and are therefore parts of a third long-lasting crisis. The other recent ones, namely those following the Asian crisis of 1997 and the North Atlantic financial crisis, were shorter-lived. All of them were associated with external shocks related to international trade and the availability and cost of external finance; flows of remittances from Latin American migrants also involved in the North Atlantic crisis.

Shocks associated with capital flows have been present in all crises, albeit with different characteristics and international support mechanisms to deal with them. The interruption in external financing was more prolonged during the Great Depression of the 1930s (which interrupted international capital markets for several decades), the Latin American debt and the East Asian crises, with action to reduce the amount of external debt in the first two of them—which, came, however, with a significant lag. The sudden stop in external financing was also present in the two most recent crises but, as we have seen, it was short-lived.

Declines in international trade have occurred in certain crises but not in all of them. In particular, world trade experienced a prolonged crisis during the Great Depression and short but sharp interruptions during the North Atlantic and the COVID-19 crises but did not do so during the Latin American debt and the East Asian crises.

Negative commodity price shocks were strong during the 1930s and the Latin American debt crisis. They were also sharp—albeit more gradual—in the 1960s and 1970s, exceeding that seen during the debt crisis, but its effects on economic activity were limited because of ongoing industrialization process. In contrast with the two old long-lasting crisis, commodity price shocks have played a secondary role in some of the recent crises. They were not behind the effects of the East Asian crisis, and played a very temporary role during the North Atlantic crisis—which shortly interrupted the 2004–2014 super-cycle of commodity prices. Finally, as we have seen, the end of that super-cycle of commodity prices was behind the very poor growth record during the quinquennium that preceded COVID-19, but there was no additional negative shock during the pandemic, except for oil and other energy prices.

Therefore, external shocks have been behind all growth shocks experienced by Latin America since the early twentieth century, but their mix between financial and trade shocks has varied through time, as well as their intensity. Two of the three long crises have been associated with the worst mix: the Great Depression of the 1930s and the Latin American debt crisis—with the worst being the first of them, which also included a collapse of world trade. The third long-lasting crisis, which we are still undergoing, was associated with the end of a super-cycle of commodity prices but not with a significant financial shock. What is more interesting is that its worsening during the COVID-19 crisis was not associated with negative external economic shocks. Indeed, by historical standards, it is the crisis in which external shocks have been weakest (Ocampo, 2020).

## 4 SOCIAL DEVELOPMENT<sup>15</sup>

### 4.1 *Human Development*

Latin American advances in terms of social development show sharp contrasts with those in economic development. There were significant lags in social development through the nineteenth and early twentieth centuries, indicating that the export age was better for its economic than its social effects. Improvements were more symmetrical during state-led industrialization. And, interestingly, there has been more progress in the social area during the recent period of market reforms than in the economic area, although the crisis since 2015 has generated a strong hit on both economic and social indicators. There has also been, all along, different performance of countries in the social area that reflect in part those in terms of economic development but also the differential historical commitments to social policies, with two small countries, Uruguay and Costa Rica, being the leaders in this regard.<sup>16</sup> There were also differential improvements: slower in education than health in terms of the human development, phases of both deterioration and improvement in income distribution but with Latin America remaining as one of the most

<sup>15</sup> See a more detailed analysis of these issues in Astorga, Bergés and FitzGerald (2005) and in Bértola and Ocampo (2012).

<sup>16</sup> Cuba could perhaps be added since its 1959 revolution, but we leave it aside from our analysis.

unequal regions of the world, and a concentration of poverty reduction in specific periods but with strong reversals during the crises that follow.

In terms of life expectancy at birth, Latin America showed significant improvements and a convergence with developed countries through the whole twentieth century, and strongly so between 1930 and 1960 (Table 2.2). This process continued during the first decades of the twenty-first century, though at a slow rate, as convergence was already significant. Improvements lagged, anyway, in relation to income growth during the export age, and they were mainly concentrated in the period of state-led industrialization. The same ranking as in per capita incomes among the Latin American countries is a feature of progress in this area, but the regional gaps in life expectancy by income levels shrank over time.

Progress was slower in education, and again was very weak during the export age and became important only since the mid-twentieth century, again during state-led industrialization, although it continued during the era of market reforms. The main explanations that have been advanced to explain the major lags in this area have to do with social structures and power relations. The abundance of natural resources per capita in relation to human capital has been used as a complementary explanation.

Even the best-performing Latin American countries in terms of education had very low average levels of schooling at the start of the century: 1.8 years for Argentina and 2.4 for Uruguay in 1900, while the average for the developed countries was 6.4. By the 1950s, the uneven performance of education policies in the first half of the twentieth century had led to strong differences in enrollment rates among countries. According to Frankema (2009), if we focus on the point in time at which a transition toward education for all was made, we can identify three groups of countries. In the last three decades of the nineteenth century, primary-school enrollment rose most sharply in Argentina, Chile, Costa Rica and Uruguay. A larger group of countries started to increase enrollment rates in the first half of the twentieth century, particularly in the 1920s and 1930s, but some of the poorest countries—particularly Guatemala, Honduras and Nicaragua—lagged behind.

However, most advance took place since the mid-twentieth century, and it continued through the first decades of the twenty-first century. This is a particular area in which advance during the market reform era has maintained the positive trends that had started during state-led industrialization. In any case, significant lags with the developed countries have remained. Around 2000, Latin America's countries had completed

**Table 2** Latin American historical human development index

<i>Year</i>	<i>Per capita GDP</i>	<i>Life Expectancy at birth</i>	<i>Education</i>	<i>HDI</i>
1900	0.08	0.14	0.09	0.10
1910	0.09	0.18	0.10	0.13
1920	0.10	0.23	0.12	0.15
1930	0.11	0.26	0.14	0.17
1940	0.14	0.31	0.16	0.20
1950	0.18	0.42	0.19	0.25
1960	0.21	0.55	0.23	0.31
1970	0.25	0.62	0.28	0.36
1980	0.32	0.69	0.33	0.43
1990	0.30	0.74	0.40	0.46
2000	0.34	0.77	0.45	0.50
2010	0.39	0.83	0.50	0.55
2019	0.40	0.86	0.56	0.58

Own estimates based on Bértola, Hernández and Siniscalchi (2011) and Bértola and Gatti (2021) 1900–1950; changes according to 7 Latin American countries (Argentina, Brazil, Chile, Mexico, Peru, Uruguay, and Venezuela 1950–2019; all Latin America Per capita GDP(y) Index =  $(y^{*0.5-400^{*0.5})/35000^{*0.5-400^{*0.5}}$ ), following Bértola and Gatti (2021) Life expectancy at birth and education, linear functions

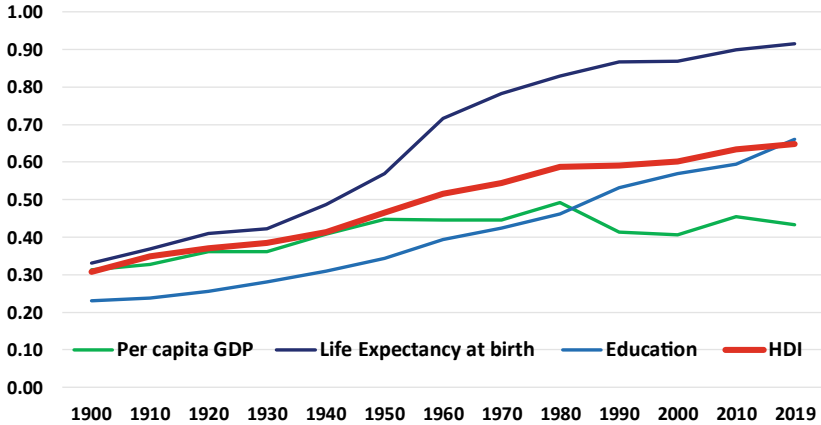


Fig. 5 Latin American Human Development Index relative to core countries, 1900–2019 (*Source* see Table 2. Core countries: France, Germany, UK and USA)

an average of 7.1 years of schooling, whereas the populations of four major developed countries (France, Germany, the United Kingdom and the United States), had completed an average of 12.5. This means that the region's level of education was still 59% of that of advanced countries.

As we have seen in previous sections, the third element of the human development index, per capita income, is the one in which the region has clearly lagged. So, there has been a historical trend to a catching up with developed countries in terms of human development, which has been associated with advances in life expectancy and, with a lag and in a weaker way, with education. Convergence with the advanced countries has taken place during both state-led industrialization and market reforms, though with slowdowns during major economic crises, when the region's per capita income has fallen (Fig. 5).

#### 4.2 *Income Distribution and Poverty*

In relation to income distribution, Latin America has remained as one of the most unequal regions of the world, competing in that regard with the most southern countries of Sub-Saharan Africa and the oil economies of the Middle East (for which there is limited comparable information). The high levels of inequalities have, of course, their roots in the region's

colonial legacy, but have evolved through the two centuries analyzed in this chapter in interaction of other factors. In this regard, the first globalization was associated with the consolidation of the state's political power and a heavy concentration of wealth, along with a stauncher defense of the elites' property rights. For the few countries for which there have been analyses, wealth and income concentration increased. The countries that received large immigration from Europe experienced a positive distributive effect that mitigated the adverse effect generated by the weight of natural resources in the specialization patterns typical of the region.

The period of State-led industrialization had differential effects in terms of equity in different countries.<sup>17</sup> In those that developed some form of welfare state, this was a time of declining inequality. This is the case of Argentina, Chile and Uruguay (Group 3 countries), which combined a relatively poor economic performance during this stage of development with advances in terms of improved equity, until this progress was cut short by military dictatorships. Costa Rica can be added to the group that developed a welfare state, though with better economic performance than was the feature of the Southern Cone.

In other countries, large labor surpluses in the countryside kept rural wages down, and the influx of rural workers into the cities also depressed wages for low-skilled urban workers. At the same time, shortage of skilled workers, which was caused by the lag of development of education systems, drove up their wages; these workers also benefited from labor demand from a growing state apparatus and the development of labor unions, that concentrated in the more formal sectors of the economy. As surplus manpower came to be absorbed in the cities and the skilled labor force began to grow, these adverse pressures on income distribution eased. As a result, a number of countries began to see improvements in income distribution in the mid-1960s (Costa Rica and Mexico) or early 1970s (Colombia and Venezuela). However, this was not an across-the-board phenomenon, as demonstrated by the continuous adverse distribution trends in Brazil, which were also heightened, as in the Southern Cone countries, by the policies implemented by military governments. According to some authors (Londoño and Székeley,

<sup>17</sup> The following observations are based on what is a still incomplete body of literature, including the comparative studies conducted by Altimir (1996, 2001), Frankema (2009), Londoño and Székely (2000) and Székely and Montes (2006), whose findings are not necessarily consistent with one another.



2000), positive trends predominated and there was an improvement in income distribution in Latin America in the 1970s, but this might be an overoptimistic view. A significant effect of industrialization and urbanization, in conjunction with widely varying types of agrarian reforms, was also the erosion and ultimate end of the long-standing forms of servitude that had existed in rural areas.

We can find a paradox when looking at the more successful industrializers in Latin America: those countries that made more progress in inequality reduction and in the development of more advanced welfare policies (Argentina, Chile and Uruguay), were those who showed more clear divergent trends in income in relation to developed countries; on the contrary, the countries which kept relative positions or even converged to some extent (Brazil, México and Peru), made very little progress, if any at all, in reducing inequality and developing welfare policies (Bértola, 2018).

There is a broad consensus that the market reforms of the late twentieth century led to an increase in inequality. In the Southern Cone, the military dictatorships played a major role in the early phases of market reforms, which they accompanied with a systematic repression of labor unions, leading to a substantial reduction in real wages. More broadly, the economic crises that took place during the debt crisis had a powerful negative distributional impact, while the restructuring of production generated by market reforms generated a demand bias for skilled labor that also had an adverse effect on income distribution.

In the first decade of the twenty-first century, however, inequality declined. The reasons for this are still open to question, but it is clear that at least two types of policies had a broad positive impact: the improvement of the distribution of educational opportunities, and the newly designed systems of social assistance, which succeeded in reaching the poorest sectors of the population (Bértola and Williamson, 2017). The egalitarian trend came to an end rather quickly, in the early 2010s, and was heightened by the adverse effects of a new period of adverse economic trends. The adverse distributive trends were heightened by the COVID-19 crisis, which hit poor urban households particularly hard.

The mix of economic and distributional trends was reflected in the evolution of income poverty. Unfortunately, however, consistent information is only available since the 1980s. Existing estimates indicate, in any case, that poverty declined in most of the countries during the period of state-led industrialization. The earliest available ECLAC estimates indicate that 40% of all Latin American households were poor in 1970, with

this figure dropping to 35% by 1980 (equivalent to about 40% of the population, given the larger size of poor households). The calculations by Londoño and Székely (2000) paint an even brighter picture in the 1970s, with a reduction in the poverty rate from 43.6% in 1970 to 23.7% in 1982—again probably an overestimate of positive trends. In turn, using indirect inferences, Prados de la Escosura (2007) calculated that the bulk of the reduction in poverty achieved in the twentieth century occurred between 1950 and 1980.<sup>18</sup>

The lost decade of the 1980s had a devastating effect on poverty levels. For Latin America as a whole, the poverty rate climbed from 40.5% to 48.3%, according to ECLAC data, with most of this deterioration concentrating in the most acute phase of the crisis. Poverty started to decline in the 1990s thanks to the recovery of economic growth, but at a moderate rate, given adverse distributional trends, and stagnated with the effects of the East Asian crisis. Thanks to the boom of the early twenty-first century and the positive distributive trends underway, poverty showed a strong decline, from 43.9% in 2002 to 27.8% in 2014, again according to ECLAC data.<sup>19</sup> In any case, it is striking that it was not until 2004 that poverty levels fell below their 1980 level, indicating that, in terms of poverty reduction, the region experienced, not a “lost decade”, but a lost quarter-century!

The strong slowdown during the 2015–2019 quinquennium stopped this positive trend, leading to a 30.2% poverty rate in 2019. In turn, the COVID-19 crisis generated a massive increase in poverty, to 37.3% in 2020. This has meant a retrogression of a decade and a half in terms of poverty—in fact, a retrogression relative to 2014 levels that is worse than that experienced during the lost decade of the 1980s.

<sup>18</sup> According to this author, in six countries (Argentina, Brazil, Chile, Colombia, Uruguay and Mexico), poverty levels decreased from 71% in 1913 to 27% in 1990, with 30 percentage points of this reduction (i.e., slightly more than two-thirds) being registered between 1950 and 1980. See also the estimates for individual countries in Altimir (2001).

<sup>19</sup> The lower demographic dependency ratio and the higher growth rate of the economically active population has been an additional factor with positive effects on poverty levels. In fact, according to Ros (2009), the decline in the dependency ratio is the main reason for the relative trends in poverty rates seen in the Latin American countries in 1990–2006, with its positive effects continuing in the early twenty-first century.

## 5 PRESENT CHALLENGES FROM A HISTORICAL PERSPECTIVE

This chapter started by analyzing Latin America's economic development over the past two centuries through four distinct periods: the post-Independence years, a stage of export-led growth, a period state-led industrialization and a final phase of market reforms. A complementary look at volatilities of trade, commodity prices and capital flows helps explain why Latin America has faced so many crises. Human development has shown improvement, particularly since the 1930s, but major problems remain to be tackled, notably high levels of inequality in wealth and income distribution.

Three major lessons for the future can be drawn from this historical analysis. The first is that achievements in the area of macroeconomic management during the period of market reforms—in terms of inflation and fiscal sustainability—need to be consolidated. However, the immense challenge of managing the Latin American economies' long-standing vulnerability to external shocks remains in place. In this regard, the response to the North Atlantic crisis was a positive one for Latin America. However, the end of the super-cycle in commodity prices gave way to a quinquennium of very slow growth that was heightened by the recession generated by the COVID-19 crisis. Macroeconomic management has again been very cautious but most countries faced a fiscal crisis that has heightened public sector debt ratios. Overcoming the deterioration in fiscal conditions while supporting the recovery of economic activity and an active social policy has become a great challenge during the new lost decade that the region is experiencing.

The second lesson relates to economic growth, which has been a frustrating issue for a majority of Latin American countries during the era of market reforms. History tells us that high growth rates cannot be attained solely on the back of sound macroeconomic conditions or patterns of specialization based on static comparative advantages. Proactive production policies—which were explicitly excluded from public sector agendas during the market reform phase—are also needed, including strong technology policies, which were also seriously neglected during the period of state-led industrialization (Bértola et al. 2012; Ocampo and Porcile, 2020). This effort should be coupled with a consolidation of the progress made in education and the introduction of measures to address the education system's failings, especially in terms of quality.

The third and most important lesson has to do with the enormous social debt that Latin America has built up over its history. The colonial legacy of extreme economic and social inequality has been perpetuated, and heightened in subsequent periods of the region's history. Improvements during the early twenty-first century in terms of equity and poverty are now displaced by the strong negative social effects of the new lost decade now underway. What is more, the contrast between these results and the advances in human development indicate that social policy is not enough, in itself, to make headway in terms of social equity.

These lessons have important implications for an issue that has long been a subject of regional controversy: the relationship between the state and the market. International experience tells us that an appropriate mix of the state and the market is vital, but it also shows us that there is no single design that is best for achieving positive synergies between the two. History shows us that forward progress is perfectly feasible, however. When strong policy initiatives are taken, they make important inroads. Examples include the development of the production sector during the period of state-led industrialization, and advances in human development during these periods as well as positive distributive trends in the early twenty-first century. Our analysis indicates, in particular, that education and technological development should be at the center of state reform efforts in the future.

The role of the state is even more relevant if we consider that the current environmental crisis poses extraordinary policy challenges when coping with the challenge of growth, stability and equity in a sustainable way.

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# The Making of Mexico: The Political Economy of Conquest and Independence

*Fernando Arteaga*

## 1 INTRODUCTION

The year 2021 marks the 500th anniversary of the fall of the Aztec city of Tenochtitlan by the hands of Hernan Cortés and his European and Native allies. Its conquest still captures our attention as it contains the elements of an epic story: a cultural clash between foreign civilizations, conflicting sides with complex interests and opportunities, political entanglements intertwined with love affairs, greedy characters, betrayal incidents, and tragic endings.<sup>1</sup> Yet, as enthralling as the conquest is in the collective

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<sup>1</sup> (i) A convoluted setting where Natives and Europeans faced relevant intrafactional conflict: From the native point of view, the Aztecs had made enemies of the many towns they had previously conquered. From the Spanish side, Cortés compromised his enterprise by disobeying his superior Diego de Velazquez, the governor of Cuba, sailing to Mexico  
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imaginary, its relevance pales in comparison with the political project that followed it: the establishment of a new state.

The process of achieving functional governance is a major object of study of economists, political scientists, and general social scientists alike. Economic development—arguably the central theme across social sciences—presupposes the existence of a stable polity; it is the bare foundation upon which markets become possible. Governance rests upon the explicit and implicit mechanisms that make cooperation possible among the different groups that compose a society. However, the space of feasible arrangements is constrained by the context which spurred them. Some may not even be stable, resulting in a constant state of conflict and civil war. More importantly, even when they are stable, they may be suboptimal—some arrangements just fail to fully capture the potential of cooperation.<sup>2</sup> Building a functional state conducive to development is not a straightforward task. We still fail to understand how to achieve it. It takes time, it is context-dependent, and most importantly, it is never assured—the risk of social unraveling does not disappear. State-building is a complex venture, unlike conquest, which merely requires one group to coercively occupy another, either by brute force or by threats of it.

Through this purview, the figure of Cortés and his native allies can be properly assessed: more than mere conquerors, they were coalition-makers that, for the very first time, unified the diverse ethnicities of Mesoamerica. They created a new distinguishable polity that ultimately led to the formation of an imagined community of its own, one that is now called Mexico. Its endurance was in no manner preordained as it hinged on the maintenance of a delicate balance of power between the new European settlers

without his permission, making him a political enemy from that point onward. (ii) Love: The story of Malinche, a Nahua woman gifted to Cortés as a slave and later became his translator, lover, and a key political figure in the process of conquest by her own merits. (iii) Greedy Motives: The so-called “noche triste,” when the Spaniards fled Tenochtitlan in a rush after the city rebelled against them. Many Spaniards drowned in their retreat, mainly because of their reluctance to leave the looted treasures behind. (iv) Betrayal: The Aztec Empire ruled through a tripartite coalition of city-states. After the ruler of Tenochtitlan was taken hostage by the Spaniards, political instability ensued in the other two cities. Texcoco’s acting ruler was betrayed by his brother, who captured him and gave it to the Spanish. (v) Tragic moments: Moctezuma II, the last ruler of Tenochtitlan, was held hostage by the Spaniards and later was killed in strange circumstances. The myth is that he was lynched by a mob of his own people, which accused him of being a weak leader that failed to protect the city.

<sup>2</sup> E.g., cooperation among certain groups may rest on coercion against others.

and the many warring indigenous communities that had inhabited the Mesoamerican region for centuries before. Even after diseases had taken a toll on indigenous populations, natives still exceeded the Europeans by a large margin—and they did so for centuries afterward. Cortés and his allies could only succeed by adapting the mechanisms left by the previous political landscape, altering it only in marginal ways to not entirely disrupt the *status quo*. Forced tributes, and the threat of violence, remained relevant procedures of control and rent-extraction. But other pre-Hispanic institutions persisted too: granting autonomous-ruling privileges to local indigenous towns and co-opting the native elites—incorporating them into the higher echelons of the new Spanish society—were important tools used to preserve political stability and avoid rebellions.<sup>3</sup>

Moreover, the arriving Spaniards were themselves embedded in a larger community: the Spanish Empire, which by this point was expanding its reach all over the world; similar semi-autonomous polities were being established by other *Conquistadores* across America and Asia. As the political center of New Spain (as the polity originally was called), Mexico City had to follow the mandates dictated by the Spanish Kings, respecting their role as arbiters and overseers of the newly integrated territories. At the same time, Cortés and his European and native allies had to fight for their rights to self-manage their own affairs on this side of the Atlantic.<sup>4</sup>

Because of these internal and external circumstances, Cortés' rule was tenuous at best.<sup>5</sup> Yet, the institutions he procured—especially the ones

<sup>3</sup> The native elites were given hereditary nobility titles, with all the due rights and rents that such titles convey. Thus, for example, the heirs of the last ruler of Tenochtitlan were awarded the titles of Dukes of Moctezuma de Tultengo. And they still live today, as Spaniards in Madrid.

<sup>4</sup> Intra-imperial conflict among the Spaniards was not trivial. The conquest of Peru succinctly shows its perils. After the Inca Empire had fallen, civil war among the conquering Spaniards ensued among the rival factions of Diego de Almagro and Francisco Pizarro. In Mexico, Cortés and his allies achieved peace relatively quickly. They then expanded across North and Central America. Yet they had to defend their interests in Europe constantly—both against the Cuban governor Diego de Velasquez and against King Charles I himself.

<sup>5</sup> Nominally, Cortés was a steward that ruled in the name of the Spanish King. However, by 1527, the premier Spanish governance institution, the *Real Audiencia*, was instituted in Mexico City to limit the discretionary powers Cortés and his conquistador allies—European and Native—have had. Ultimately, in 1535, the administrative divisions of the Spanish Empire were settled, and Mexico City became the seat of power of the Viceroyalty of New Spain, which was governed by a viceroy directly appointed by the Spanish King.

molded from pre-Hispanic times—perdured for centuries. His legacy, for good and bad, it's still palpable today. North and Central America were unified and pacified, and they became integrated into the world economy; they constituted a relevant link uniting Europe and Asia for centuries to come. As the political and economic center of this new polity, Mexico City became one of the wealthiest cities in the Americas and also one of the most unequal ones (Abad and Zanden 2016).

My goal with this text is to cover one specific aspect of state-building that is often overlooked: the process by which people in a given location accept, either explicitly or implicitly, their attachment to a polity. The creation of a state is often—if not always—endogenous to the population that inhabits it. With its current political jurisdictions and governmental structures, present Mexico resulted from a process that was not preordained but depended on the incentives set by the diverse constraints that geography and circumstances played. The historical region of Mesoamerica mostly ended up being consolidated into one state. But what led to this outcome? This is an important question, especially if we frame it in the larger context, where Mexico itself was but a region of a larger polity. Hence, besides the conquest, the other case study I focus on is the process that led to Mexico's independence. Conquest and independence: the former represents the unification impetus, the latter the secession force.

The conquest of Mesoamerica and the independence of New Spain are the most relevant junctures to understand the formation of a polity in Mexico. Studying these cases may also prove fruitful to understand the process of state and nation-building more broadly, as an example of how states are born and mutate through time due to continuous institutional adaptation to both preexisting conditions and sudden contingencies. I aim to capture what is unique about Mexico by emphasizing what it's not. By doing so, the reader will appreciate the broader applicability of the framework hereby presented: how states are created, how they change, and how they collapse. Both episodes—conquest and independence—situate Mexico as part of a larger community, of which other Hispanic countries—the rest of Latin America, Spain and even the Philippines and Portugal—belong as well. The conquest of these territories was followed by a state-building process that adapted local native institutions to a larger Spaniard political structure. The wars of independence in America mark the implosion of such political system. Both events can be objectively studied as a particular case of the life-cycle of a state: from

political unification to its fragmentation.<sup>6</sup> After they seceded from Spain, the newly created Latin American states—including Mexico—experienced several decades of political convulsion, civil wars, and economic vulnerability to global economic cycles. The old regime was thwarted, but it was not entirely supplanted. It led to a century of weak states that were financially and logistically incapable of unifying their own countries.<sup>7</sup>

In the following pages, I present a brief overview of Mexico's economic history via an analysis of how its state was established, focusing on its beginnings after the Spanish conquest and its transformation after independence. I follow an approach that highlights the political economy processes that led to the formation of its borders, and their subdivisions. I first explain the theoretical framework that I'll be using. And then, I'll apply it to two specific scenarios: the Mesoamerican coalition that led to Mexico as a state and the independence, by which Mexico seceded from the larger Hispanic community.

## 2 DECENTRALIZED EMPIRE, FRAGMENTED EMPIRE

The creation of the Spanish state in the Americas can be studied under the framework of a general model of the size of nations (Alesina and Spolaore 1997, Casella and Feinstein 2002). The size of a polity depends on the equilibrium between two forces: a) a centripetal one which incorporates the benefits of having economies of scale in the provision of public goods and b) a centrifugal force that involves the increasing marginal costs associated with population heterogeneity. Totalitarian and democratic states alike are bounded by the same forces, even though they face different conditions and constraints.

Historically, states ruled by oligarchic elites have acted primarily to maximize their own rents rather than optimizing global social welfare. As such, the primary constraint these states face is centripetal in the form of costs of potential rebellions that could fragment it. One possible leeway

<sup>6</sup> The Philippines and the Caribbean countries remained in the Spanish sphere, but the seeds of secession had been planted in those places too.

<sup>7</sup> Central America can be seen as the extreme case where warlords actually succeeded in seceding from a potential Central American state. Colombia is one important case where regional divisions didn't lead to ulterior fragmentation, but still mattered in creating a divided country (Safford and Palacios 2001). As I explain in this chapter, Mexico is another example of that.

these states have, in their quest to maximize rents while maintaining the size of their borders (which means minimizing costs of rebellion), is to opt for processes of decentralization—allowing locals to remain semi-autonomous. I argue this kind of model applies to both pre-Hispanic Mesoamerica and the early Spanish Empire.<sup>8</sup> It can help explain how ethnic settlements survived, how they maintained significant levels of autonomy, and why later Spanish Bourbon administrations wanted to suppress it but just ended up fragmenting the Spanish Empire itself.

A basic model for understanding the processes of secession and decentralization is offered in Alesina and Spolaore (2005), Spolaore (2010), Koyama et al. (2018). I present a simplification of their framework. The primary constraint a non-democratic state faces is a  $\delta$  parameter, which symbolizes the proportion of persons (as a percentage of the total amount of population) that the state must appease. It means that even though it may not care about the global welfare of its population, it must still care about maintaining a base level  $\mu$  of welfare for a given portion of its population—the bare minimum level necessary to avoid rebellions. The implication is that when  $\delta$  is high enough, the non-democratic state will act as if it cared about social welfare. If the consumption of public goods is the measure by which citizens stay together in a given polity, allowing its local provision may improve their utility, limiting their incentives to secede. In this case, given that the state is analyzed as a rent maximizer, it would prefer to extend decentralization instead of reducing taxes (which, if decreased, would tend to increase the population's utility level at the cost of the state's rents). The problem is that providing a public good locally may cost more than doing it centrally and would tend to reduce the state's rents.

The optimization process the state would follow to decide to either centralize or decentralize involves estimating the benefits of reducing the cost of rebellion  $\delta$  constrained on the cost of provisioning a decentralized public good  $K$ . The basic setup of this simple framework involves a Hotelling-like location model where people are distributed within a line that represents the preferences of the population; for example, a line that goes from zero to one implies that the person that inhabits point 0 is

<sup>8</sup> See Mazin and Ruiz Ibanez, eds (2012). In the larger literature on the Spanish Empire, the Habsburg way of governance is known as a polycentric monarchy, as it relied on a set of autonomous regions loosely connected by their allegiance to the King.

the opposite of the person located in point 1. The distance can be interpreted geographically or ideologically. The state locates itself on the line, enacting policies that favor the preference where it is located. Assume that a state can provide two public goods: say, defense against external encroaches, identified by  $\alpha$ ; and an administrative role providing local organization, defined as  $\beta$ . Assume good  $\alpha$  is always provided centrally by a central state, but it must decide whether to provide public good  $\beta$  as well or create a sub-jurisdiction that locally provides the good. A key aspect of the model is that it assumes that the costs of provisioning  $\beta$  in a decentralized manner will also be incurred by the central state.

The following equation expresses the inequality that needs to be satisfied for a state to decentralize:

$$\delta \geq \lambda + \frac{K_{\beta}}{\theta}$$

Here,  $\lambda$  represents the number of people that enjoy a utility high enough that the decision being made by the state to decentralize or not is irrelevant to them.  $K_{\beta}$  is the median cost of provisioning public good  $\beta$  to each individual living in the model, and  $\theta$  exemplifies the marginal cost that the median individual faces for being at a distance  $l$  from the provisioning of the public goods. Thus, the quotient of  $K_{\beta}$  and  $\theta$  reflects the costs of appeasing at a base level  $\mu$  a given population subset.

The prediction is that, *ceteris paribus*, decentralization is more likely when: (a) the number of people that must be appeased  $\delta$  is high; (b) the number of people that enjoy a sufficiently large utility as not to care about decentralization  $\lambda$  is low; (c) the heterogeneity costs  $\theta$  are high; (d) the cost of provisioning  $K_{\beta}$  public good  $K_{\beta}$  is low.

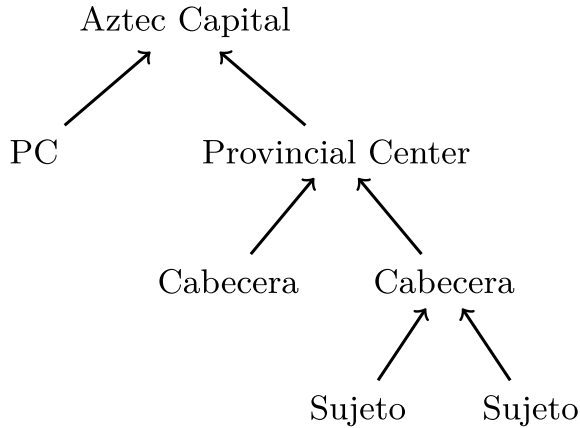
Applying this simple framework to the Mesoamerican context can shed light on why small ethnic settlements remained semi-autonomous for long time within Mexico, and why (even in the face of *de jure* actions against them) they remain an important aspect of the local political life today. It can also explain why the Spanish Empire remained unified for hundreds of years but imploded quickly after a series of failed centralizing reforms. In the following sections I detail the process of conquest and how the indigenous settlements were incorporated into the new Mexican polity. In the last section, I explain the implosion of the Spanish Empire using Mexico's independence as a case scenario.

### 3 THE CONQUEST: DECENTRALIZED GOVERNANCE

Mexico's political division reflects its complex history. The borders of its main political jurisdictions, the Mexican states, were drawn exogenously by the Spaniards and resulted from its colonial subdivisions. At least as they were in the late eighteenth century when Spanish imperial reforms introduced the *intendente* system that tried to centralize the power of the King's bureaucracy to the detriment of local elites (O'Gorman 1937). The next section—on Mexico's independence—will explain the larger events that shaped their trajectory. Mexico's smaller political jurisdiction, the *municipios*, however, reflects a more profound inheritance that goes back to pre-Hispanic times. Mexico's indigenous communities were conquered, but their local ways persisted, its governance institutions transcended, and its polities became the basis of Mexico's central spatial organization today (Arteaga 2018, Elizalde 2020, Garcia Martinez and Martinez Mendoza 2012).

The political map of Mesoamerica at the time of arrival of the Spaniards is complex: The Aztec Empire ruled most of the area, but they were only one of several polities. And these communities were significantly different from each other. Differences existed in terms of culture, institutions, and even genetics (Moreno-Estrada et al. 2014). Enmities among them were common: war, conquest, and tributes were common. The Aztec Empire, the most significant power in the region, relied on a loose network of conquered, but self-governed, polities to sustain itself (Hassig 1985). Figure 1 shows how the system was organized: At the bottom of the pyramid were subject settlements (*pueblos sujetos*): polities at the bottom of the hierarchy that paid the brunt amount of tributes. Above them, however, larger communities existed; they were called *Cabeceras*. They were settlements that received tributes from their respective *pueblo sujetos*, but they themselves paid tribute to Aztec provincial centers, who also paid tribute to Tenochtitlan, the central Aztec city (Garcia Martinez and Martinez Mendoza 2012).

When Spanish Conqueror Hernan Cortés arrived, he took advantage of these political divisions; the Aztec conquest would have been impossible without the help of other Mesoamerican societies. The governance structure of the Aztec Empire made it especially vulnerable to this kind of external shocks: The arrival of the Spaniards provided an opportunity for other indigenous settlements to secede from the Aztec coalition. The alliances forged to uptake the Aztecs served as the foundations



**Fig. 1** Hierarchical Tribute flow between polities in the Aztec Empire

of the new political organization—of what became the Viceroyalty of New Spain. Cortes' main achievement was not the conquest, but the building of a new stable state out of the previous political landscape. The Spanish substituted the Aztecs at the top of the political hierarchy in Mesoamerica, yet the divisions among the indigenous communities (and the enmity between them) remained. Mexico City supplanted Tenochtitlan, and the newly formed Spanish cities became the new provincial centers. The preexisting pre-Hispanic hierarchical structures were maintained: the vertical relationships between *cabeceras* and *sujetos* persisted. To maintain control, the Spanish-Native alliance kept pushing the frontier of the new state toward the South and North, conquering Mayan towns in Central America and fighting nomadic indigenous tribes in the north.<sup>9</sup> Spaniards used violence to coerce natives, but the primary mechanism of control was subtler: respecting their local autonomy, granting them special privileges, and accepting them into the hierarchy of the Spanish Empire (Kellogg 1995, Lockhart 1992, Rojas 2010).

<sup>9</sup> Several current locations across Central America are now known by their Nahuatl names, even though locals were almost all Mayans. This is because the Nahuatl allies of the Spaniards—especially the Tlaxcalans—were an essential part of the conquering coalition. This was also true for northern Mexico, where Nahuatl allies conquered and later resettled those territories.



The foundation of the Spanish state in the Americas relied on a grand subdivision between what was known as the Republic of Spaniards and the Republic of Indians. The former included the newly formed Spanish territories and cities within the Americas, while the latter encompassed the preserved territories of the original Native American communities. The Crown delegated significant levels of autonomy to both but gave them specific duties and rights.<sup>10</sup> The notion of a Republic of Indians—in contrast to that of Spaniards—refers to the broad category of a collection of pueblos juridically different from the rest of the empire. However, each pueblo enjoyed various degrees of autonomy not only with respect to the Spaniards but also in reference to the rest of the other indigenous communities. The hierarchies shown in Fig. 1 persisted, but also mutated through time—*pueblos sujetos* became their own cabeceras. There is a pattern in the way pueblos were nominally organized: they relied on local elites (*caciques*) for practical governmental purposes (say a council of elders or an autocratic royal family) and had collectivist leanings in their economic organization, where the communal property of land was the norm (each community member was allotted some land in concession only, for him to live and to procure their living).

Republics of Indians were initially constituted by respecting most of the pre-Hispanic borders as they were before the conquest. Cortés arrived with only 1,000 Spaniards as companions. To govern these territories, he needed to incorporate their institutions. The historical debate centers on how many of these settlements were actually preserved through time, how many were destroyed, and how many were “artificially” created afterward. The literature dwells on three arguments:

- (a) The Spanish expansion into North America implied the conquest of more nomadic societies that, unlike those of Mesoamerica, lacked the historical legacy of political organization that their Mesoamerican counterparts had (Cramaussel 2000). Hence, the colonial pueblos seen in those parts—northern Mexico and the southern United States—were most likely established in an *ad hoc* manner by the Spaniards to facilitate the payment of tribute in an organized manner.

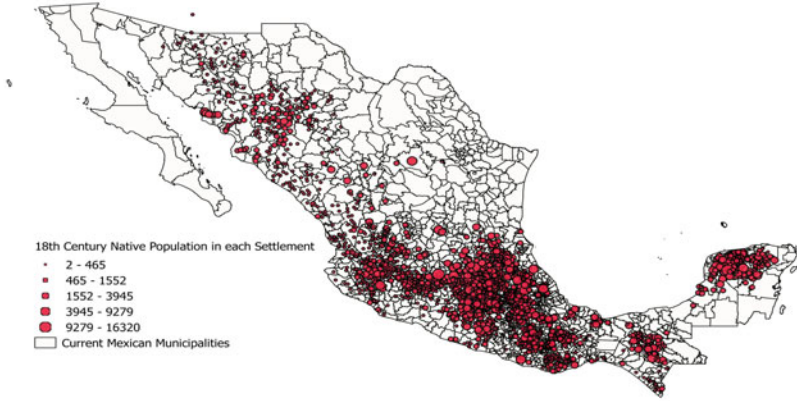
<sup>10</sup> In the next section, I go more into detail about the mechanisms of governance of the Spanish world itself. For further information on the building of the intra-Spanish state in Mexico, specifically in the sixteenth century, see Garfias and Sellers (2021).

- (b) The epidemics of the late sixteenth century decimated the indigenous population. There is a debate around how many people died, based on the lack of information on how many lived in pre-Hispanic times. A conservative figure posits that the indigenous Mesoamerican population went from 8 million people in the fifteenth century to less than three million in the eighteenth century (Sanchez-Albornoz 2014). The demographic shock fractured many original pueblos. The Spanish response was to congregate these into new ones. As such, many Indians were relocated to places they were not originally related to. The extent of this process is unknown and subject to tremendous debate. Nonetheless, Maloney and Valencia Caicedo (2015) have established that agglomeration effects mattered in the persistence of pre-colonial settlements thorough time. Fernandez Christlieb and Urquijo Torres (2006) suggest geographical patterns help distinguish the origin of the pueblos: original native settlers preferred their settlements to be located on hills because it gave easy access to water from rain, cover from wind, and an ideal location to observe celestial bodies to plan for harvests. On the other hand, Spaniard administrators preferred settlements to be located on valleys because of their plane surface that favored a European urban layout.

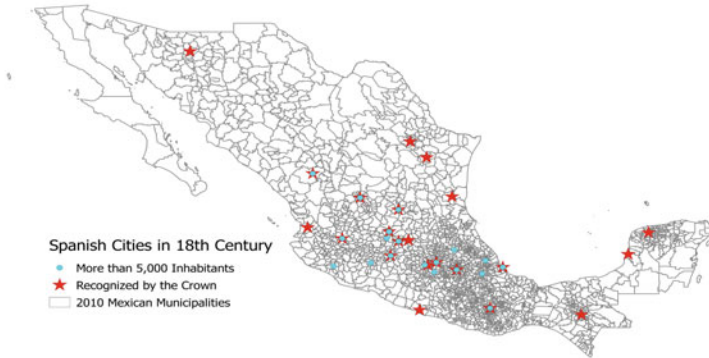
In the eighteenth century, a fragmentation process ensued among the indigenous governance structures: a wave of secession of *pueblos sujetos* from their respective *cabeceras*. The demands for separation were based on the unjust treatment by the headtowns' elites whom the *sujetos* owed tribute payment and the increasing costs of bureaucracy (Dehouve 1984). Perhaps more important were the disputes over land distribution, as some pueblos lacked land and were permanent lessees from their *cabeceras*. Being recognized by the Spanish Crown as an independent entity implied de facto land redistribution toward them (Ouweneel 1995). The Spanish were receptive to indigenous fragmentation because, by the 1700 ss, they were attempting to reform the empire's governance structures. The Crown attempted to centralize its power and backed policies that diminished the power of local elites (Cuello 1988).

How can we interpret the historical process by which these indigenous towns were incorporated into the Spanish state? In terms of the

(a) Indigenous Settlements



(b) Spanish Cities



**Fig. 2** Two political jurisdictions: The Republic of Indians & The Republic of Spaniards (Arteaga 2018, Abad and Zanden 2016, Rojas 2016, Tanck de Estrada 2005)

framework explained in the last section, the big constraint was the diverse cultural landscape of Mesoamerica (where a plethora of languages and cultures coexist) which means that heterogeneity costs were high for any potential conqueror. Second, Mesoamerican indigenous cultures were collectivist, and when they were conquered, the appeasement of their local elites was itself constrained on the respect of their own collectivist ways of organizing. Third, and related to the second point, the conflicting nature of political arrangements in Mesoamerica meant that the population that must have been appeased was high nonetheless. Fourth, the Aztec and Spanish strength relied on providing only one relevant public good, defense, and security against external encroachments, but nothing else. Neither government directly provided nor financed roads, temples, or hospitals but relied on third parties to do so—the church or the local elites. It implies that the cost of providing these other goods was almost null for them. All these characteristics help explain why both Aztecs and Spaniards built their respective states in Mesoamerica in a decentralized manner: to maintain control while maximizing rents.

#### 4 FROM HABSBURGS TO BOURBONS: TWO GOVERNANCE MODELS

The sixteenth century was a period of expansion and consolidation. Besides the Spaniard-Indigenous divisions, there was a need to formalize the administration of the new territories within the Spanish system. The indirect rule of Cortés and the early conquerors—the *encomienda system*—was superseded by royal institutions that aimed to centralize the governance hierarchies in bureaucrats directly appointed by the Spanish administration (Garfias and Sellers 2021). In 1524, the Council of Indies was created as the administrative body that oversaw government affairs in the Americas. In 1535, New Spain was officially constituted as a political jurisdiction: A Viceroyalty governed by a viceroy, a position that directly answered to the King. New Spain kept expanding its borders throughout the century using the same strategy delineated in the last section: subduing and incorporating territories and indigenous communities. The conquest of Central America became a priority, and by 1524—three years after the fall of Tenochtitlan—there were already Spanish settlements in Costa Rica. The expansion to the north was more difficult, as it was a region used to repel previous Mesoamerican attacks.

The Chichimeca War<sup>11</sup> was fought in central and northern Mexico until the 1590s (Powell 1969). In 1598, the northernmost Spanish settlement was founded: Santa Fe in the current state of New Mexico, US. The New Spain also expanded to the east, across the Pacific. In 1565, Miguel de Legazpi found a viable seafaring route between Asia and America. He founded Manila in 1571 and opened the door for one of the most lucrative trade routes the pre-modern world has known: the Manila Galleons (Arteaga et al. 2021).

Yet, even after all the developments toward expansion and consolidation, the Spanish Empire of the sixteenth and seventeenth centuries cannot be conceived as a unified polity. Pure geographical constraints,<sup>12</sup> such as travel distance and costs, made direct administration untenable. As previously discussed, incorporating many different indigenous communities also created challenges that only political delegation could even attempt to solve. Moreover, the Spaniards followed a specific governance paradigm that the Habsburgs, the ruling house of Spain, had successfully practiced for centuries in their European realms; outsourcing all but the most essential governmental functions to local elites that complied and benefited from the arrangement.<sup>13</sup> This model is known in the historiography as a polycentric monarchy, denoting how the empire was decentralized, and kept united only by their ties to the King and by an unbowed attachment to the Catholic religion from all their inhabitants (Herrero Sanchez 2020, Mazin and Ruiz Ibanez 2012).

In 1714, a new ruling house, the Bourbons, succeeded to the Spanish throne after the last Habsburg King died without an heir. The Bourbons came from a French lineage that had a very different perspective on governance. They were particularly interested in modernizing the empire, creating a fiscal-military state capable of competing with the British. To do so, they had to truly push for reforms that unified the administration, increased tax revenue, and solidified political control of the government (Torres Sanchez 2015). The Bourbon changes frame the context that ultimately led to the implosion of the empire.

<sup>11</sup> Chichimeca is a derogatory term used by Nahuatl people to denote those who lived in the north, and it roughly translates as “barbarian.”

<sup>12</sup> Although often attributed to the British, the phrase “the empire on which the sun never sets” was coined as a reference to the Spanish empires of Charles I and Philip II.

<sup>13</sup> Spain itself was thoroughly divided between its composing regions. See Grafe (2012).

## 5 INDEPENDENCE: IMPERIAL FRAGMENTATION

How the Spanish Empire, of which Mexico was an essential part, fragmented into several new polities? The answer lies in exploring the exogenous shocks that created incentives for the Spanish Crown to push for centralizing policies, alienating key regional elites while empowering others. I make use of the same theoretical framework explained in section two to explore this problem. The only minor change is the trivial modification in the setting with respect to the type of agents involved. In the previous sections, I emphasized the division between indigenous and Spaniards. Here, I will rely on the intra-elite division between local elites in the American regions and the King—which follows a model closer to Spolaore (2007).

The Spanish American wars of independence resulted from unexpected contingencies that arose out of France's invasion of Spain in 1808—which provoked a crisis of political legitimacy in the Americas. But what were the conditions that created the opportunity for secession? Understanding the particular fiscal sociology of the empire is critical to solve the conundrum. Key political groups (Miners, merchants, Crown) played crucial roles. Although I focus on Mexico, the process of fragmentation applies to the whole of the Spanish influence area. The argument hinges on a straightforward institutional idea: a political equilibrium is stable only while the necessary conditions to sustain it exist. A state may lack robustness and be vulnerable to exogenous shocks that change the conditions that support it.

New Spain's economy was of the backward *ancien régime* type but had an important twist: it had a large endowment of silver. Mexican money circulated all around the world (Marichal 2006, Findlay and O'Rourke 2007). It is to be expected, then, that its economy was anchored around silver extraction and the minting of coins (Dobado 2002, Dobado and Marrero 2011). A common idea among non-historians is that Monarchy was parasitic precisely because of its extraction of this resource. Yet, the Crown did not heavily tax this resource. It levied a 20% tax that decreased to 10% in the late eighteenth century. Moreover, the monarchy enacted policies that aimed toward enhancing the productivity of silver mining through its subsidies of mercury—silver's primary input needed for its extraction.

Although mining was the motor behind New Spain's economy, miners were not at the top New Spain's society. Political control was exercised

by the members of Mexico City's trade guild.<sup>14</sup> The *Consulado de México* was established in 1594 to be a corporation that consolidated the interests of the wholesaler merchants in New Spain and had the aim of acquiring a piece of the transcontinental trade pie; it was founded with the premise of being an American counterpart to the Seville's trade guild, which had dominated the transatlantic trade since its creation in 1554. As succinctly explained by Studnicki-Gizbert (2000), the Mexican Consulado operation was entirely founded upon three internal roles: (i) to set and enforce the formal rules that would govern all commerce in New Spain; (ii) to provide institutionalized support to its members, aiding them in improving their businesses; (iii) to act as a key lobbying group that could push for their members commercial interests.

From 1566 to 1776, the main structure of the Spanish oceanic trade was centered around the so-called Flota System: a scheme that consolidated all commerce around the shipment of periodical convoys from Seville to key designated docks in the Americas: Veracruz in New Spain, and Portobello, Panama for South America. Havana and Cartagena acted as potential resupply harbors. Similarly, in the Pacific, the trade route connected the ports of Acapulco, New Spain, and Manila, Philippines. The idea of centralizing trade, around heavily guarded convoy fleets, arose as a measure of protection against raids. Independently of the presumed purpose of the system, it must also have acted as a rent-making mechanism as it consolidated trade in the hands of the trade guilds (Brading 1971, Garner and Stefanou 1993, Walker 1979).<sup>15</sup>

By controlling the influx of goods from Europe and Asia, the guild maintained preponderance on settling political disputes in New Spain (Arteaga et al. 2021). Thus, a symbiotic alliance between the Crown and the guilds existed: the Crown granted monopolistic power to the guilds, which gave them economic and political power, which then was used to politically control the territories in favor of the Crown. In this context, the Mexico City trade guild became the most important ally of the Crown for

<sup>14</sup> As lengthily explored by Brading (1971) and Walker (1979, pp.119–132), miners themselves depended heavily on the merchants: The latter were the prime sources of credit investment that financed mining, and they also controlled the trade opportunities—necessary for silver to be exchanged into goods.

<sup>15</sup> One recent argument against this interpretation comes from Baskes (2005), who argues that if we consider the distinct risks and uncertainties involved in oceanic trade, guilds weren't actually enjoying monopolist profits from international trade at all.

the governance of New Spain and for the Americas in general (del Valle 1997).

Rents were derived from the transatlantic trade limitations. Initially, only three guilds were responsible for managing it: the merchant guild of Mexico City in New Spain, the guild in Lima, South America, and the guild in Seville in Spain. The Crown acted as an arbiter of their disputes and also legitimized their routes and rents. The Crown profited from this arrangement because it lacked capacity to directly govern its overseas territories; it needed the compliance of the merchants.<sup>16</sup>

Prior to the eighteenth century, the greatest threat to this organizational scheme was the occasional trade disruption driven by pirates and buccaneers. The Spanish Empire was well equipped to counteract such mishaps. It adopted a well-known stratagem that minimized losses: it centralized trade in key ports in America (primarily Veracruz in Mexico and Portobello in Panama) and consolidated it through periodical shipments that were well defended—the Flotillas.<sup>17</sup> Piracy was not a substantial threat (Lane 1998). The situation changed in the second half of the eighteenth century when Britain became a world maritime power. In 1762, in the context of the Seven Years' War, Britain captured the ports of Manila and Havana. It also blockaded other important Spanish ports in the Caribbean and Central America, making it clear that a new era of British dominance had begun.

The exogenous change in the status of Britain implied a new organizational threat that could not be obviated. The Crown was failing at its basic duty to protect the sea lanes that connected the empire, and doing so meant that the local elites across the Sea had larger incentives to secede. While the British and Dutch had pillaged Spanish coast towns for hundreds of years before, those attacks were limited as they—for the most part—did not threaten the trade routes themselves. However, by the late eighteenth century, it was clear that the British now had the power to stop intra-Spanish commerce. This prompted a Spanish response in the form of the famous Bourbon Reforms that, on paper, tried to modernize the governing of the empire by centralizing the Crown's

<sup>16</sup> It is the same reasoning that led Cortés to accept indigenous autonomy in exchange for tributes. In this case, the Spanish Crown needed the local elites of their overseas regions to micromanage their day-to-day affairs. This is the decentralization equilibrium.

<sup>17</sup> A strategy inherited from Europe's medieval past, where commerce occurred through centralized trade fairs where wholesalers exchanged their goods in one venue.



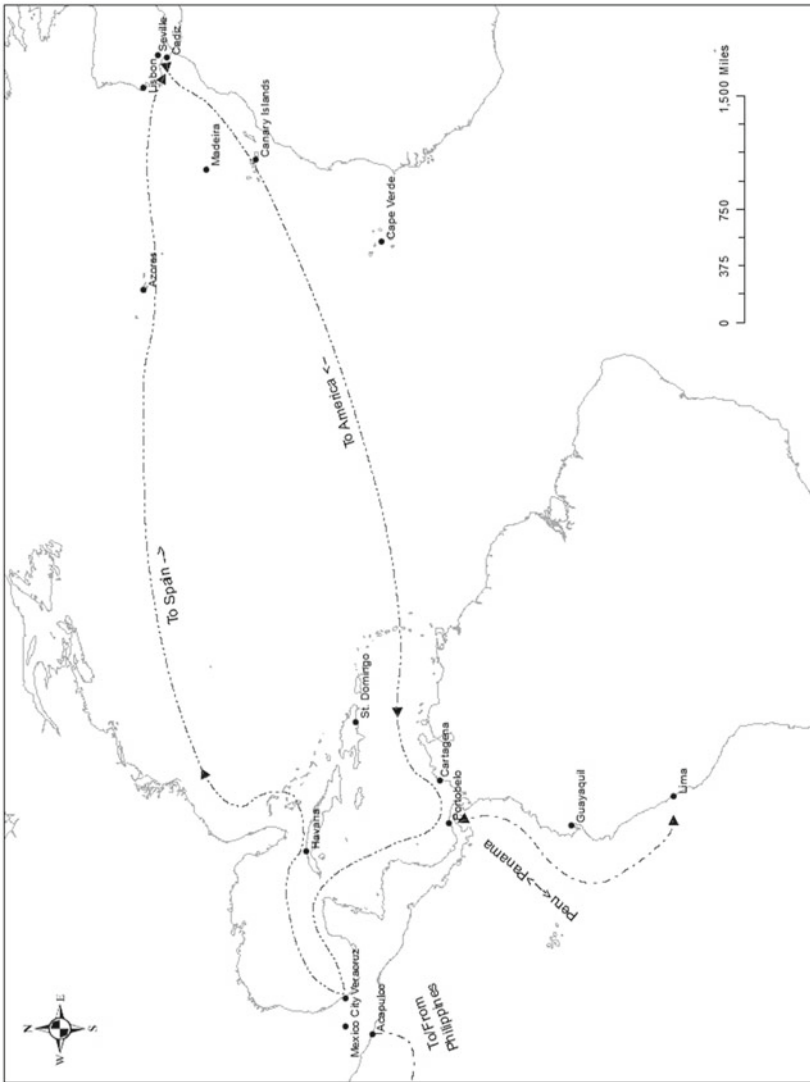


Fig. 3 Imperial trade routes

bureaucracy. These were administrative modifications introduced by the Spanish Crown after the Bourbon family became the ruling house of Spain in 1714, after the War of Spanish Succession. The reforms have been traditionally interpreted as an enlightened attempt to modernize the Spanish Empire (Paquette 2008, Torres Sanchez 2015); to be able to compete with England and France (Marichal 2007, pp .22–29).

The several interpretations one can make of the political economy's functioning of the Spanish Empire and the nature of the Bourbon Reforms depend on the distinct potential accounts of the colonies' fiscal apparatus. There are at least two major strands in the literature. The traditional interpretation emphasizes Crown's coercion against its American subjects. It posits that the reforms were a partially successful attempt to centralize the whole empire administration in the Crown's hands. The intensification of tax collection is underscored as a critical aspect. As advanced by Marichal (2007), the idea is that the coercive nature of the reforms became evident with the extraction of funds in the late eighteenth century via forced loans and expropriations.

The second type of literature argues that the reforms were less centralizing and less coercive. They depended on a *de facto* coalition between the Crown and local elite groups. The arrangement is described by Grafe and Irigoien (2012) as being composed of stakeholders, where both the Crown and the elites had aligned interests and hence had stakes in maintaining the consented status quo. The Crown's borrowing of extensive funds in the late eighteenth century could only have happened with the collaboration of the elites. Colonial transfers didn't just satisfy Crown's interests, but that of the local American elites too (Grafe and Irigoien 2006, Grafe and Irigoien 2012, Irigoien and Grafe 2008a, Irigoien and Grafe 2008b).

Both strands of the literature can be conciliated. The Crown and its American elites—who had the power to politically manage the American regions—had an interdependent relationship where they both benefited—at the expense of other actors within the empire. Their interdependence was opportunistically oriented.<sup>18</sup> The bargaining equilibrium was stable only up to a point. Passing certain threshold, the empire's survival was itself at stake. The increase in the number of merchant guilds—and other rent-seeking corporations—proved to be the primary underlying

<sup>18</sup> Opportunism understood as self-interest seeking with guile (Williamson 1993).

mechanism by which local elites got empowered and started demanding autonomy and independence (Arteaga 2022).

A critical aspect of the Bourbon Reforms that has been less studied is the trade liberalization policies.<sup>19</sup> Besides aiming toward bureaucratic centralization, the Spanish Crown implemented a slow but steady program of liberalization of the transatlantic trade: more ports and more cities were allowed to engage in it. This meant that alternative local elites—besides Mexico City, Lima, and Seville—started gaining power and commercial experience. The original goal of the policy was to diversify the trade routes, making them more resistant to events as they had happened in 1760ss.

The liberalization attempt was at first cautious and measured, but due to subsequent fiscal and military shocks that affected the Crown in the 1790's, it was rushed. Spain's fiscal capacity waned despite its attempts to improve it. This was an effect of the constant state of war against either France or England. To sustain its war efforts, the Crown prioritized short-term gains and hastened its "liberalization" policy; it prioritized granting privileges to more elites in exchange for funds (Marichal 2007). The Crown tried to co-opt local elites in previously neglected cities: in the late eighteenth century, new merchant guilds were created in Guadalajara, Veracruz, Havana, and Guatemala.

The plan backfired for the Crown.<sup>20</sup> The new privileges given to regional elites made them more independent of Madrid and warier of the power held by the traditional capital guilds of Mexico City and Lima. Napoleon's invasion into Spain—and the imposition of his brother Jose Bonaparte as King of Spain—triggered a series of events that changed the incentives of Latin American elites. The political re-configuration created an opportunity window for alternate elites to challenge the previous *status quo* (Rodriguez 1998). The established elites in America were in a dilemma: to embrace the new imposed King as their own—which meant

<sup>19</sup> For an economic analysis of its effects, see Ellingsen (2020). He finds that the policies reduced shipping costs and facilitated population growth in the many cities where trade was liberalized.

<sup>20</sup> The need for funds led the Crown even to alienate its main institutional ally: the Church. The Crown implemented several policies that expropriated Church's wealth. This was a blow to local economies across the empire, as the Church was the realm's leading banking and credit institution. See von Wobeser (2006), von Wobeser (1990).

accepting an imposed ruler—or rebel at the cost of also reneging the institutions that provided their legitimacy. Mexico's independence resembles the latter scenario.<sup>21</sup>

Alternative elites in Central America, Yucatan, and in other Mexican provinces, were empowered too. And although they remained overshadowed by Mexico City's elites, their impetus toward secession was present. Thus, Mexico's independence was the result of former royalist elites in the capital realizing the dilemma in which they were put. They would have preferred to maintain the previous *status quo* remaining part of the Spanish larger polity. But at that moment, such equilibrium was already untenable. To preserve their sphere of power within North and Central America, Mexico City's elites had to react by seceding from Spain and focusing on creating a new local coalition. After its independence in 1821, Mexico transformed into a weak empire that quickly collapsed in 1823. Central America ended up seceding. Later, Texas did too. Other regions attempted to do so as well—Yucatan among them. However, the most relevant areas remained part of the Mexican polity. For example, Guadalajara was New Spain's second-largest city and had a history of self-governance independent of the central authorities in Mexico City.<sup>22</sup> It could have moved for secession. It didn't. Nowadays, what people identify as Mexican culture—tequila, mariachi, etc.—is really the culture of Guadalajara and its surrounding areas.

In summary, the Spanish Crown never held absolute power over its dominions, spanning several miles across different continents and inhabited by a very heterogeneous population. It had governed in a decentralized manner through a coalition that included regional elites. For the Americas, the *de facto* economic and political controllers were the merchant guilds—they had a monopoly over the trade routes. While trade flourished, elites and Crown benefited by capturing rents while maintaining political stability. It was a stable equilibrium. But once trade was disrupted—in the late eighteenth century—the incentives of the involved actors changed. The Crown had to react by diversifying its trade routes,

<sup>21</sup> The South American case can be better seen as contention between former peripheral elites in Nueva Granada and Rio de la Plata against the established ones in Peru. This explains why Simon Bolívar and San Martín became the heroes and had to invade Peru to succeed.

<sup>22</sup> Guadalajara itself was founded in 1531 as a result of a military expedition originated by the rivalries between Nunõ de Guzmán and Hernan Cortés.

but that also empowered alternative elites and diminished the support of its old allies. In terms of the model, this implies that the ruling coalition increased and made more difficult an agreement. More importantly, the Crown aimed toward improving its capacity to govern the territories directly, which meant the cost of provisioning public goods increased for them too. It led to an erosion of the legitimacy of the power of the Crown, which culminated after Napoleon invaded Spain, creating the ideal setting for the wars of independence to begin in America. Mexico City was a special case in as much as its elites were tied to the imperial routes the most. Yet, they themselves had local pressures from other Mexican regions to push for secession. Mexico's independence resulted from Mexico City realizing that it needed to become independent to preserve its own position.

## 6 CONCLUSIONS

The chapter explores the economic processes behind the formation and fragmentation of polities with applications to the conquest of Mesoamerica—the beginnings of Mexico as a polity—and the fragmentation of the Spanish Empire that led to Mexico's independence. I follow a simple model of the size of nations (Alesina and Spolaore 2005), founded upon simple economic precepts, where a political jurisdiction is explained as the result of an equilibrium between the advantages in terms of economies of scale in providing public goods and the costs in relation of the heterogeneity of preferences among the population that composes said state. I particularly focus on the processes of decentralization as an essential strategy that allows a state to incorporate regions that may otherwise want to secede (Spolaore 2010).

The process of state-building after Mesoamerica's conquest was based on a successful coalition among Spaniards and Natives, where the latter enjoyed high levels of autonomy. The political structure of New Spain relied on a major division between what was called *The Republic of Spaniards* and *The Republic of Indians*. This political division remained for centuries, up to the late eighteenth century. It still is relevant to explain political divisions in Mexico today—indigenous settlements are the basis of current counties.

Decentralization was a governance strategy that was used widely across the Spanish Empire: to successfully govern its overseas dominions, the Crown had to outsource political administration to local elites. Trade

routes were critical. The Crown allied with merchant guilds, providing monopoly rights to them in exchange for political allegiance. The setting was stable because the Crown could defend and legitimize the routes. In the late eighteenth century, Spain lost the capability to do so. The Bourbon Reforms aimed to modernize the governance of the Spanish Empire by enhancing the fiscal and bureaucratic capacity of the state to collect taxes and engage in war against rival empires. However, the reforms also liberalized trade routes, empowering alternative regional elites. The fragmentation of the empire—and Mexico's and Latin America's independence—can be understood as a policy failure. Once the decentralization strategy was untenable, and their autonomy was taken away, the Spanish American regions chose to secede. This global scenario contextualizes Mexico's independence movement. And even though Mexico had enjoyed a particularly privileged position among Spanish America—due to its geographical centrality as a producer of silver and a connection between Asia and Europe—it still felt pressures from its provinces toward secession.

The fragility of the nascent Mexican state in the nineteenth century—and of the newly independent Latin American states in general—had its origins in how the fragmentation of the Spanish Empire occurred: It was not a war of independence in a romantic sense. It was a civil war among regional elites that saw better opportunities in reneging the previous political coalition. Once regional elites got rid of bureaucratic control from Spain, what stopped them from getting rid of the authorities in Mexico City? The figure of the *cacique*, the warlord, consolidated in this period. Regional elites created their own armies that fought to preserve their autonomy against the capital. The independence movement created an impetus for fragmentation all across the Americas. Central America can be seen as a paradigmatic case: once part of Mexico, they seceded from it and later imploded, forming the many small Central American countries that exist today. Central authorities in Mexico City were able to retain most of their former regions. However, the central government still struggled for the next 50 years to enforce its authority.

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# Checks and Balances in the Colonial Government of Peru: Evidence from Office Prices

*Jenny Guardado*

A key question in the economic history of Latin America is how the colonial experience shaped its political and economic development in the long run. The most convincing accounts center on the role of institutions created by colonial powers as a response to the type of factor endowments and disease environment they faced in the New World (Engerman and Sokoloff 1997; Acemoglu et al. 2001; Bruhn and Gallego 2012).<sup>1</sup> Others focus on a combination of pre-existing institutions, labor availability, and the prevailing ideology of colonizing powers (i.e., Mahoney 2010) in setting their future economic path. Although these explanations underscore the significance of the broad institutional contours, or the “rules of the game”, in shaping Latin America’s postcolonial development, the literature is still working to understand the role of colonial officials, at the helm of these institutions, in bringing these effects about.

<sup>1</sup> Other studies in turn document the effect of particular colonial institutions in Peru, such as the forced labor mit’a (Dell 2010) or the Inca Road (Franco et al. 2021), for example.

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In this chapter, I build on Guardado (2018, 2022) to argue that in the Spanish Empire in the Americas, henceforth Spanish America, the colonial legacy of these institutions crucially depended on the sometimes-obscure colonial officials populating them. In-line with the well-known trope of the Spanish Empire's bureaucracy—*obedezco pero no cumplo*<sup>2</sup>—colonial officials did not always follow the Crown's rulings but also actively shaped and even designed new ones—often in their own interest. In fact, the effectiveness of the *de jure* arrangements varied significantly depending on the identities, incentives, and qualifications of colonial officials. For instance, historians document how the particular personalities of Peruvian viceroys greatly influenced their stance against (or for) administrative corruption (Quiroz 2008). At the level of top magistrates (*audiencia*), the place of birth and mode of appointment (whether by purchase or appointment) is strongly correlated with documented instances of self-dealing (Burkholder and Chandler 1977). Finally, even among provincial *corregidores*, the mode of appointment and social origin are good predictors of their performance in office (Guardado 2018). In all, this suggests that officials at all levels played a consequential role in shaping the functioning of these institutions.

Why could performance in office vary so widely? The main hypothesized reason is the inability of the Spanish Crown to fully monitor and control their behavior in office—agency problems. Difficult communications, low wages, and the lack of an institutionalized “career path” for most of the bureaucratic positions in the Empire meant that their selection and appointment process was one of the few opportunities for the Crown to steer overseas policy (Eissa-Barroso 2017). An alternative interpretation of these “agency concerns” is that it was never the intention of the Crown to engage in this type of centralized control in the first place (Irigoin and Grafe 2008). Rather, colonial policy was a product of bargaining between the Crown and its subjects or “stakeholders” (Grafe and Irigoin 2012) which would explain policy departures from its original formulation. Whether intentionally or not, the result was that the implementation of royal decrees could be very different from that envisioned in the first place, if at all.

As an acknowledgment of these limitations, the Crown devised an institutional framework organized hierarchically but with a number of

<sup>2</sup> I obey but do not comply.

horizontal checks at each level of government. For example, low-level officials were supervised by a higher ranked one as a way to induce better performance. This is the case of top magistrate courts (*audiencias*), as they oversaw the performance of provincial governors (*corregidores*) through routine judicial investigations and post-tenure assessments. Horizontally, the colonial government established checks in the form of overlapping jurisdictions, such that different authorities exercised the same powers or functions (Haring 1947: 122), as a way to counteract each other. For instance, while the colonial *audiencia* had the legal mandate to protect the indigenous population, this responsibility also fell in the hands of the regular clergy, numerous missions, and in the case of Peru, a special figure called the *Protector de Indios*.<sup>3</sup> The overall purpose was to align bureaucratic outcomes with those of the Crown through a mixture of oversight and competition.<sup>4</sup>

However, the effectiveness of these constraints was contingent on the willingness and ability of each actor to fulfill their duties. It was also essential that there was no collusion between officials at different levels or across different branches (Tirole 1986; Mishra 2002). If the *audiencia* lacked the ability to follow up on accusations against provincial governors, or even worse, if they actively colluded, vertical checks became more of a nuisance than a true deterrent. The same concern arises with overlapping jurisdictions: if instead of recurring to the Crown as “the ultimate arbiter” in any dispute (Grafe 2011: 35), officials agreed to divide the spoils or settle the issue—the Crown would not even know about it. Recognizing these possibilities, the Crown employed various “rules” for selecting and incentivizing its representatives abroad. These included collecting private information, choosing among a restricted set (mainly Spanish *peninsulares*), and discouraging official’s connections local networks, among others.

However, despite its stated commitment to selecting amenable officials, the Crown undermined one of its few mechanisms to achieve this goal. In the 1670s, during a period of fiscal pressure caused by the Nine

<sup>3</sup> This system contrasts with that developed in British North America, whereby checks and balances were achieved by assigning different powers to different branches (Gailmaid 2017).

<sup>4</sup> The system also encouraged information sharing with the Crown (Gailmaid 2017).

Years War, Charles II began the systematic sale of provincial governorships throughout the empire. This was followed by the sale of *audiencia* seats in 1687 and the resumption of the sale of treasury positions, which had been put on hold several decades earlier.

Prior to 1670, provincial governorships and *audiencia* seats would not have been accessible via purchase. Instead, the Crown appointed loyal and “meritorious” individuals, generally of Spanish origin, who have rendered past services to the Crown and would be more likely to follow the Crown’s interests. The advent of sales disrupted the process of appointment of colonial officials to the Americas with visible changes in their profile and incentives.

This chapter employs the office-selling policy as a means of quantitatively assessing the relative significance of various institutional features of the colonial government in eighteenth-century Peru. While previous work shows that office-selling led to worse governance among provincial governors (Guardado 2018), partly due to worse oversight from the *audiencia* (Guardado 2022), here I extend this argument to include other key vertical and horizontal checks and examine how they impact the willingness to pay for provincial governorships (*corregimientos*) in Peru. As shown for the case of Mexico (Pietschmann 1972; Garfias and Sellars 2020) and Peru (Guardado 2018), office prices can provide a meaningful measure of the expected returns from office—particularly that coming from indigenous surplus.

Using this data, I start by quantifying the relative importance of vertical and horizontal checks on the prices paid for lower-level provincial offices (*corregimientos*). That is, I examine how the prices of *corregimientos* were influenced by changes in the composition of two different types of institutions. First, higher-level officials, including *audiencia* members and treasury officials such as the *Tribunal de Cuentas*, which exerted vertical oversight over the *corregidores*. Second, horizontal checks, such as the density of church authorities and parishes (*parroquias*) or the presence of regional treasuries (*cajas*) within the provinces they governed, which also played a role in determining *corregimiento* prices.

Based on this approach, I find that as the extent of vertical checks from the *audiencia* and treasury officials weakened over time, the prices of *corregimientos* grew at a faster rate. In terms of horizontal checks, I also find that the prices of provincial governors were more sensitive to the number of local parishes per capita, but less to the presence of

regional treasury officials in the province. This is consistent with the well-known competitive relationship between provincial governors and priests for power and control. Alternative explanations for this result based on price manipulation (via supply changes) by the Crown, the potential for trending in prices or across different provinces, or that of better governance, are not supported in the data. Rather, the salience of certain traits in the *audiencia*—namely, their connections to local economic activities and government branches—constitutes a potential explanatory mechanism.

The analysis helps us understand how and which institutional features of the colonial government “mattered” in terms of hindering or facilitating the activities of other actors. While most of what we know from the institutional organization of the Spanish Empire in the Americas is of how rules were not followed, the office-selling episode can help understand which features do matter and how. In the case of Peru, changes in the *audiencia* and fiscal positions led to higher increases in the perceived returns from office, while horizontally, the strongest evidence comes from the presence of local church authorities.

This chapter thus looks beyond liberal institutions such as citizens’ assemblies or the separation of powers as a means of addressing credibility problems and promoting long-term economic growth (Gailmard 2017). Instead, it argues that alternative models of imperial organization can work as devised while at the same time highlighting the negative impact of some policies within these models, such as office-selling. This is evident not only within *audiencias* (Burkholder and Chandler 1977) and the fiscal apparatus (Andrien 1982), but also at the *corregimiento* level, with consequences for local governance and indigenous welfare in the Americas.

The rest of the chapter is organized as follows: Sect. 1 outlines the organization of the colonial government of Peru including vertical and horizontal checks to colonial officials. Section 2 focuses on the data and methodology while Sect. 3 presents the results and alternative interpretations. Section 4 discusses the implications of these findings and concludes.

## 1 THE INSTITUTIONAL FRAMEWORK OF THE COLONIAL GOVERNMENT IN PERU

The territory now known as Peru was one of the two epicenters of the Spanish Empire in South America. As the capital of the Viceroyalty of Peru, which spanned from present-day Panama to Chile and Argentina, Lima held a central position of power and influence in the Southern Cone. Together with the Viceroyalty of New Spain, it was one of the two Viceroyalties of the Spanish Empire in the Americas ca. 1700.<sup>5</sup> In turn, each Viceroyalty was divided into top magistrate courts (*audiencias*) which served as governing councils with the highest judicial, political, and legislative powers over a territory of the same name.<sup>6</sup> Figure 1 shows the territorial divisions for each of the *audiencias* at the time mapped unto contemporary country boundaries.<sup>7</sup>

Throughout the colonial period, *audiencia* councils had different sizes ranging from four to twelve members, depending on the importance of the territory. Key *audiencias* such as those of Lima and Mexico had larger councils with twelve members each,<sup>8</sup> while smaller ones such as those of Manila, Santo Domingo, or Guadalajara, had only four. Judicially, these bodies served as the last-instance court in most civil and criminal cases. The *audiencia* of Lima also advised the executive in the territory (the Viceroy of Peru) such that decisions made jointly had the force of law (*real acuerdo*) unless disavowed by the Council of the Indies (Burkholder and Chandler 1977: 2). As such, *audiencia* members enjoyed a broad set of powers and could rule in matters as diverse as taxation, mining, and land rights, among others.

Aside from judicial and legislative powers, the *audiencia* was also in charge of overseeing the implementation of royal laws and of touring the territory to make sure they were upheld (Burkholder and Chandler 1977: 2). *Audiencias* conducted the post-tenure review of lower-level

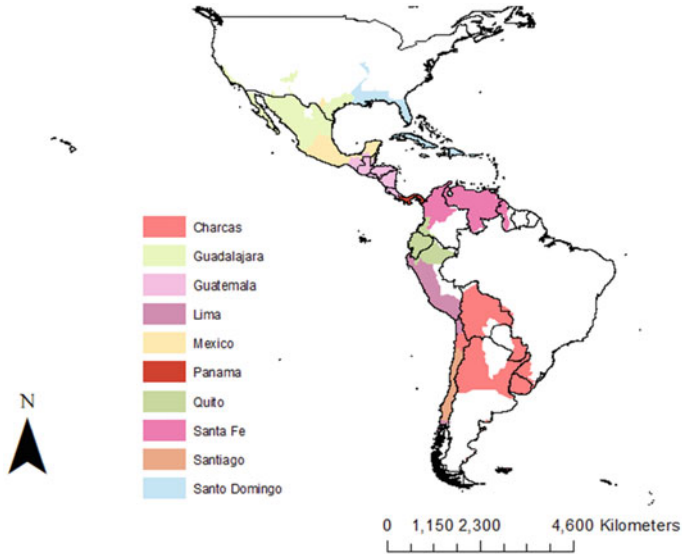
<sup>5</sup> Later subdivisions would lead to the Viceroyalty of New Granada and the Viceroyalty of Rio de la Plata.

<sup>6</sup> These powers were often shared with the Viceroy in cases in which the seat of the *audiencia* was also the Viceroyalty capital. In case of sudden death or absence of the Viceroy, the most senior member in the *Audiencia* was set to occupy the post while a new Viceroy was appointed.

<sup>7</sup> The *audiencia* of Manila in the Philippines is not shown in the map.

<sup>8</sup> In large *audiencias*, eight members belonged to the civil chamber, which was key in deciding important economic and high policy matters (Burkholder and Chandler 1977: Appendix VII, footnote 4) and the other 4 were part of the criminal chamber.





**Fig. 1** *Audiencias* of the Spanish Empire in the Americas ca. 1700 mapped to contemporary boundaries (Source Stangl [2019]. Total *audiencias* of the Spanish Empire, in 1700 those of Buenos Aires, Caracas, and Cuzco have not yet been formed and were part of the audiencia of Charcas, Santa Fe, and Lima, respectively)

officials, such as that of provincial governors or *corregidores*—the so-called *juicio de residencia*. These assessments were based on querying the population about the performance of the *corregidor*: whether taxes were collected properly, extant laws were upheld and even if their personal behavior was up to the highest standards. If found lacking in any of these dimensions (and the charge was serious), the finding was then turned to the full *audiencia* for indictment and trial. In addition to routine visits and post-tenure assessments, the *audiencia* could also conduct ad hoc investigations, depending on the circumstances. For instance, certain episodes of mismanagement of royal taxes, or severe mistreatment or exploitation of the indigenous population often

reached the Crown, who could then order the *audiencia* to investigate accordingly.<sup>9</sup>

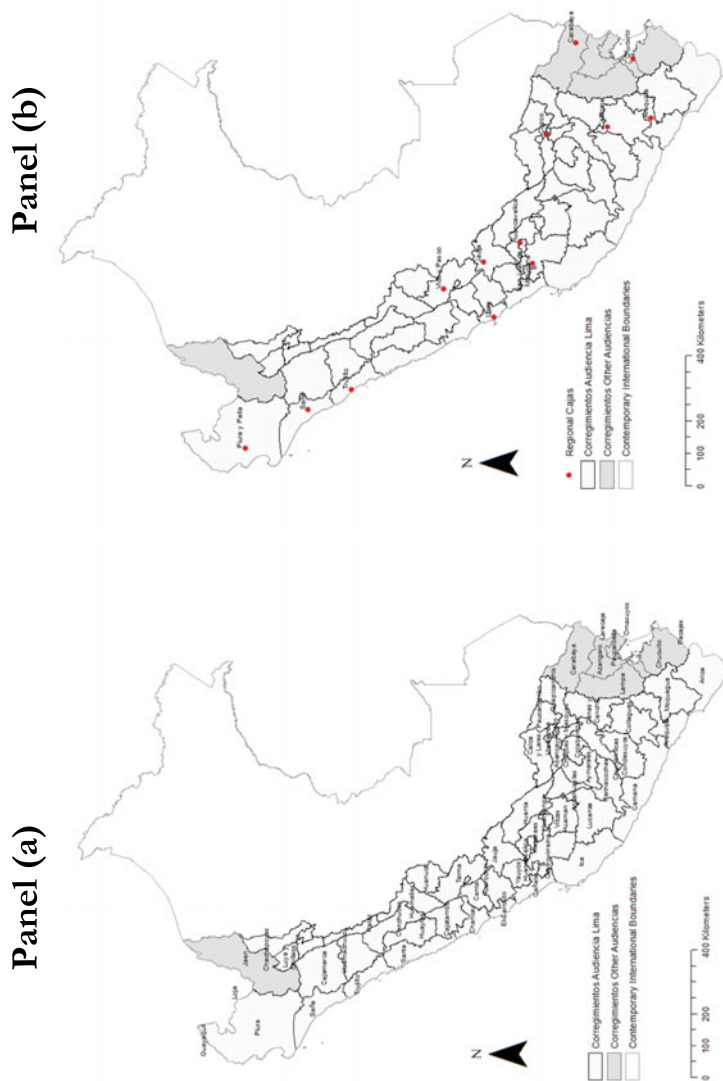
Directly below the *audiencias*, stood the *corregidores* and *alcaldes mayores*, who were both “justice administrators” in the provinces they ruled but who also served as tax-collectors for the royal exchequer. *Corregidores* and *alcaldes mayores* ruled a territory smaller than that of the *audiencia*, which would be the equivalent to a province. In the case of the *audiencia* of Lima, the territory was divided in 51 provinces, each ruled by a provincial governor<sup>10</sup> or *corregidor*. *Corregidores* served as first instance in all judicial cases and were in charge of collecting taxes; organizing local labor for public works or for the mines (mit’a); and organizing the defense in case of uprisings or even foreign attacks, among other functions. *Corregidores* also had to keep tax payrolls updated and report it every three years to the Crown (Andrien 1986: 498). For most of the population, particularly indigenous, *corregidores* or their assistants were the first (and often only) contact with royal representatives in their lifetime. Figure 2 panel (a) shows the distribution of the provinces overseen by the *audiencia* of Lima.<sup>11</sup>

In a different branch of the colonial government, that of the royal exchequer, the *audiencia* of Lima was organized in regional treasuries or *cajas reales*. These treasuries served as royal tax collection offices in places with commercial, mining, or large population centers, although it also served as an outpost of the Crown in strategic locations even if not fiscally profitable. At some point, there were close to 150 *cajas reales* throughout the Spanish Empire (Nestares Pleguezuelo 1992: 300). Each *caja* generally had a treasurer (*tesorero*) and a comptroller (*contador*). However, in some larger *cajas* there was also an additional business manager (*factor veedor*). The purpose of the *caja* was to serve as regional tax collector and be in charge of royal payments and transfers. In the case of royal ports, such as that of Callao in Lima, *caja* officials had to collect taxes from the entry and exit of merchandise, and send to Spain accounting

<sup>9</sup> These types of investigations could also encompass regional *cajas*, depending on the severity of the situation.

<sup>10</sup> The province of Huancavelica was ruled by a governor and not a *corregidor*, so not technically a *corregimiento*.

<sup>11</sup> Three provinces were not overseen by the *audiencia* of Lima at the time but are today part of the territory of Peru, these were the provinces of Lampa, Carabaya, and Puno or Paucarcollo.



**Fig. 2** *Corregimientos* (a) and *Cajas Reales* (b) of the *Audiencia* of Lima ca. 1700 (*Source* Stangl [2019]). Panel (a): *corregimientos* of the Audiencia of Lima circa 1700 [excludes the province of Huancavelica as it was ruled by a Governor, not technically a *corregimiento*]. Panel (b): Cajas reales in the *audiencia* of Lima and surroundings)

records at given intervals. *Caja* officials also performed oversight tasks including fighting contraband in royal ports and “keeping an eye on” other royal officials, such as *corregidores* (Nestares Pleguezuelo 1992: 303). For example, they supervised *Corregidor* performance, particularly the prompt and full delivery of the taxes owed to the Crown. Due to their lifetime tenure and the prestige of their appointment (directly by the Crown), they often constituted the highest ranked authority (together with the *corregidor* or governors) in provinces where no other authorities were present. In the case of Peru, the territory was organized in 11 *cajas* between 1670 and 1751, although the number fluctuated somewhat over time.<sup>12</sup> Figure 2 panel (b), shows the geographical distribution of these *cajas*, which were in turn overseen by the *Tribunal de Cuentas de Lima*—the highest treasury authority together with the *Caja* of Lima, the main one in the *audiencia*.<sup>13</sup>

Although the rest of the chapter focuses on *audiencias*, *cajas*, the *tribunal*, and *corregimientos*, it is also worth noting that at the level of the municipalities or villas, *cabildos* or city councils often became the focal point of local politics, with positions occupied by the local notables. Finally, places with high indigenous density also had parallel systems (*republicas de Indios*)—subject to the Crown but run semi-autonomously by local indigenous authorities known as *kurakas*.

### 1.1 Vertical and Horizontal “Checks”

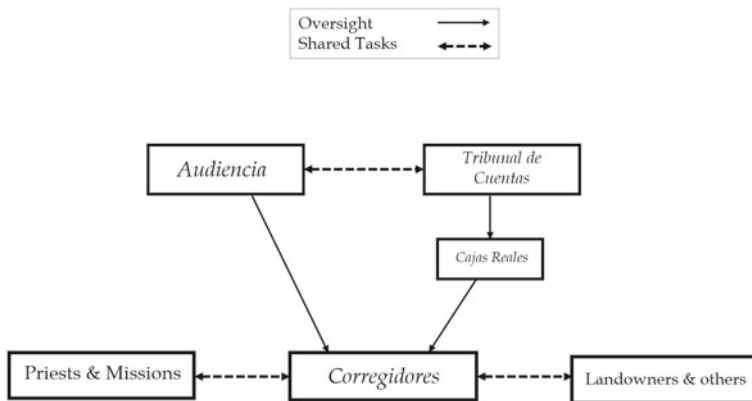
These institutional frameworks followed two key principles: horizontal and vertical checks. Vertical oversight involved higher-ranking officials monitoring the performance of their subordinates. For instance, *audiencias* were responsible for supervising *corregidores* and *caja* officials, while tax authorities like the *Tribunal de Cuentas* of Lima reviewed the accounting records of *corregidores* to keep them in line.

<sup>12</sup> For example, the *Caja* of San Juan de Matucana was only in place between 1721 and 1729. The *cajas* of Chucuito, Puno, Carabaya, and Jaen encompass some of the current territory of Peru but were under the jurisdiction of the *audiencia* of Charcas and Quito (not Lima) (see Data: Royal Treasuries of Spanish America, 1510–1808, 2019).

<sup>13</sup> The role of the *Tribunal de Cuentas de Lima*, together with the *audiencia*, was to serve as the Treasury Junta (*Junta de Hacienda*) and to oversee all the revenues and expenditure in their territory.

In addition, horizontal checks were built into the system by assigning similar functions to different bodies. For example, both *corregidores* and priests collected taxes from the indigenous population, which often led to jurisdictional disputes. The shared executive responsibility of the *audiencia* and the Viceroy in the form of *Real Acuerdo* also meant that they kept a close eye on each other and frequently reported to the Crown. The *audiencia* also served as a horizontal check on church authorities by reviewing cases presented in ecclesiastical courts via the *recurso de fuerza*. Figure 3 represents a schematic version of these “checks” for the particular case of provincial governors (*corregidores*).

In principle, vertical and horizontal checks worked to better align outcomes to those preferred by the Crown. For example, the prospect of investigations and potential indictments in the *audiencia* was one of the few checks on the power of provincial governors. To the same effect, competition among branches of government induced by overlapping jurisdictions meant that the Crown served as “the ultimate arbiter” in any dispute (Grafe 2011: 35) and a source of information of the conditions in the colonies (Phelan 1960: 53). Given the importance of silver production, a system that would induce truthful reporting of its levels



**Fig. 3** Example of vertical and horizontal checks faced by *corregidores* in the *Audiencia* of Lima (Source: own construction. The figure is a partial portrayal of some of the institutional constraints [vertical and horizontal] faced by *corregidores* at the time)

and shipment would be beneficial for the Crown (Gailmard 2017), for example.

The weakness of this arrangement in both colonial and contemporary times, is the possibility of collusion “vertically” as well as across different branches (“horizontally”). Given the distance and poor communications, the Crown could do little if the overseer and those overseen were to arrange their relationship differently than that desired. Theoretically, collusion could be prevented or at least made more difficult when officials’ incentives to perform their duty outweighed their costs. Career-oriented officials or those who feared loss of reputation for themselves (and their families) would be most willing to uphold the Crown’s rules. Similarly, differences in backgrounds—particularly if these reflected different economic or social interests—may also make it harder to coordinate on a collusive outcome. However, collusion was easier if both overseer (say, the *audiencia*) and those overseen (say, *corregidores*) had poor career prospects and shared strong family, social, or economic ties. In these cases, joint ventures, such as the *corregidor* unduly mobilizing indigenous labor for the *audiencia* member’s hacienda, could prove mutually beneficial (see Carrillo Ureta 2019).

The same would occur with horizontal checks, such as those induced by overlapping jurisdictions. According to historical accounts, “a great deal of overlapping was deliberately fostered to prevent officials from unduly building up personal prestige or engage in corrupt or fraudulent practices” (Haring 1947: 122). Thus leading to “continuous and acrimonious” jurisdictional fights between the various bureaucracies, in which the King served as final arbiter (Phelan 1960: 53). The objective was to limit the arbitrariness of colonial bureaucrats, but also that of the Spanish Crown, since “fragmented and overlapping jurisdictions allowed for legal challenges, negotiation, pleading, or outright refusal of royal demands” (Irigoin and Grafe 2008: 179). However, if these arrangements did not induce the necessary competition among officials, it would have little impact on their performance at best. For instance, although jurisdictional fights between *corregidores* and priests were well-known, there were also examples of collusion or cooperation to pursue mutually beneficial goals.

Clearly aware of the threat posed by collusion, the Crown followed two strategies: first, it implemented a number of rules to prevent it, and second, it placed some effort in selecting types of officials that would better observe and execute the Crown’s desired policies. In terms of rules, these varied depending on the position but were generally intended to

insulate officials from the social and economic influence of the subjects they ruled. In the case of *caja* and *audiencia* positions, it was important to appoint individuals that did not have social (much less economic) ties to the territory they governed (Burkholder and Chandler 1977; Nestares Pleguezuelo 1992). For *corregidores*, this meant that officials should not reside in the *audiencia* and much less the province they intend to rule. The effective result of these provisions was to give preference to Spanish-born (*peninsulares*) officials when filling any of these posts, under the assumption of less susceptibility to local influence.

In addition to screening by place of birth, other measures included rotation across territories (for *audiencia* members) or the prohibition to rule more than once a given province (*corregidores*). A special provision for treasury officials and *corregidores* was to provide a bail payment to financially insure the Crown when managing or collecting royal taxes. Other measures for *caja* officials was to use treasure vaults with two locks (with each *caja* official getting only one key) such that it could only be opened in the presence of the two royal *caja* officials. Similarly, each official had to conduct its own accounting (and the books had to match when sent to Spain), consistent with the deliberate efforts to “check” on each other. These provisions, together with the selection of officials—with the “right” social background, connections, and moral character—were some of the few tools of the Crown to steer policy from afar (Eissa-Barroso 2017).

## 1.2 *The Advent of Office-Selling*

Yet, despite the avowed concerns for collusive behavior, in 1670s the Spanish Crown under Charles II started the systematic sale of treasury positions and provincial governments across the Empire. This measure was followed in 1687 by the sale of *audiencia* seats. The reasoning behind this measure were the fiscal needs induced by protracted and expensive wars in Europe. Revenue from sales would alleviate the pressing and urgent needs (*urgencias presentes*) and avoid military defeat and disintegration of the Empire. Although the Council of Indies—advising body to the King—voiced its concerns warning about how it would change the qualities of the purchasers and the incentives they would face, these were disregarded at the time.

While office-selling was a common practice for municipal and other fee-earning positions, in Spanish America it represented a departure from

custom which kept the sale of provincial governorships and *audiencia* positions off-limits. Moreover, the way sales took place was not necessarily via public auction as with municipal positions, but as an individual transaction between buyers and the Crown whereby the latter offered a price that the Crown would (generally) accept. Positions were also sold in advance of an actual vacancy (*futura*), and if the position had specific education or title requirements, they could also be purchased (or waived) by a separate extra fee.

In the case of Peru,<sup>14</sup> between 1672 and 1751 there were 85 treasury or fiscal positions sold by the Crown either to occupy a vacant position or to serve as *supernumerary* in the meantime. In addition, 466 *corregidor* or provincial government positions were sold together with 34 *audiencia* seats. Given the relatively small size of the colonial bureaucracy, officials entering via purchase represented a sizable share of the total, particularly for positions with lifetime appointments—where sales ahead of a potential vacancy meant that purchasers would dominate the institution in the years to come. In terms of prices, these closely resembled the rank, length of term, and power in the colonial government: with *audiencia* seats valued in around 15,000 pesos and *corregimientos* and regional *cajas* at the bottom with 5,000 and 6,000 on average.<sup>15</sup> Table 1 summarizes the average price and quantity of positions sold.

During this period, individuals entering by sales dominated the most important branches of the colonial government. Among *caja* personnel, generally limited to 2–3 officials per *caja*, the lifetime nature of their appointment (unless promoted or removed) meant they would have a long tenure. In the case of *audiencia* seats, 34 positions were sold throughout the period, more than double the twelve seats potentially available at a given point. As with the treasury positions, purchasers often entered as *supernumerarios*, serving in the council but with half salary, limited responsibilities, and often waiting years to occupy their full position. Finally, in the case of *corregimientos*, sales were in the hundreds, partly due to the high turnover, limited terms, and the larger number of positions. Yet, it also reflects the demand for this position as almost

<sup>14</sup> This refers to the territory overseen by the *Audiencia* of Lima (which at the time included Cuzco).

<sup>15</sup> These were sizable quantities at the time, taking the yearly salary of a military captain at the time (840 pesos), the average *corregimiento* would be 6 to 7 times that quantity.



**Table 1** Number of positions sold vis-à-vis those available by level of government: *Audiencia* of Lima, 1672–1751

<i>Position</i>	<i>Total positions sold 1672–1751</i>	<i>Total positions (at any given time)</i>	<i>Term</i>	<i>Average price (real Pesos de a ocho)</i>
Regional <i>Cajas</i>	64 <sup>a</sup>	24 <sup>b</sup>	Lifetime	6,331
<i>Tribunal de Cuentas</i>	21	9 <sup>c</sup>	Lifetime	12,906
<i>Corregimientos</i>	466	50 <sup>d</sup>	5 years <sup>e</sup>	5,198
<i>Audiencia</i>	34	12	Lifetime	15,648

<sup>a</sup>Royal cajas counts as “available” for purchase those of *tesorero*, *contador*, or *factor veedor* which were appointed by the Crown (*Source* AGI, Contaduría 235)

<sup>b</sup>Cajas of Lima and Trujillo had 3 officials as opposed to two in most of the other cajas (9)

<sup>c</sup>*Tribunal de Cuentas* includes as “available” positions 3 *contadores mayores* and a *supernumerary*, 2 *contadores de resultas*, and 4 *contadores ordenadores* (Andrien 1982: 55)

<sup>d</sup>There were 51 provinces in Peru, however, the province of Huancavelica was administered by a governor not a *Corregidor*

<sup>e</sup>Sales by the King included in this analysis were generally for a five-year term, however, appointments by the Viceroy on an interim basis could range from 2 to 3 years. The latter appointments or sales (if any) are not included in the analysis

all provinces in Peru were sold to a greater or lesser degree.<sup>16</sup> As with the other two cases, the purchase of positions in advance was common (*futuras*), such that buyers would purchase the titles and waited for years (decades?) until they were able to access office. These long wait lists meant that even after sales officially ended in 1751, the backlog generated by sales would not be cleared until the 1760s for *corregimiento* positions, and much later for *audiencia* and treasury ones.

In principle, selling these positions would not undermine or fundamentally alter the functioning of the colonial government in Peru (and the Empire more generally). If these individuals had similar profiles and intentions than those appointed by the Crown, there would be little difference in government performance, but a sizable one for the King’s coffers. Yet, previous studies show this was not the case for Peruvian *corregidores* (Guardado 2018), *audiencia* members (Burkholder and Chandler 1977), and for purchasers of the Lima *Caja* and *Tribunal* (Andrien 1982). That, in fact, purchasers exhibited “worse” traits, at least from the standpoint

<sup>16</sup> I found no record of sales for the province of Urubamba, probably due to its later creation.

of the Crown, which translated into “worse” performance, particularly for the indigenous population. Purchasers exhibited characteristics derived associated with less connections to the Crown derived from their lower social status, place of birth, as well as strong social, economic, and family links to the territory they ruled—contravening Royal dictates. In addition, because their position came from a monetary exchange, not from the Crown’s will, they could not be removed without compensation, which meant that often they retained their posts despite evidence of corruption, as the Crown could not reimburse them for their purchase.<sup>17</sup> In all, sales allowed a particular type of official—whose career and earnings were often less dependent on the Crown—to enter the colonial government of Peru.

As a consequence of this change in the *type* of officials and incentives, office-selling significantly undermined the vertical and horizontal checks devised by the Crown to collect information and influence colonial policy. By allowing individuals to sort into positions from which they could profit from, officials now had a greater incentive to collude instead of compete. In other words, given the poor career prospects, meager wages, and little social connections to the Crown, it is no surprise that many purchasers chose positions from which they could benefit the most and where they faced little chance of being caught and indicted—for example, by having a protector in the *audiencia* council. Moreover, by allowing individuals with this profit-seeking motive to enter office, it also distracted officials from oversight tasks altogether. For example, *audiencia* members tasked with supervising *corregidores* may find themselves unwilling to do so, either because it is not in their own interest (collusion), or simple dereliction of duty.

Anecdotal evidence of collusion due to office-selling abound for the case of Peru. For example, powerful *audiencia* member Pedro Bravo de Rivero—who entered by purchase in 1733 by virtue of 20,000 pesos—had widespread family and economic connections to *corregidores* who had also bought their position. Being acquainted with local *corregidores* also helped Bravo de Riveros’ sprawling family and business connections. For example, Bravo de Riveros’ own son-in-law Manuel Jimenez Lobaton was a merchant involved in *repartimiento* or forced sales of goods to the indigenous population who had purchased the *corregimientos* of Cuzco, Santa, and Chilques and Masques (Carrillo Ureta 2019). During his

<sup>17</sup> This was the case of several *audiencia* members (Burkholder and Chandler 1977).

tenure as *corregidor* of Cuzco, there was clear evidence that he had exceeded the *repartimiento* quota assigned to the province of Cuzco in detriment of the population and other merchants (Carrillo Ureta 2019: 125). Despite complaints, nothing ever came out of it, partly due to his clear link to powerful members of the *audiencia*.

The case of Bravo de Rivero is not an isolated one. Other historians have documented how *corregidores* “leased” indigenous labor from their province to nearby haciendas and mines at below market wages and pocket the difference (Andrien 1982). If some of these *hacienda* owners were economic or socially linked to members in the *audiencia*, they were never indicted. Similarly, other studies argue that Peruvian merchant elites (of which *audiencia* members were connected to, particularly purchasers) often partnered with local officials in joint (and illicit) commercial ventures such as contraband or the forced sale of goods to the indigenous population at mark-up prices (Sanz Tapia 2009; Moreno Cebrian 1977). These type of ventures were possible (and worthwhile) thanks to the well-known ability of *audiencia* members to rule “on behalf of special interests if they so desired” (Campbell 1972: 4).

Among treasury and *caja* officials, office-selling made it easier for purchasers to share economic and social links with local elites and other government officials. Andrien (1982) documents a number of ways in which purchasers of posts in the *cajas* or the *Tribunal de Cuentas* exhibited blatant conflict of interests. For example, some held *encomiendas* (directly contravening royal provisions); others had direct family links (father) in the *Audiencia*; their own collaterals (*fianzas*) were often paid by prominent *audiencia* members; and many were linked by marriage to other government officials and wealthy individuals. These links likely shaped their performance in office: *caja* officials allocated profitable tax-farming contracts, collected debts, and could even oppose or delay new tax levies ordered by the Crown.

## 2 ANALYSIS

While illustrative, one could question how representative are these accounts of the institutional checks *corregidores* faced and to what extent did office-selling weaken them. In what follows, I investigate these questions looking at changes in the willingness to pay for *corregimientos*—a measure of their expected profitability—as a response to changes in the composition of key oversight offices such as those of the *audiencia* and

the *Tribunal de Cuentas*. Is it the case that questions of “vertical” and “horizontal” oversight were an important determinant of the value of colonial offices at the time, as suggested? Quantifying the impact of these institutional constraints can illuminate whether (and to what extent) they “made a difference” for the functioning of the colonial government of Peru.

### 2.1 *Data and Methodology*

The main dependent variable of interest—office prices—comes from colonial officials’ appointment titles located at the *Archivo General de Indias* in Seville. The first sale in Peru dates from 1672 and the last one from 1751. The main records are titles of *corregidores*, which contain information on the purchaser, individual traits, the position bought, as well as a series of admonitions from the Crown about how *not* to behave with the indigenous population and what kind of abuses *not* to commit. In addition to titles, I also rely on accounting sheets, which provide a more succinct description of the transaction but serve to crosscheck data. Finally, correspondence between the King and its advisers sheds light on the purchase process, the negotiations (if any), and what were the main criteria for sale. Suffice to say that the main criterion was economic, namely, the size of the monetary offer for the payment. However, being known in Court and favorable references also helped secure the transaction.

Data on the composition of oversight institutions—*audiencia* and the *Tribunal de Cuentas*—comes from two sources: first, the time series for the prices, places of birth, and the mode of entry into the *audiencia* council (whether by purchase or appointment) from Burkholder and Chandler (1977). For the case of fiscal positions, I collected some individual information (name) and the price paid for positions in the regional *cajas* and central treasury in Lima from accounting records located at the *Archivo General de Indias*. Unlike the case of *audiencia* and *corregidores*, these records contain less personal information of the purchasers. These datasets allow me to construct the following variables: (1) the proportion of ministers who have purchased their seat to enter the *audiencia* and (2) the number of officials who have purchased their seat in the main treasury office in Lima (*Tribunal de Cuentas*).

Finally, data on sources of potential “horizontal” constraints such as whether a given province is a bishop seat and the number of parishes

in a given province—sources of jurisdictional competition—come from the geographic relations of Cosme Bueno (Valcarcel 1951). The latter wrote a detailed description of each province and its colonial subdivisions (*partidos*) based on the parishes established there and how many settlements (*anexos*) they oversaw. Unfortunately, I do not have comprehensive data on haciendas at the time, which would provide additional evidence on other checks. For example, Dell (2010) mentions how hacienda owners would often oppose labor recruitment for the mines (*mit'a*), a task implemented by *corregidores*.

### 3 CORREGIMIENTO PRICES AND INSTITUTIONAL CONSTRAINTS

Using this data, I examine the role of vertical as well as horizontal institutional constraints in the prices paid for *corregimientos* in Peru between 1672 and 1751. Estimates showing whether and which of these institutional features drove prices would tell us the extent to which these traits impacted other layers of government. In terms of “vertical” constraints, I focus on the willingness to pay for *corregimientos* at times in which the share of the *audiencia*, or the number of purchasers in the *Tribunal de Cuentas*, is relatively higher to times in which they are lower. To make sure I am not capturing price trends or fixed differences across provinces, I focus on first difference estimates and include a year indicator to account for factors affecting all provinces in a given year (year fixed effects). Finally, because there is wide variation in the number of years between sales, I limit the sample to changes in the composition of the *audiencia* in the medium to short term, as these could plausibly affect the valuations of *corregimientos* while not capturing other factors.<sup>18</sup> Equation (1) in the Appendix shows the estimating equation.

Table 2 presents the results from this approach. As shown in column (1), times at which the share of positions sold in the *audiencia* increases, prices paid for *corregimientos* tended to increase as well. This pattern is not driven by common year factors or trending in the dependent variable. Rather, I interpret this relationship as at least being partly driven by the symbiotic relationship between *audiencia* members and *corregidores*:

<sup>18</sup> I focus on transactions below the 99th percentile, 27 years or less. Long time-periods between sales suggest that changes in the composition of the *audiencia* may not be an important consideration.

worse oversight from the *audiencia* increased the value of *corregidor* positions throughout Peru. Albeit this result focuses only on the share of positions sold, Table 3 shows it is strongly correlated with the influx of *audiencia* purchasers born in Peru (*criollos*), with merchant ties and with family members in other branches of government.

Consistent with this finding, Column (2) of Table (2) shows a qualitatively similar result—whereby more sales in the *Tribunal de Cuentas de Lima* is associated with higher prices of *corregimientos*. Because the Tribunal had oversight powers over the tax collection records of *corregidores*, more sales of *contador* and *tesorero* positions in that body plausibly translates into *worse* oversight (see Andrien 1982) and more opportunities

**Table 2** Main Results: Institutional “checks” and the growth rate of *Corregimiento* prices (OLS estimates)

<i>DV: Type of “check”</i>	(1) <i>Log(Growth Rate of Corregimiento Prices) Vertical</i>	(2)	(3) <i>horizontal</i>
% Change in share of <i>Audiencia</i> seats sold	0.45*** (0.14)		
% Change in total share of tribunal positions sold		0.01* (0.01)	
Caja Seat (0/1)			-0.11* (0.06)
Bishop Seat (0/1)			-0.04 (0.08)
High parish density (0/1)			-0.07** (0.03)
Observations	415	415	389
R-squared	0.38	0.38	0.37

Robust standard errors clustered at the province level in parentheses. Estimates include a year fixed effect and a control for the distance between sales and is estimated using first differences. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Table 3** *Audiencia* members' traits and the growth rate of *Corregimiento* prices (OLS estimates)

DV	(1)	(2)	(3)	(4)
	Log(Growth Rate of <i>Corregimiento</i> Prices)			
% Change in share of <i>Audiencia</i> seats sold	0.45*** (0.14)			
% Change in share of <i>Audiencia</i> born in the Americas ( <i>Criollos</i> )		0.58*** (0.21)		
% Change in share of <i>Audiencia</i> members with merchant ties			1.52*** (0.43)	
%Change in Share of <i>Audiencia</i> members with family ties in other branches of government				0.49** (0.20)
Constant	0.07** (0.03)	0.09** (0.03)	0.06 (0.04)	0.09** (0.03)
Observations	415	394	394	394
R-squared	0.38	0.35	0.34	0.32

Robust standard errors clustered at the province level in parentheses. Estimates include a year fixed effect and a control for the distance between sales and is estimated using first differences. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

for illicit gains from office. As in column (1), these results are unlikely to be driven by individual province trends or that of certain bishop areas.<sup>19</sup>

While Table 2 shows that prices vary over time depending on the changing composition of oversight bodies (*audiencia* and *tribunal*), it is also important to examine whether horizontal checks such as the fact that *corregidores* shared functions with other bodies, leading to jurisdictional conflict also impact prices. The expectation is that greater jurisdictional competition may have undermined the valuation of certain provinces versus others. Column (3) of Table (2), presents a horserace comparison of three factors: first, the role of *corregimientos* that housed bishop

<sup>19</sup> Accounting for trends is important given that the available measures for the *Tribunal de Cuentas* capture only the cumulative Tribunal sales between *corregimiento* sales (as opposed to change in the composition).

seats. Second, the absence or presence of regional *cajas* and their officials in some *corregimientos*, and, finally, the number of parishes within the *corregimiento* relative to the total population. The assumption is that provinces with more parishes per capita, with their corresponding priests and auxiliaries, may be more likely to face jurisdictional conflicts with *corregidores*.

A horserace comparison of the effect of different traits shows: first, that point estimates are negative for all three proxies of jurisdictional competition, in-line with the hypothesized effect. In other words, places that serve as *caja seats*, bishop seats, or had a high number of parishes per capita, exhibit lower *corregimiento* prices on average. However, and second, the standard errors are much larger for the case of bishop and *caja* seats, so we are less certain of their offsetting impact on the activities of the *corregidor*. In contrast, the estimate for parishes per capita is more precisely estimated and of similar size.

One reason for the small impact of bishop and *caja* seats is that these provinces often exhibit other valuable benefits such as connections and social conditions that could drive up the prices for these positions, dampening the effect of competition. This is particularly the case of bishop seats, located in major cities with a large Spanish presence and other government branches, thus more prestigious and with better living conditions.<sup>20</sup> These advantages could have thus served as a counterweight to the negative impact of acrimonious jurisdictional fights, between *corregidores* and *caja* officials or the bishop.

Another plausible explanation is that higher authorities of the Church (bishops and archbishops) or *caja* officials were *not* the actors most able or willing to “check” the behavior of *corregidores*, but rather priests and missionaries who were in direct contact with the indigenous population and saw firsthand some of the abuses by *corregidores*. For instance, priests would often incite rebellions against *corregidores*, particularly in the face of excessive tax collection and extraction. This was the case of the 1736 indigenous uprising in the province of Canta, which saw a spontaneous rebellion against a royal tax collector led by the priest Baltazar de Rivadeneyra together with indigenous authorities (O’Phelan 1988). It should be noted that the province of Canta had one of the highest parishes per capita ratios (in the 69th percentile). Similarly, in 1756

<sup>20</sup> In a few cases, *caja* headquarters and bishop seats coincided.



in Tarma, local priests promoted a rebellion against the *corregidor* for meddling with the election of indigenous authorities (O’Phelan 1988). Another uprising in 1764 in Sana by the indigenous and mestizo population was in defense of the priest Don Antonio de Villala, who had been attacked by the royal tax collector (O’Phelan 1988). The latter suggests that in some cases, local religious actors may serve as a check against other royal officials, particularly those engaged in collecting taxes, such as the *corregidor* or his aides.

Part of this confrontation between *corregidores* and priests was due to the fact that both had taxation powers over the same population, such that sometimes payment of one tax came at the expense of the other. For instance, labor for the construction of parishes came from the indigenous population and its maintenance came from taxes such as agricultural tithes as well as payments for various sacramental rites (marriage, burials, baptism). To the extent that resources were finite, *corregidores* and priests were bound to compete.

This is not to say that religious actors were always allies of the indigenous population or never overtaxed their own population. Rebellions also targeted priests—such as those in Tarma (1719), Lucanas (1730), and Azangaro y Asilo (1736),<sup>21</sup> to name a few. In some cases, uprisings targeted both, the *corregidor* and priests, a signal that the population may perceive them as colluded or in the same category. Examples include the rebellion of 1737 in Huamanga, targeting both the royal official and the priest and that of 1739 in Castrovirreina, where the population killed both the *corregidor* and the Jesuit priest with him. However, these were rarer instances in the data. For the purposes of this study, what matters is that the presence of priests “could” present a counterweight to the authority of the *corregidor*. This is particularly important in provinces farther from the *audiencia* seat (Lima) or from major cities where other authorities lived.

The coefficient for parishes per capita in Table 2 Column (3) shows that, indeed, there was a lower willingness to pay for provinces that had a higher share of parishes per capita. Using the population data reported in 1754, but collected around 1735 (in the middle of the sample under study), it appears that there is a greater decrease in the growth rate of prices paid for provinces above the median of parishes per capita vis-à-vis

<sup>21</sup> Source O’Phelan (1988).

those below the median. This is consistent with the idea that provinces with a higher number of parishes may have presented greater jurisdictional competition to *corregidores*, thus lowering the expected valuation for these posts. Although priests could also serve as allies of *corregidores*, the costs from competition may have outweighed this potential benefit at least as shown by the willingness to pay (prices).

All in all, it appears that vertical and horizontal checks on the activities of *corregidores* had a visible effect on prices. Particularly responsive to changes in the *audiencia*, *Tribunal de Cuentas*, and parish density in a given province. I find less evidence supporting the importance of the presence of *caja* officials and bishops.

### 3.1 *Alternative Explanations*

While these results show the impact of different institutional features on price growth among *corregimientos*, there are other potential interpretations to these findings. Below I discuss three.

One alternative explanation of these results is that prices capture the expectation of better management from the *audiencia* and the *Tribunal de Cuentas* that would facilitate the tax collection ability of *corregidores* and their own earnings. Yet, this does not bode well with what we know about how *corregidores* were compensated at the time. Given wages of *corregidores* were a lump-sum payment paid from collected taxes, not varying throughout the period under study, woefully insufficient for the task at time, and subject to other taxes and delays (Moreno Cebrian 1977), wages were only partly responsive to higher effort exerted in office. This means that higher tax collection due to better *audiencia* or *Tribunal* management would not change the *corregidor's* compensation (wage) and therefore explain their higher willingness to pay. Instead, I argue that this result is consistent with prices reflecting higher expected returns in side-gains from office either in detriment of the Crown (in the form of tax-theft or underreporting) or of the indigenous population (such as increasing the tax rate or taxable base) or of both.

Second, it is possible that this result is not driven by collusion, but by a simple lack of competence at the higher levels of the colonial government. For example, it was well-known that some of the members of the *audiencia* were minors lacking (any) legal experience but whose family have purchased a position for them. The same is true for at least one position sold in the *Tribunal de Cuentas*. In these cases, the increase

in the expected value of *corregimientos* is not driven by active collusion across layers of government, but rather by sheer incompetence whereby debts are uncollected in the *Tribunal* and judicial cases languished in the *audiencia* without resolution, thus lacking any deterrence impact. While these instances did take place, this was more the exception than the rule among purchasers. Individuals who purchased their position generally did not lack competence or ability—as they were often highly successful in other realms, such as business—but simply had little incentives and social obligations to follow the Crown’s mandates, as their career, reputation, and/or fortunes did not depend or were made based on the Crown’s favor. In fact, Table 3 and Guardado (2022) shows that purchasers in the *audiencia* were not necessarily less educated, but merely more locally connected. A related reason is that in a context where wealth is associated with *some* education, the ability to purchase a position may signal actual competence.

Finally, a different concern is whether the relationship in the composition of the *audiencia* and province prices is driven by the Crown’s strategic actions to sell *corregimientos* at higher prices when the share of purchasers in the *audiencia* is larger. While the Crown always preferred more revenue to less, all else equal, it was the purchasers’ choice whether to pay for a given position or not. Yet, there is limited evidence that the Crown was taking any of these actions. As shown in Table 4, there is little difference in the yearly quantity of *corregimientos* sold and changes in the composition of the *audiencia* and the *Tribunal de Cuentas*.<sup>22</sup> Thus suggesting that timing the number of sales of *corregimientos* to potentially manipulate prices is not driving these results.

All in all, it appears that vertical and horizontal checks on the activities of *corregidores* had a visible effect on prices. Particularly responsive to changes in the *audiencia*, *Tribunal de Cuentas*, and parish density in a given province. I find less evidence supporting the importance of the presence of regional *caja* officials and bishops.

<sup>22</sup> I focus on changes in the share of new members who purchased their post as this is the specification used throughout the analysis, and less susceptible to trending.

**Table 4** Institutional “checks” and the number of positions sold: (OLS estimates)

<i>DV</i>	(1) <i>Total Corregidores Sold</i>	(2)
% Change in share of <i>Audiencia</i> seats sold	1.50 (3.09)	
% Change in total share of tribunal positions sold		0.01 (0.16)
Observations	117	29
R-squared	0.00	0.08

Robust standard errors in parentheses. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

## 4 DISCUSSION

What can we learn from this analysis of the variation in office prices of Peruvian *corregimientos*? The first and most important implication is that the Spanish Empire’s institutional checks—the complex web of vertical and horizontal constraints on office-holders—were not merely “paper tigers” but under certain circumstances showed real “bite”, as illustrated in the willingness to pay. Despite the fact that these mechanisms were often derided as ineffective, vertical and horizontal checks had the potential to facilitate or hinder the activities of other branches of government, at least partially as intended in their design.

These findings also show that the qualities and incentives of those serving in office influence the functioning of colonial institutions—particularly the *audiencia* and *Tribunal de Cuentas*—which varied greatly depending on the particular traits, incentives, and background of the office-holder in turn. Because purchasers were often locally connected and particularly interested in recouping their investment via monetary or even non-monetary ways, they could steer colonial institutions as needed. In the case of *corregimientos*, the result was higher perceived returns from office, which we know correlates with possibilities for self-dealing and/or extraction (Guardado 2018).

In terms of long-term development, this episode shows how the same institutions have very different effects on extraction over time. Thus suggesting that, as previewed in the introduction, we cannot understand the impact of these arrangements on long-run growth without uncovering the mechanisms underpinning them. In this case, extractive

behavior was facilitated by a series of policy decisions (office-selling) and contextual conditions leading to some periods of worse extraction vis-a-vis others with long-run implications. In fact, previous studies on the topic show that corruption at the higher levels of the colonial government of Peru—that of Viceroy—costed Peru around 2% of GDP on average but varied through the period under study (Quiroz 2008). This chapter documents additional layers of corruption—among lower rings of the colonial government (provincial governors and top magistrates)—that could further increase those estimates.

More speculatively, this episode of representation of local elites (*criollos*) in major colonial institutions (*audiencia*, *tribunal de cuentas*)—via sales—may have also presaged some of the challenges Peru would face after independence. In particular, the presence of strong networks able to circumvent or mold formal institutions in ways that produced economic or social advantages for them at the expense of other groups. In other words, *criollo* ascent to power may have only widened the opportunities for self-dealing across all layers of the colonial government. This is not to say that the government prior to office-selling was without faults, but the expectation that local elite or *criollo* rule would lead to better government, say from the indigenous population standpoint, likely did not take place. Perhaps the result would have been different if *criollos* did not have to purchase their positions in the first place. Yet, the problems caused by their ascent are remarkably similar to those plaguing the country after independence—when these elites would be firmly in power despite not having to pay for it.

## APPENDIX

Estimates shown in Tables 2 and 3 come from estimating the following equation:

$$\text{LogPrice}_{i,t} - \text{LogPrice}_{i,t-n_i} = \alpha + \beta(\text{Sold}_t - \text{Sold}_{t-n_i}) + x_{i,t} + e_{it} \quad (1)$$

where  $\text{LogPrice}_{i,t} - \text{LogPrice}_{i,t-n_i}$  is the difference in the log growth rate for *corregimiento*  $i$  between sales in year  $t$  and  $t - n_i$ , where  $n_i$  is given by each *corregimientos*' timing of sale; and  $x_{i,t}$  is a control for the number of years between sales of *corregimientos*, which is different for every province.  $\text{Sold}_t - \text{Sold}_{t-n_i}$  is either the difference in the share of new members in the *audiencia* who purchased their position, or the difference the total

number of positions sold in the *Tribunal de Cuentas* (I lack the exact share of purchasers versus appointees in this body).

$$\begin{aligned} \text{LogPrice}_{i,t} - \text{LogPrice}_{i,t-n_i} = & \beta_1 \text{CajaSeat}_i + \beta_2 \text{BishopSeat}_i \\ & + \beta_2 \text{ParishPerCapita}_i + x_{i,t} + e_{it} \quad (2) \end{aligned}$$

Finally, in column (2), I estimate a version of Eq. (1), but by removing the constant and including indicators for the variables for provinces that serve as caja seats, bishop seats, and/or are above the mean in parishes per capita. Other controls are the same as in (1). In all Tables, I report the standard errors clustered at the province level.

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# The Legacy of Concertaje in Ecuador

*Alex Rivadeneira*

## 1 INTRODUCTION

When the Spanish arrived in what comprises today's Ecuador, they found a region in civil unrest. The sixty to seventy years of Inca rule, its fierce initial opposition by local tribes, as well as posterior rebellions, had left significant scars on the pre-colonial society (Newson 1995, p. 119). This facilitated the Spanish conquest, with some ethnic groups even allying with the conquistadors (Salomon 1986, p. 182). Yet, the war campaign was not exempt from brutality (Phelan 1967, p. 48). As things settled down, the priority of the new rulers was to extract the greatest amount of resources. But this immediately led to the problem of labor distribution.

Although no evidence of pre-Hispanic slavery exists, the Inca already had forced labor systems like *yanacunaje* and *mita* (Oberem 1981a, pp. 303–306). They all consisted in forcing different communities to supply labor on a rotational basis as a form of taxation. The Spanish took advantage of this custom and adapted it to their needs. As gold and silver mines rapidly depleted in this region (Tyrer 1988, p. 7), the new settlers

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moved to other profitable activities like agriculture and textile production. However, the limited pool of indigenous workers induced landlords to develop mechanisms to retain them, being the main one to indebted them during their working period.

Along these lines, this chapter synthesizes the work in Rivadeneira (2023), where I study a forced labor institution created by the Spanish in the Ecuadorian highlands named *concertaje*. This institution forced indigenous workers to provide labor to landlords to pay off past debts. Because indebted workers were usually unable to pay their obligations, this situation implied a lifetime of service in the rural estates (*haciendas*) where they worked. Additionally, they transmitted this condition over generations via inherited debt. These mechanisms let the institution persist for more than 350 years. *Concertaje* was legally abolished in 1918 while surviving through other forms of forced labor relations until 1964.

Although I focus on the Ecuadorian case, *concertaje* is not very different from other types of forced labor relations in Latin America.<sup>1</sup> Furthermore, forced labor has been the most common labor relation throughout history (Acemoglu and Wolitzky 2011). However, empirical evidence about its effects is scarce due to data limitations. I circumvent this challenge by collecting and digitizing more than 2,000 pages of historical tax records from the late Spanish colonial regime (1780–1830). These records clearly distinguish the coercion status of indigenous workers, which enables me to build a unique dataset of more than 50,000 taxpayers, covering all the colonial districts where the institution existed. In turn, these districts nearly account for the totality of those in the current Highlands, where half of the country’s population currently live.

I first assess the regional effect of *concertaje* on contemporary development by exploiting the fact that its intensity, measured by the rate of indigenous labor permanently attached to *haciendas*, varied across districts. I identify a causal relation guided by the Ecuadorian historiography and the well-known hypothesis that natural endowments influenced the formation of forced labor institutions (Engerman and Sokoloff 1997). Due to the peculiar characteristics of the Ecuadorian highlands, there are

<sup>1</sup> The *conciertos* of Ecuador are comparable to *terrazqueros* in Colombia, *inquilinos* in Chile, *yanacunas* in Peru or *colonos* in Bolivia (Oberem 1981a). The system of indenting workers during agricultural activities was also common in Mexico and known as “tienda de raya” (Villegas 2008). *Concertaje* also shows quite resemblance with the indentured labor system in the Caribbean (Dippel et al. 2020).

non-negligible variations in crop suitability, even within short distances. In turn, landlords coerced labor based on crops' labor requirements.

I use data from the GAEZ-FAO project to compute relative crop productivity from potential yields and use it as an instrument for *concertaje*. Crucially, these yields consider only agro-climatic conditions, orthogonal to human intervention, instead of agro-ecological ones. Specifically, I use the relative productivity of maize, a native crop with high labor requirements, to potatoes as an instrument for *concertaje*. I document that, on average, regions where maize was more suitable to produce than potatoes coerced more indigenous labor.

Using contemporary census data, under the instrumental variable framework, I find that an increase of 10 percentage points (pp) of *concertaje* around 1800 increased the 1990's extreme poverty rate of a locality by 4.2 pp. I then disentangle the mechanisms behind the detrimental effects of *concertaje* by understanding how this institution shaped economic incentives. In particular, I stress the fact that indebted workers, in addition to guaranteeing a stable labor force, were an asset to the property. Hence, landlords put much effort into preserving the institution, as *conciertos* were an intrinsic part of their profit strategy.

Indeed, around 1800, *concertaje* was positively correlated to (proxied) output per capita, suggesting it was more productive districts, not underdeveloped ones, where labor coercion was heavily concentrated. In addition, *concertaje* was strongly associated with larger *haciendas* (in terms of employment), which tend to be more productive. While a hundred years later, the total value of land in places where *concertaje* prevailed was also higher. These facts imply that landlords retained workers as a business strategy to both profit and maintain the land's value.

However, somewhere between the mid-nineteenth and twentieth centuries, this strategy turned into an impediment to economic development. For instance, from 1962, *concertaje* started to be associated with higher illiteracy rates, lower school enrollment, fewer years of education, and a lower provision of public goods. Moreover, districts with higher rates of *concertaje* also report a larger workforce in the agricultural sector and a lower density of road networks nowadays.

This sort of reversal of fortune suggests that during the transition from an agrarian economy, *concertaje* became a major obstacle to development by creating significant barriers to human capital accumulation and labor mobility. First, the intergenerational transmission of debts gave landlords a tool to retain the offspring of *conciertos* in order to keep a stable labor

force. This forced children of *hacienda* workers to substitute schooling for early work, leaving them illiterate. As illiterates could not vote, their participation in public affairs was limited, which reduced their opportunities to demand public goods. Lastly, due to landlords' efforts to retain workers, *concertaje* also became a barrier to labor mobility, especially from agriculture, generating a possible misallocation of labor. This situation generated persistent distortions in the labor market that, in turn, harmed economic development. For instance, I show that *concertaje* increased the fraction of individuals working in agriculture nowadays.

Studies that have investigated the historical origins of underdevelopment in the Americas have stressed the negative association between labor coercion and economic development, although through different channels. Notoriously, Engerman and Sokoloff (1997) see land inequality as the first-order consequence of labor coercion and the crucial channel that determined long-run economic growth. Especially because forced labor relations were particularly common in large plantations. The authors suggest that higher rates of inequality induced by forced labor systems hampered the formation of wider, deep markets, which failed to create the right incentives to invest in public goods. Instead, Dell (2010) evidences a negative long-run effect of coercion from Peru's mining *mita* but finds a positive association between *haciendas* and development. She argues that regions that did not contribute labor to the *mita* allowed the expansion of large landowners, which in turn had secure property rights and, thus, were more likely to invest and lobby for public goods. In that sense, the results described in this chapter coincide with the generalized view regarding the detrimental economic role of labor coercion.

However, the negative effects of coercion from *haciendas* I report differ from Dell's hypothesis about the mechanisms by which the latter could have promoted economic development, particularly their role in supplying public goods. Rather, I emphasize the general negative effects of all forms of forced labor. Moreover, the evidence in this chapter provides support to the idea that historical labor coercion, instead of land inequality by itself, is a key element in explaining contemporary development, principally because coercion does not have to be necessarily accompanied by land inequality. In lieu, labor coercion, usually transmitted across generations, was typically characterized by education restraints and subsequent labor mobility restrictions, which altogether provides a better explanation of its detrimental long-run effects.

This chapter is organized as follows. The next section offers a historical background of *haciendas* and *concertaje*. Section 3 describes the identification strategy and the data used. Section 4 presents the results for the long-run impact of *concertaje* on economic development. Section 5 studies the mechanisms of persistence. Section 6 concludes.

## 2 HISTORICAL BACKGROUND

### 2.1 *Concertaje*

During the colonial regime, the Spanish organized the distribution of indigenous labor in the Ecuadorian highlands, mainly via a pre-Hispanic system known as *mita*. The *mita* was a system of forced but paid labor that assigned one-fifth of the male population between the ages of 18 and 55 to work on a specific task for a certain period of time (Cushner 1982, p. 119). Its enforcement was principally in charge of local chiefs, who could lose their power or be forced to pay with their own wealth in case they did not supply the solicited workers (Cushner 1982, p. 121). Given the absence of gold and silver mines in the region, the *mita* was mainly distributed to landlords for agricultural and textile activities.<sup>2</sup>

Due to the rotational nature of the *mita* system, landlords developed mechanisms to secure a stable labor force (Cushner 1982, p. 128). The most important one was to push indigenous workers to become indebted to the *hacienda* in order to retain them indefinitely. Once employed, landlords deducted from their wages a combination of alleged benefits, which mainly included the right to use a small plot of land, the guarantee of tribute payment, and the provision of food and clothes. However, as typical wages hardly covered the charged costs of these expenses, workers ended-up contracting a series of obligations with the *hacienda*.<sup>3</sup> Consequently, they had to extend their original service period in order to pay these induced debts. In fact, it was more an exception, rather than a rule,

<sup>2</sup> Deposits of precious metals rapidly depleted during the first colonial years (Andrien 1995, p. 18). On the other side, since most landlords combined in their *haciendas* both textile and agricultural production (Oberem 1981b, p. 347), the distinction between both is unclear.

<sup>3</sup> For instance, while wages ranged between 18 and 25 pesos, tribute payments and the cost of food and cloth averaged 5–6 and 5–10 pesos, respectively (Andrien 1995, p. 122).

that *mita* workers did not end up indebted during their serving period (Oberem 1981a, p. 314).<sup>4</sup>

Indeed, landlords discretely mediated this vicious cycle of work and debt. Except for the tribute payment, they had the ability to adjust the extent of the provided benefits. For instance, the parcel of land granted was so small that it barely fulfilled any subsistence requirements, while the prices of food and clothes charged to workers typically exceeded those of the market (Oberem 1981a, pp. 314–315; Cushner 1982, p. 134). Moreover, the loss of livestock during shepherding was added directly to workers' debt (Andrien 1995, p. 123). In sum, landlords deliberately employed debt as a mechanism to perpetuate indigenous workers' labor supply. For example, Cushner (1982, pp. 123–128) documents the story of an indigenous worker in a Jesuit *hacienda* who started with a debt of 27 pesos in 1701 and worked there for 15 more years just to end up accumulating a debt of 48 pesos by 1716.

Once attached to *haciendas*, workers' chances to escape were low. Those who tried were chased and typically recaptured. Furthermore, the intent to escape, in addition to harsh punishment, implied an increase in the debt since landlords charged prosecution costs directly to workers (Oberem 1981a, p. 316). Moreover, worker's descendants shared the same fate since they inherited the debt of their parents. Accordingly, many *haciendas* reported two or three generations of one family living and working together on the same estate (Alchon 1991, p. 85). The difficulty to escape and the intergenerational transmission of debts attached entire generations of families to *haciendas*.<sup>5</sup>

This process created the institution named *concertaje*, a system of debt peonage that forced indigenous workers to become permanent residents of Spanish holdings. These workers, known as *conciertos*, were not considered slaves because landlords did not formally own them. However, the existence of debtor's prison guaranteed landlords a legal mechanism to retain them. And because *conciertos'* debt was an asset of the property,

<sup>4</sup> By paying workers in goods, landlords also ameliorate liquidity constraints, a constant problem in the region sharpened during the eighteenth century (Tyrer 1988, p. 100).

<sup>5</sup> Debt inheritance was abolished in 1833, but *concierto* status continued to be transmitted, as children were forced to obtain a debt in order to guarantee their labor supply when adults (Oberem 1981a, p. 315).

landlords bought and sold them with their *haciendas* (Oberem 1981a, p. 310; Baud 2007, p. 76).<sup>6</sup>

Accordingly, in Rivadeneira (2023), I show that 1909's total value of land, when the system was still in place (Trujillo 1986), is positively correlated with *concertaje*. So, aside from supplying a stable labor force, the institution linked land's value intrinsically to its workforce. In fact, the right to *mita* labor already constituted a considerable part of *hacienda's* value in colonial times (Oberem 1981a, p. 307). Thus, as indebted workers were part of landlords' wealth, they opposed the abolition of *concertaje* and used their political power to perpetuate it.<sup>7</sup>

In 1918, *concertaje* was legally abolished via the prohibition of prisoners' debt. However, once that *de jure* mechanism disappeared, landlords continued to coerce them *de facto* by giving them the right to farm a small plot of land in a *hacienda* in return for labor obligations, a variation of *concertaje* known as *huasipungo* (Oberem 1981a, pp. 321–322). Ecuador's rural workers just witnessed the disappearance of any residuals of *concertaje* in 1964, when the agrarian reform abolished all forms of labor coercion. As the first records of *concertaje* date from 1601 (Oberem 1981a, p. 309; de Costales and Samaniego 1964, p. 4), this means it lasted for 300–360 years, being one, if not the most, persistent economic institution in the Ecuadorian highlands.<sup>8</sup>

## 2.2 Labor Requirements and Coercion

Historical analysis suggests that business considerations determined the decision of landlords to coerce labor (Andrien 1995, p. 124). Depending on their own labor requirements, landlords had to secure a stable labor force for their properties, in particular if they believed the *mita* system would not grant them enough workers. Thus, landlords may have taken into consideration the pool of workers available to them, given the potential demand of other parties.

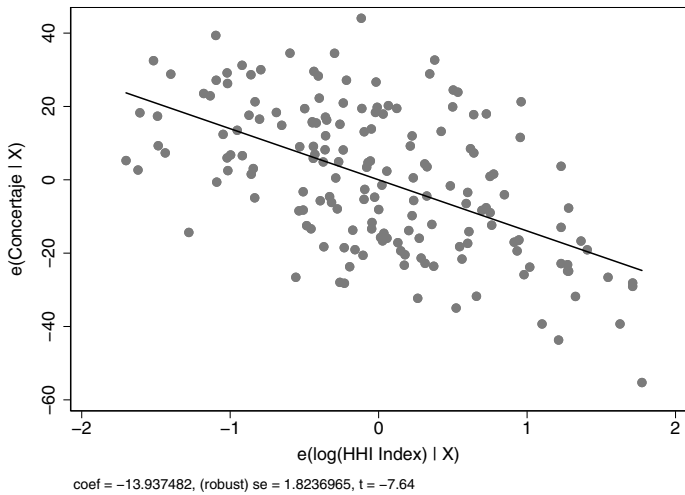
<sup>6</sup> Ironically, the word *concierto* comes from the Spanish word *concertar*, which means to agree. Literally translated, *concierto* is an individual that has agreed in a contract (Oberem 1981a, p. 309).

<sup>7</sup> See Chapter I of Prieto (2004) for an analysis of the political debate around the abolition of *concertaje*.

<sup>8</sup> The historical relevance of this institution is such that, unsurprisingly, Jorge Icaza's book, *Huasipungo* (1934), is perhaps the most worldwide famous Ecuadorean novel.

In that sense, whenever landlords anticipated high levels of competition of *mita* workers, and thus, smaller quotas for themselves, they could have coerced more labor in an effort to secure workers for their own production. Instead, in the extreme case of full monopsonic power, landlords may not have to worry about coercing a significant number of workers, given their high disposal. Accordingly, Fig. 1 shows that districts with higher labor market concentration, measured by the (log) Herfindahl-Hirschman Index (HHI), also exhibited higher *concertaje* rates. This evidence aligns with Domar (1970)'s idea of labor scarcity and coercion.<sup>9</sup>

This degree of labor competition, in turn, seemed to be directed by the types of crops a region could grow. For instance, maize, as opposed



**Fig. 1** Partial correlation between Log (HHI Index) and *Concertaje* (1780–1830) (*Notes* The regression controls for decade and colonial province fixed effects. Standard errors clustered by district. See Rivadeneira [2023] for a detailed explanation of the source of the data)

<sup>9</sup> Instead of coercing workers via debt or other mechanisms, Méndez-Chacón and Van Patten (2019) show for the case of Costa Rica that whenever the United Fruit Company faced more external competition, it invested more in schooling and health care, in an effort to retain workers.



to potatoes or wheat, requires extensive labor demand, especially during the three to four months of the plowing and tillage period (Andrien 1995, p. 124). It also has an extended crop cycle that lasts about ten months (Cushner 1982, p. 73). Similarly, sugar cane, a crop typical of slave plantations, is quite labor intensive. Accordingly, landlords in regions more suitable for crops with high labor requirements, like sugar cane or maize, had more incentives to have *conciertos*.

Anecdotal evidence confirms this was the case. For example, the book records of the Jesuit *hacienda* of Tanalagua, located in San Antonio (Quito), report both a high number of indebted workers and a large production of maize. Conversely, the Jesuit *hacienda* of Llanagua in Santa Rosa (Ambato), which did not produce crops with high labor requirements, failed to retain indebted workers (Andrien 1995, p. 124). The fact that the same owners had different business strategies depending on the crops they could grow suggests that coercion was profitable only when labor was more intensely required.

Since Spanish agro-pastoral production and distribution were eminently commercial (Cushner 1982, p. 176), landlords had to take into account the labor costs around *concertaje* before attaching indigenous workers permanently. After all, *conciertos* had to be provided at least with food and clothes, plus their guaranteed tax payment, which altogether represented a non-trivial expenditure (Andrien 1995, p. 134). Even though landlords could manipulate the costs in their workers' accounts, they have to cover the true expenses of maintaining a stable labor force. A failure to do so could imply an immediate economic ruin (Andrien 1995, p. 108).

This profit-oriented rationale of *concertaje* also seems reflected in higher agricultural productivity. To see this, I collected historical tithe auctions data (1780–1830), which can be seen as an indicator of rural production. The tithe was the ten percent mandatory tax given to the Catholic Church. Nonetheless, the church delegated its collection to privates, who bid by town *before* production occurred. Hence, these auctions represent an expected value of a district's production (Andrien 1995, p. 90).<sup>10</sup>

<sup>10</sup> See Ouweneel and Bijleveld (1989b), Brading (1989), Coatsworth (1989), Lindo-Fuentes (1989), and Ouweneel and Bijleveld (1989a) for a debate regarding the usefulness of tithe data as a proxy for rural production for the case of Mexico.

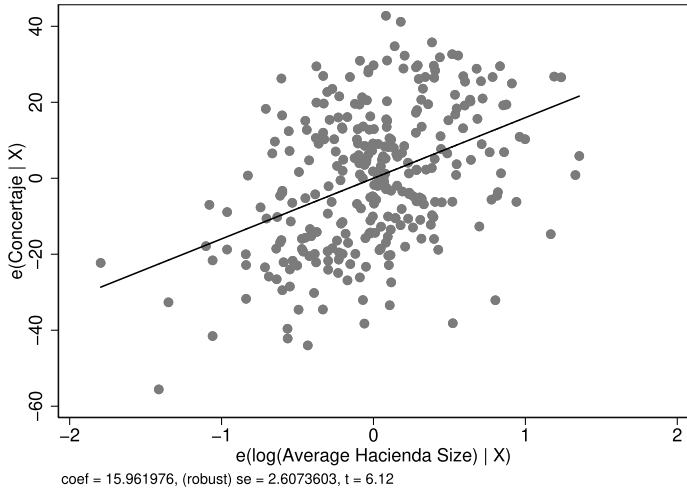
Figure 2b shows the partial correlation between *concertaje* and (log) tithe per capita after controlling for time (decade) and colonial province fixed effects. Without a price deflator, the former takes into account any inflationary trends, while the latter controls for the fact that tithe collection varied significantly across regions (Andrien 1995, pp. 91–92). Parishes with larger *concertaje* rates, which likely concentrated agricultural production, also showed, on average, larger per capita tithe payments. Moreover, Fig. 2a shows that *concertaje* was closely linked to larger *haciendas*, which usually are more productive (Adamopoulos and Restuccia 2014).

This suggests that the prevalence of *concertaje* was larger in districts with relatively higher (proxied) output per capita. Moreover, as the value of land was higher in those places (Rivadeneira 2023), it is hard to reconcile with the idea that they were unproductive. Specially given landlords had the best available land (Coronel Feijoo 1991, p. 77; Ortiz de la Tabla Ducasse 1993, p. 193). However, as shown in Sect. 4, the fact that nowadays, we observe a negative long-run relation between current economic development and historical labor coercion indicates that a sort of reversal of fortune (Acemoglu et al. 2002) occurred somewhere between the nineteenth and twentieth centuries. As agricultural endeavors stopped being the primal economic activity, it seems *concertaje* became an obstacle to modern economic development.

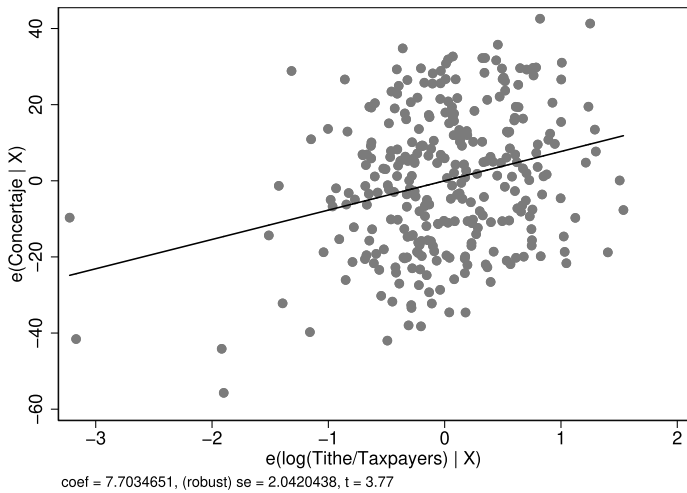
These historical observations are also consistent with Engerman and Sokoloff (1997) hypothesis that initial factor endowments determine the development path of a region. However, their theory pays special attention to the formation of forced labor institutions via large-scale plantations like sugarcane. But the evidence discussed above suggests that not only did large-scale plantations induced the formation of these types of institutions. In general, plantations with high labor requirements, particularly in terms of days of attention, favored labor coercion, a point also made by Earle (1992).<sup>11</sup>

Therefore, landlords in regions with natural endowments for crops that require relatively fewer days of attention or are less labor-intensive,

<sup>11</sup> Farms specialized in multiple-day crops were likely larger. For example, in the Chillón Valley, a region characterized by its maize production, large holdings of the religious orders held more than half the farmland (Andrien 1995, pp. 83–84). Large landowners in turn could reduce labor coercion costs, as it was surely cheaper to retain peasants by paying them with the right to use a small plot of land.



(a) Partial correlation between Log(Average *Hacienda* Size) and *Concertaje*



(b) Partial Correlation between (proxied) Output per Capita and *Concertaje*.

**Fig. 2** *Concertaje* and productivity (1780–1830) (*Notes* The regressions controls for decade and colonial province fixed effects. Standard errors clustered by district. See Rivadeneira [2023] for a detailed explanation of the source of the data)

such as potatoes or wheat, might have to compete less for labor and attached fewer indigenous workers. On the other side, regions suitable for crops with high labor requirements, such as sugarcane or maize, might have experienced larger levels of labor competition, with the inevitable consequence of higher *concertaje* rates. In Sect. 3, I exploit this idea that exogenous agricultural conditions determined the intensity of labor coercion in order to identify the long-run effects of the *concertaje*.

### 3 DATA AND IDENTIFICATION STRATEGY

The persistence of labor coercion via *concertaje* may have had important implications in the development process of the Ecuadorian highlands. In that spirit, one can test the long-run effect of *concertaje* by estimating the following regression,

$$y_d^c = \beta_0 + \beta_1 \text{concertaje}_d^h + B' \mathbf{X}_d + \epsilon_d \quad (1)$$

where  $y_d^c$  is a contemporaneous outcome of interest in district  $d$ ,  $\text{concertaje}_d^h$ , measured by the fraction of workers living in *haciendas*, is the historical incidence of the institution (*circa* 1800), and  $\mathbf{X}_d$  are other controls.

However, several econometric concerns arise if (1) is estimated via Ordinary Least Squares (OLS). To start, as discussed below, historical data typically come from many sources that differ in their quality. This mixture of data may imply the inclusion of measurement error, leading to the well-known downward bias of the coefficient of interest. Second, one can hypothesize that regions that were already poor in colonial times self-select into *concertaje*, meaning that any positive association between *concertaje* and subsequent underdevelopment may not be mediated by the effect of the institution. Although this reverse causality concern seems to be less of an issue given the evidence shown in Sect. 2.2. Finally, one cannot disregard that other factors, omitted in the analysis, interacted with the institution and affected long-run economic development.

Overall, I address those concerns by instrumenting *concertaje* with the relative productivity of crops that differ in their labor requirements. As mentioned in Sect. 2.2, historical evidence suggests that crops largely determined the demand for labor, although this hypothesis has not been formally tested. In particular, I use information from potential crop yields, exogenously determined by local conditions, to consistently estimate the

long-run effect of the institution. In the next section, I discuss in detail this instrumental variable (IV) approach.

### 3.1 *Instrumental Variable*

Due to both the presence of the Andes and the Equatorial line, the Ecuadorian highlands have non-negligible climate variations within short distances (Basile 1974, p. 19). Those variations translated into important differences in crop yields. I exploit those variations to predict the historical agricultural labor requirements of each town by using spatial data reported by the GAEZ-FAO project (IIASA/FAO 2012). The GAEZ project provides estimates of potential crop yield (ton per hectare) at a grid resolution of  $5' \times 5'$  (approximately  $100 \text{ km}^2$ ). Crop yields can be computed for low, medium, and high inputs. Moreover, one can select the source of water supply between rain-fed and irrigation. Although in the interest of replicating historical conditions, I selected a combination of low inputs and rain-fed water supply.<sup>12</sup>

One main feature of the GAEZ project is that it reports potential (rather than actual) yields based on agro-climatic conditions, which, as discussed by Galor and Ozak (2016), are arguably exogenous to human intervention. None of the estimates of potential yield reported by the GAEZ project use information on actual or historical production, but instead, they are based on very detailed models that incorporate agro-climatic conditions to predict potential crop yields. Climate characteristics taken into account include, among others, temperature, radiation, and moisture regimes. Further explanation of the data can be found in Nunn and Qian (2011) and Costinot and Donaldson (2016).

I use the GAEZ data to test whether districts with a comparative advantage in producing labor-intensive crops coerced more indigenous labor. Specifically, I focus on (highland) maize and (white) potatoes. Both crops, native to the Americas, represent some of the most important ones of the region (Cushner 1982, p. 72). However, as mentioned earlier, maize has higher labor requirements than potatoes. To compute the relative productivity of both crops in a given district, I first compute the corresponding average potential yields using geospatial software to posteriorly take their

<sup>12</sup> See Rivadeneira (2023) to assess the robustness of the results to the selection of intermediate inputs.

log difference. So relative productivity is,

$$z_d = \log(\bar{y}_d^i) - \log(\bar{y}_d^j), i \neq j, i \in \{maize\}, j \in \{potato\}$$

where  $\bar{y}_d^i$  is the average potential yield of crop  $i$  ( $j$ ) in region  $d$ . Additional technical details are discussed in Rivadeneira (2023).<sup>13</sup>

Once computed the relative productivity of maize to potatoes, I use this instrument to predict the historical rates of *concertaje*. However, since the endogenous explanatory variable is a fraction, it is possible to use the two-step IV method (Wooldridge 2010, p. 939). Thus, I first estimate a (fractional) probit model for *concertaje*, namely

$$concertaje_d^h = \gamma_0 + \gamma_1 z_d + \Gamma' \mathbf{X}_d + v_d \quad (2)$$

Then, I estimate an IV regression of Eq. (1) using the predicted values of the probit model as an instrument for *concertaje*. This approach has the advantage of improving both the efficiency and precision of the two-stage least square (2SLS) estimator and does not require the probit model to be correctly specified for consistency. Moreover, Xu (2021) shows that this procedure improves the first stage F-statistic, alleviating weak instrument concerns.

Since relative crop productivity may reflect differences in other geographic features that might have a direct impact on economic development, I control for a comprehensive set of exogenous variables. These include (center) latitude, longitude, and altitude, and (average) elevation, slope, precipitation, and temperature. Furthermore, I also control for the *overall* agricultural suitability of a district by employing an index reported in the GAEZ-FAO project. In that sense, while the instrument exploits the *comparative* advantage of certain crops, this index controls for the *absolute* advantage in agricultural activities. The inclusion of this control further alleviates concerns regarding the direct impact of the instrument through other channels than the institution itself. These set of variables constitute the baseline controls,  $\mathbf{X}_d$ , in both (1) and (2), although due to their skewness, I take the natural log of them.<sup>14</sup>

<sup>13</sup> In Rivadeneira (2023) I show the results are similar if wheat is used instead of potatoes. To avoid problems relative to places where crop is not suitable at all, I follow a strategy similar to Easterly (2007) and Lowes and Montero (2021), and add a constant (1) to the average potential yields.

<sup>14</sup> See Rivadeneira (2023) for extra details about these geographical variables.

Differences in crop suitability might reflect instead differences in caloric diet, which could have a direct effect on workers' health and hence, their productivity. However, this is less of a concern given the inclusion of the overall agricultural productivity index. In any case, the health conditions of *hacienda* workers have been documented as precarious, in particular, due to inadequate and scarce alimentation, on top of the unsanitary life and harsh working conditions they faced (Oberem 1981a, p. 324). However, this seems to be more the consequence of labor coercion rather than the lack of availability of certain crops, given, for example that both maize and potatoes are high-calorie food sources (US Department of Agriculture 2016). In fact, Suárez (1942) clearly distinguishes important expenditure differences in food between *hacienda* and other rural workers.

This issue takes particular relevance given the pervasiveness of infant malnutrition in Ecuador, which is more prevalent in the highlands (Gutiérrez et al. 2017). As malnutrition problems typically reflect in low height, in Rivadeneira (2023) I estimate the effects of *concertaje* on the percent of stunting children using digitized data from Freire and Bacallao (1992). There I show that *concertaje* seems to have a positive effect on child stunting, although the effect is not statistically significant. Moreover, the ubiquity of maize and potatoes in the Ecuadorian highlands allowed most regions to produce both crops. So, it is difficult to reconcile the idea that one crop substantially outperforms the other to produce such malnutrition levels.

But this potential difference in caloric diet could also have historical implications. Hence, to further reduce worries about the exclusion restriction of the instrument, in Rivadeneira (2023) I also show that the proposed instrument is neither related to the indigenous tributary population nor to tax per capita around 1,600. This somehow indicates that the initial colonial conditions, which could have further affected economic organization, were not determined by differences in the relative productivity of maize to potatoes. Although this result should be taken with certain caution, since early population data is of low quality (Ortiz de la Tabla Ducasse 1980).

Because crop suitability is plausibly exogenous, the approach of using the relative fitness of crops as a determinant of historical institutions has been widely used in the literature. For example, Easterly (2007) uses the relative suitability of wheat versus sugarcane as an instrument of inequality to test its effect on economic development. However, he does not study

its direct effect on the formation of forced labor institutions as I do. Lowes and Montero (2021) instead use the relative suitability of cassava relative to millet as an instrument for medical campaigns in Africa to understand its current effects on medical trust. Other works following a similar approach are Acharya et al (2016), who study the political legacy of slavery in the United States, and Bobonis and Morrow (2014), who investigate the role of labor coercion on human capital accumulation in Puerto Rico.

### 3.2 *Concertaje*

*Concertaje* data come mainly from colonial tax records. Spanish authorities typically collected taxes by visiting each town twice a year and reported the individual taxes paid by every indigenous worker from 18 to 55 years old (Villegas 2008).<sup>15</sup> Each tax administration (colonial province) had its own tax collector, who filled these records in books. Most of them are lost, with only a few preserved in the National Archive of History in Ecuador (*Archivo Nacional de Historia*). I collected at least one book for 9 of the 10 tax administrations that comprise what is today Ecuadorian highlands.

These records correspond to different years between 1780 and 1830, the last period of the colonial administration and the first years after independence, when *concertaje* was already a consolidated system. Every book clearly distinguishes between free workers and those living in *haciendas*, and was usually organized as follows. First, authorities reported a list of the names of free workers and then described each *hacienda's* workforce. Hence, records show for each *hacienda* in the town the name of the owner, the names of the indigenous workers living there, and the tax paid. The latter did not differ between free and *hacienda* workers. I digitized more than two thousand pages of those records and compute by town how many free and attached workers lived at the time, as well as the number of *haciendas*.

Historians such as Tyrer (1988) and Poloni (2006) have used some of these records to report regional rates of *concertaje*, but never reported a full list by colonial district. A notable exception is Oberem (1981b), who reported a partial list of *concertaje* rates around 1805, but only for those

<sup>15</sup> Taxes were paid in “San Juan” (June) and “Navidad” (December). Women, people with disabilities, and the elderly were exempted of tribute.



towns with the three highest and lowest rates in each tax administration. Unfortunately, the original source of these data seems to be lost. So I included Oberem's list in my dataset to complement the data from tax records. The final database I built covers virtually all the colonial districts of the time (144/147) and totals more than 50,000 tributaries, giving me a complete snapshot of almost all the indigenous population of the time.

Tyrer (1988) mentions that data quality is better for earlier years since there were stronger incentives to know the real number of workers, as well as their exact location. Thanks to the availability of books for different years, I can observe if there were dramatic differences in the number of workers and rates over time. Overall, as commented in Sect. 2, *concertaje* rates did not vary much, although they seem to be higher for earlier years. Some differences seem to reflect the fact that officers collected taxes seasonally and sometimes deferred their collection for the next visit. So whenever two sources for the same province exist, I select the earliest one, following the observation of Tyrer (1988).<sup>16</sup>

Since the unit of observation in colonial records is a town, while in modern outcomes is a parish (the smallest political unit), I matched *concertaje* data with contemporary locations by using several sources to reconstruct the approximate colonial territory. The fact that most modern districts retain their colonial names facilitates this procedure. The matching process leaves a sample of 128 aggregated districts, although I disregard 3 that belong to current Oriental provinces, as they were barely populated until the late twentieth century. Further details are discussed in Rivadeneira (2023). Figure 3 shows a map of the studied region, the location of each tax administration, and displays the intensity of *concertaje* in each district.

### 3.2.1 Contemporary Outcomes

Data for contemporaneous outcomes come from censuses. SIISE (2011) provides disaggregated information by parish from 1990 onward. The principal variable I use to measure economic development is the fraction of households considered extremely poor, as classified by a poverty index called Unsatisfied Basic Needs (*Necesidades Básicas Insatisfechas*). This index, commonly used in Latin America, classifies a household as

<sup>16</sup> See Rivadeneira (2023) for a detailed discussion regarding the quality of each source.

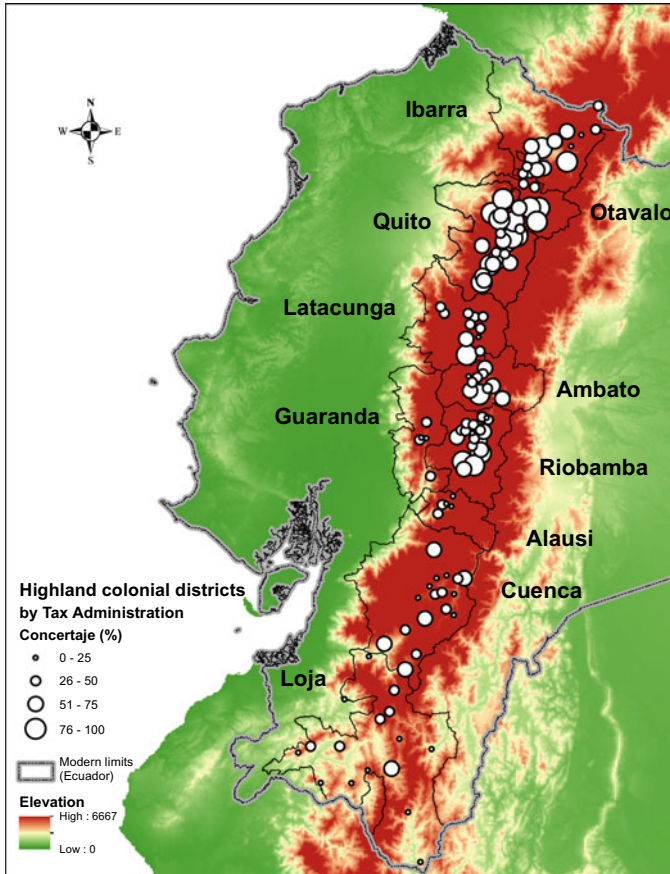


Fig. 3 Map of the studied region with its Colonial Tax Administrations

poor, or extremely poor, if one, or more than one of the five proposed criteria are satisfied, respectively. Other census variables I later use to explore the channels of persistence include illiteracy, average years of school, school enrollment, and sectoral composition. Rivadeneira (2023) provides additional details.

## 4 RESULTS

Table 1 shows both the IV and OLS estimates of Eq. (1) using as a dependent variable extreme poverty rates in 1990, the earliest ones available. All columns (except (4)) include the comprehensive set of geographical controls described in Sect. 3.1. Since spatial dependence naturally arises in this setting, I report both robust and Conley (1999) standard errors.<sup>17</sup> The F-statistic, reported in Panel B, ranges between 11 and 15, depending on the specification. This suggests a relative strong first stage, reducing concerns about a weak instrument, and at the same time, confirms the hypothesis that crop suitability influenced the intensity of labor coercion.

The IV coefficient reported in column (1) of Panel A shows that the long-run effect of *concertaje* on extreme poverty is around 0.42. The result, statistically significant, suggests that in average, an increase in 10 percentage points (pp) in the rate of *concertaje* circa 1800 (about half a standard deviation), increased extreme poverty in 1990 by 4.2 pp. To put it another way, a district that had all of its workers attached to *haciendas* around 1800 nowadays would have an extreme poverty rate 42 percentage points higher than one where *concertaje* was fully absent.

In column (2), I control for the proxied colonial output *per capita* discussed in Sect. 2.2, i.e., tithe *per capita*, to see if the initial (1800) economic conditions still have an effect on today's outcomes. Nevertheless, its inclusion barely changes the long-run effect of *concertaje*. As discussed earlier, it seems that relatively productive agricultural regions were the ones where *concertaje* was more intense. This result further reduces the concerns of reverse causality. On the other side, columns (3)-(6) report the estimates when I add other controls. Overall, the point estimates for the IV coefficients remain close to the base model, except in column (3), which are larger, when I include colonial province fixed effects.

These fixed effects capture other time-invariant unobservable regional differences, although when included, I omit geographical controls to avoid overfitting the regression. More important, since tax books were organized by colonial province, adding fixed effects helps to control

<sup>17</sup> Conley standard errors are computed using the *acreg* Stata package (Colella et al. 2019) at the cutoff distance of 15 km. The latter is the one that maximizes standard errors for 1990's extreme poverty rate.

**Table 1** Long-run effect: extreme poverty (1990)

	<i>Base model</i>	<i>Proxy output per capita (colony)</i>	<i>Province fixed effects (colony)</i>	<i>Province capital (colony)</i>	<i>Fraction indigenous (colony)</i>	<i>Number taxpayers (Colony)</i>
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: 2SLS						
Concertaje	0.4207 (0.1976)** [0.1903]**	0.432 (0.2017)** [0.2025]**	1.0085 (0.2956)*** [0.415]**	0.3819 (0.2025)* [0.2104]*	0.4613 (0.2578)* [0.2713]*	0.4443 (0.2107)** [0.2149]**
Panel B: First Stage						
Instrument	101.8123 (26.4564)***	101.6979 (26.6423)***	102.6682 (29.0584)***	101.6014 (26.9144)***	102.2855 (30.7597)***	102.1098 (27.4322)***
F Statistic (Robust)	14.8095	14.5707	12.4832	14.2505	11.0577	13.8552
Panel C: OLS						
Concertaje	0.0798 (0.0729) [0.0812]	0.0823 (0.0738) [0.0821]	0.2271 (0.0754)*** [0.0747]***	0.0455 (0.07) [0.0816]	0.0718 (0.076) [0.0787]	0.0918 (0.0735) [0.0843]
Geo. Controls	Yes	Yes	No	Yes	Yes	Yes
Observations	125	125	125	125	125	125
Mean Dep. Var.	64.9141	64.9141	64.9141	64.9141	64.9141	64.9141

*Notes* Robust standard errors are in parentheses. Conley standard errors are in brackets. Geographic controls include, in logarithms, (center) altitude, latitude longitude; (average) elevation, slope, total annual precipitation, mean annual temperature, and agricultural suitability  
 \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

for any systematic misreport of *concertaje* by tax administration. The inclusion of these fixed effect, absent of geographical controls, reduces the strength of the instrument, as crop variation within provinces is smaller. Yet, the OLS estimates become larger (and statistically significant), suggesting the likely existence of measurement error in *concertaje* data.

Column (4) reports the results when I control if the town was the main colonial tax district.<sup>18</sup> Although the estimates are smaller, they are still statistically significant. Hence, the inclusion of historically important administrative centers is not driving the results. In column (5), I control for the fraction of indigenous population *circa* 1780 in order to observe if *concertaje* is actually capturing the effect of the institution instead of differences in the colonial distribution of indigenous population. But once again, the results do not change significantly.

Finally, in column (6), I report the estimates when I control for the (log) number of taxpayers. The premise is the potential heterogeneous effect that *concertaje* may have on districts with different population sizes. However, by adding this control, the results become slightly larger and continue to be in the range of the previous estimates.

In all columns from Table 1, the IV estimates are larger than the OLS ones. One possible reason is the existence of measurement error in the *concertaje* data. First, keep in mind that this information come mainly from tax records organized by colonial provinces from more than 200 years ago. The quality of the data might have differed by province, or worse, by town. Even though the Spanish had an organized system to collect taxes, nothing exempts the process from including accidental or deliberate misreports, since each province had its own tax collector. One can suspect this is the case, given that the OLS estimates that include the colonial province fixed effects are the largest (and statistically significant).

In Rivadeneira (2023), I also report results when average night light intensity is the dependent variable. The latter has been shown as a good proxy for income, specially useful in settings where no disaggregated income information exists (Michalopoulos and Papaioannou 2013a, b). Moreover, I also present there the effect of *concertaje* on both outcomes for different years, in order to understand if its effect has vanished over

<sup>18</sup> The heads of *Corregimientos* according to the 1809 territorial division, as reported by Morelli (2005).

time. I show that while the effect of *concertaje* on extreme poverty appears to be reduced, the effect on night light intensity remains almost the same.

In summary, the estimates reported in this section reveal a quantitatively important long-run effect of *concertaje* on today's economic prosperity. These results are also consistent with Banerjee and Iyer (2005) study of India's landlord system, as well with Acemoglu et al. (2012), Fujiwara et al. (2017), and Dell (2010), for other forced labor institutions in Latin America such as slavery in Colombia and Brazil, and Peru's mining *mita*, respectively. Yet, they differ with the latter in terms of the mechanisms. As the mining *mita* was perhaps the most cruel colonial activity (Brown 2016), it is unsurprising that, when compared to the agricultural *mita* (*haciendas*), the former show larger negative effects. However, the positive role Dell gives to *haciendas*, as providers of public goods, does not seem to be occurred in Ecuador. So I attribute the negative effects of both *mita* and *concertaje* to labor coercion by itself, which is typically characterized by both a detriment in human capital and occupational barriers. Precisely, in the next section, I study these mechanisms.

## 5 MECHANISMS

As discussed in Sect. 2, *concertaje*, and its subsequent variations, persisted until the mid-twentieth century in great part because it gave landlords the means to retain cheap labor. Furthermore, it also granted them the ability to incorporate workers as assets in their properties. However, given that crop suitability shaped the incentives of landlords to indebt workers, not all regions developed under the shadows of this institution. In this section, I discuss some mechanisms that explain how variations in the incidence of *concertaje* lead to a divergence in the development paths across regions.

The main argument is that the long-run economic effects of labor coercion are better understood if they are seen as a barrier to both accumulate human capital and reallocate labor from the coercive sector, in this case agriculture. In that sense, the negative effects of *concertaje* are explained because it was profitable for landlords to maintain the system while agriculture was the main economic activity. Although by doing so they blocked and neglected the required investments (like the provision of public school) to develop other economic activities. At the same time, since the system limited workers' mobility, precisely because it would have

supposed a reduction in landlord's economic power, it slowed the process of structural transformation.<sup>19</sup>

*Concertaje*, a profitable and likely productive system during colonial times, became an obstacle to economic development somewhere between the mid-nineteenth and twentieth century. This sort of reversal of fortune suggests that during the transition from an agrarian economy, *concertaje* turned into a major distortion in the labor market, reducing the incentives to provide school and affecting labor reallocation. As landlords retained workers in their *haciendas*, they created a barrier to accumulate human capital and reduced the incentives to provide public goods. Moreover, due to the difficulty to escape from *haciendas*, most workers in regions with high prevalence of *concertaje* remained in the agricultural sector. Accordingly, I test the effects of *concertaje* on human capital and sectoral composition, finding strong effects on both, specially in earlier periods.

I also test other mechanisms discussed by the literature like inequality and public goods provision. I show that the latter, proxied by the density of roads and their availability, is negatively related to *concertaje*, which suggests landlords blocked, instead of foster, infrastructure investments. Instead, in Rivadeneira (2023), I also report that, despite land inequality and *concertaje* are strongly linked, inequality by itself is not associated with lower levels of contemporary economic development. Hence, I interpret this results as a generalization of the overall negative effects of coercion, instead of its operation through inequality.

### 5.1 *Human Capital Accumulation*

In addition to indebted workers, their wives and sons were also part of the *hacienda* labor force (Oberem 1981b, p. 352). Landlords usually employed women as housekeepers, while sons of *conciertos* started working at very early age. The early disposition of children to work limited their education, if any was available. Accordingly, in 1934, 80%

<sup>19</sup> Net migration rates seems to have been higher in regions historically affected by *concertaje*, particularly posterior to the agricultural reform (1964). Although the required authorization to buy, rent, and sell the properties granted by the reform may have somehow limited it (Barsky 1984, pp. 338, 343). Migration during the nineteenth century or early twentieth century, when *concertaje* was more prevalent, cannot be studied due to data limitations. See Rivadeneira (2023) for a discussion.

of indigenous workers living in *haciendas* were illiterate, as opposed to the 40% of the rest of rural workers (Oberem 1981a, p. 323).

In that spirit, I test as one of the potential channels of persistence of *concertaje* its effects on human capital using three metrics of education: (1) illiteracy rates, (2) average years of education, and (3) school enrollment. The data come from the 1962 census, the first year for which all this information is available. I report the results in Table 2.

Column (1) shows the results when the dependent variable is illiteracy rate. The coefficient, statistically significant, suggests that in average, an increase of 10 percentage points in *concertaje* during colonial times, increased the illiteracy rate of a district by 3.8 percentage points in 1962. I obtain the same negative relation between *concertaje* and human capital if instead I use as a dependent variable (log) years of school, as reported in column (2). The point-estimate,  $-0.011$ , means that an increase in 1 percentage point of *concertaje* around 1800 leads to a reduction in

**Table 2** Mechanisms: human capital

	<i>Illiteracy (1962)</i> (1)	<i>Years of school (1962)</i> (2)	<i>Enrollment (1962)</i> (3)
Panel A: 2SLS			
Concertaje	0.3763 (0.1892)** [0.2547]	-0.011 (0.0052)** [0.006]*	-0.4888 (0.1796)*** [0.2229]**
Panel B: First Stage			
Instrument	101.5519 (24.7501)***	101.5519 (24.7501)***	101.5519 (24.7501)***
F Statistic (Robust)	16.8354	16.8354	16.8354
Panel C: OLS			
Concertaje	0.0855 (0.078) [0.108]	-0.0021 (0.0023) [0.0029]	-0.1254 (0.0708)* [0.0927]
Geo. Controls	Yes	Yes	Yes
Observations	124	124	124
Mean Dep. Var.	44.3842	0.6398	51.1558

*Notes* Robust standard errors are in parentheses. Conley standard errors are in brackets. Geographic controls include, in logarithms, (center) altitude, latitude longitude; (average) elevation, slope, total annual precipitation, mean annual temperature, and agricultural suitability

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$



average years of school in 1962 by 1.1 percent. This effect is also quantitatively large, given that the mean school years for the population above six years in a district in 1962 was around 2.

Jointly, these results stress the strong negative effects of labor coercion on education. The elevated illiteracy rates observed in districts where *concertaje* was higher reflected the poor incentives individuals had to attend school, as well as the impediment they faced due to work obligations. Wherever *haciendas* had a strong presence, children had little alternatives other than start working at early ages in them, either because they were indebted soon enough, or because they had inherited the debts of their parents.

On the other side, landlords had strong incentives to limit the education of their workers as a strategy to preserve *concertaje*. Since illiterates did not have the right to vote until 1978 (Corkill 1985), by limiting their education, landlords also blocked their participation in public affairs. Hence, they had little voice on matters like the provision of public goods, as education infrastructure. Moreover, illiterates could be more easily retained by altering their debt accounts. So *concertaje* not only reduced demand for schooling, it also generated strong incentives in landlords to block their formal education.

The concerns about the low education of *conciertos* were acknowledged, and historically, there were several legal initiatives to improve this situation. For example, in 1899, the Congress passed a law that made mandatory to *haciendas* to send all children between 10 and 14 years old to school. Furthermore, it also required *haciendas* with more than 20 *conciertos* to build a school (Oberem 1981a, p. 324). But in practice, the power landlords exerted over local authorities made it difficult to accomplish all these resolutions. Accordingly, as shown in column (3), *concertaje* had a negative effect on school attendance in 1962.

Altogether, the results of this section make a case on how colonial institutions, in particular labor coercive ones, can explain variations of human capital within a country, a mechanism also emphasized by Mariscal and Sokoloff (2000). Extractive institutions, such as *concertaje*, either created barriers to education or distorted the incentives to invest in human capital, which in turn negatively affected economic development. Additionally, *concertaje* also generated incentives for the landlord elite to block education of workers as a method both to perpetuate the institution and perhaps also to maintain political control.

## 5.2 Sectoral Composition

Nowadays, the major disparities in productivity across countries are in the agricultural sector (Caselli 2005; Restuccia et al. 2008). At the same time, as documented by Restuccia et al. (2008), poor countries allocate more employment in agriculture than developed ones. The main justification behind this empirical finding is the Schultz hypothesis (Schultz 1953), which argues that poor countries face a “food problem,” in the sense that they have to allocate much of their labor to produce food for subsistence needs because of their low productivity.

However, the allocation of workers in agriculture is also mediated by distortions in labor markets, some of them linked to historical institutional arrangements. Indeed, the mechanisms developed by *concertaje* were designed to impede labor mobilization, which might have crowded out the development of other economic sectors. I test this hypothesis by estimating the effects of *concertaje* in sectoral composition, specifically in the percent of workers in (1) agriculture, (2) manufacture, and (3) wholesale and retail sector in the year of 1990 as dependent variables. I show the corresponding results of these estimate in Table 3.

In column (1), the effect, statistically significant at 10%, implies that, on average, an increase of 10 percentage points (pp) in the rate of *concertaje*, increased by 3.7 pp the share of workers allocated in agriculture. Notice that this result is not driven by the overall agricultural suitability, as this control is also included in the regression. Instead, in columns (2) and (3), I report the effect of *concertaje* in the share of workers in manufacture and service sectors, respectively. While the former suggest that a 10 pp increase in *concertaje* reduces the share of workers in the manufacture sector by 2.5 pp, the latter is not statistically significant. However, it is likely, as with other estimates, that the effects in sectoral composition are stronger for earlier periods. Unfortunately, there is no disaggregated information before 1990.

These results are consistent with the slow process of industrialization in the Ecuadorian highlands (Saint Geours 1994). Moreover, they shed light on how institutions may delay the process of structural transformation by creating barriers to reallocate labor. A notable anecdotal example is the case of the neighbor towns of Cayambe and Otavalo, where the minor presence of large *haciendas* and landlords in the latter contributed to the formation of indigenous trade specialists, who are renown because of their entrepreneurial talent (Valarezo 2002). The author shows that

**Table 3** Mechanisms: Sectoral Composition

	<i>Agriculture (1990)</i>	<i>Manufacture (1990)</i>	<i>Wholesale and retail (1990)</i>
	(1)	(2)	(3)
Panel A: 2SLS			
Concertaje	0.3688 (0.2579) [0.2067]*	-0.2477 (0.1122)** [0.116]**	-0.0445 (0.0491) [0.0341]
Panel B: First Stage			
Instrument	101.8123 (26.4564)***	101.8123 (26.4564)***	101.8123 (26.4564)***
F Statistic (Robust)	14.8095	14.8095	14.8095
Panel C: OLS			
Concertaje	0.0151 (0.0934) [0.0793]	-0.0823 (0.0467)* [0.0446]*	-0.0169 (0.0156) [0.0117]
Geo. Controls	Yes	Yes	Yes
Observations	125	125	125
Mean Dep. Var.	54.7253	10.5299	5.536

*Notes* Robust standard errors are in parentheses. Conley standard errors are in brackets. Geographic controls include, in logarithms, (center) altitude, latitude longitude; (average) elevation, slope, total annual precipitation, mean annual temperature, and agricultural suitability

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

these differences in sectoral composition apparently occurred as early as the mid-nineteenth century. For instance, using census data for 1862, he reports Otavalo had 38% of its population working in the agricultural sector, and Cayambe had 82%.

Finally, the results presented in this section also reflect the fact that historically, labor coercion has been intimately related to agriculture. Even nowadays, most forced labor relations occur in low-technology, labor-intensive activities as agriculture (Andrees and Belser 2009). In the context of Latin America, for instance, labor coercion has been historically concentrated in agricultural and mining activities. While mines were rapidly depleted, coercion in the agricultural sector remained for a longer period of time. Accordingly, it created barriers in the reallocation of labor and limiting the development of other economic activities. These distortions later on had important implications in the economic performance across regions.

### 5.3 *Public Goods Provision*

Instead of suggesting a negative relation between the historical *hacienda* system and contemporary economic development, Dell (2010) states that under the presence of the mining *mita*, landlords in Peru protected indigenous workers by offering an escape from the cruel conditions of the Potosi silver mines. Hence, she proposes an alternative hypothesis to Engerman and Sokoloff (1997) theory to explain the development path in the Americas, where she emphasizes the potential positive role landlords had on providing public goods, like roads, and securing property rights.

Accordingly, I test if places with higher rates of *concertaje* also show higher presence of public goods, proxied by the density of district's roads. To measure the latter, I follow the same strategy as Dell (2010) and compute the total length of roads and divide them by the district surface area. Rivadeneira (2023) explains additional details. Table 4 shows the results.

Column (1) shows the effect of *concertaje* on (log) road density. In this case, an increase in 10 percentage points in the historical rates of *concertaje* led to a decrease in 2.4% in road density. These results are contrary to those presented by Dell (2010), who hypothesizes that large landowners with secure property rights had higher incentives to invest in public goods. In contrast, I observe that public goods, reflected in road density, seem to be negatively related to the existence of forced labor in *haciendas*.

Data on roads, from 2010, might reflect quite different conditions from historical ones, due to recent important government investments in infrastructure. To see if that is the case, I use data from the 1974 agricultural census to compute for each district the fraction of farms further than 5km to a passable road. The results are shown in column (2). Once again the IV estimates suggest that higher rates of *concertaje* are associated with less public goods. In this case, an increase in 10 percentage points of *concertaje* increased by around 6 percentage points the share of farms whose passable roads are further than 5km. If landlords in the Ecuadorean highlands produced to sell to local markets, why did they not invest or lobbied for roads?

One explanation is that during most of the nineteenth century, the state relied on unpaid draft labor for public works (Ackerman 1977). Since *conciertos* were exempted from it (Palomeque 1990, pp. 171–172),

**Table 4** Mechanisms: public goods provision

	<i>Road density</i> (2010) (1)	<i>Farms further than</i> <i>5km (1974)</i> (2)	<i>Public sector</i> <i>workers (1990)</i> (3)
Panel A: 2SLS			
Concertaje	-0.0237 (0.0076)*** [0.0091]***	0.6033 (0.2354)** [0.2641]**	-0.1455 (0.0786)* [0.0701]**
Panel B: First Stage			
Instrument	101.8123 (26.4564)***	101.8123 (26.4564)***	101.8123 (26.4564)***
F Statistic (Robust)	14.8095	14.8095	14.8095
Panel C: OLS			
Concertaje	-0.0046 (0.002)** [0.0023]**	0.0761 (0.0817) [0.1161]	-0.0343 (0.0249) [0.0215]
Geo. Controls	Yes	Yes	Yes
Observations	125	125	125
Mean Dep. Var.	5.9768	19.204	7.9973

Notes Robust standard errors are in parentheses. Conley standard errors are in brackets. Geographic controls include, in logarithms, (center) altitude, latitude longitude; (average) elevation, slope, total annual precipitation, mean annual temperature, and agricultural suitability

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

it is likely public infrastructure was harder to build in regions dominated by *haciendas*. Even when some of those regulations were removed, landlords displayed an enormous opposition to dispose their workers (Palomeque 1990, pp. 181–182). As *conciertos* were an asset, landlords limited their labor supply, even to activities that could have benefited them, like roads' construction. In that sense, landlords faced a coordination problem, where their private interest to retain workers conflicted with the public one to provide public goods.

For instance, during the construction of a road system near Otavalo, state officials complained about *haciendas* as the principal obstacle for labor recruitment (Williams 2007, p. 51). Official records also show governors complaining about landlords requesting for infrastructure, but denying the participation of *conciertos* in public works (Palomeque 1990, p. 184). Despite their best interests in more infrastructure, landlords also seemed careful about retaining their workers. A temporary assignment to road construction implied more chances to escape and a diversion from

agricultural duties. Then, it is not clear that a major provision of public goods could exist in districts with more *haciendas*. Moreover, labor abundance allowed landlords to transport objects, without the need to invest in transportation, as exemplified in 1925, when 3000 indigenous workers mobilized electric equipment by 150 km (Albornoz 1971, p. 80).

Perhaps also, larger levels of labor coercion affected state's capacity. Notably, column (3) shows that *concertaje* is associated with a lower share of workers in the public sector. Hence, the provision of public goods may have been more difficult to accomplish in places with less state presence. Specially if we take into account the large number of illiterates in *haciendas*, who could not vote, and had little chances to demand for an active state role. Contrary, it was in landlords best interest to limit state's capacity and government workers presence, in order to exert more influence over local affairs and to avoid unwanted forms of regulation. Hence, *concertaje* did not necessarily give landlords incentives to promote a greater state presence and a larger provision public goods. Instead, it seems the opposite happened.

## 6 CONCLUSION

This chapter summarizes the work in Rivadeneira (2023), where I document the long-run effects of *concertaje*, a forced labor institution in the Ecuadorian highlands. I measure its intensity across districts from hand-collected records circa 1800. To identify a causal effect, I instrument *concertaje* with the relative productivity of crop yields that differ in labor requirements. This a plausibly exogenous instrument, as those yields consider only agro-climatic conditions, orthogonal to human intervention. Moreover, both historiography and the hypothesis that geographic conditions influenced the incentives to coerce labor support the use of this instrument. I estimate that, on average, an increase of 10 percentage points (pp) in the rate of *concertaje* increased extreme poverty in 1990 by 4.2 pp.

Due to the close relation between *concertaje* and the labor market, I argue that the presence of this labor-coercive institution created barriers to the process of human capital accumulation and generated distortions that affected the sectoral composition of labor. I estimate that, on average, an increase of 10 pp in the rate of *concertaje* circa 1800 increased the illiteracy rate of a district in 1962 by 3.8 pp and the share of workers

in agriculture by 3.7 pp. These results plausibly document the role of historical institutions as a cause of persistent market distortions.

Finally, using data of contemporary roads, I report a negative effect of *concertaje* in public goods provision. These results are opposite to Dell (2010), who highlighted a positive role of Peru's *haciendas* in providing access to roads. Instead, the results presented here do not favor a generalization of Dell's hypothesis that landlords shielded individuals against extractive institutions. In the case of Ecuador, where Spanish depleted gold and silver mines very early, it is possible to have a more homogeneous setting to study the effects of institutions promoted by landlords. Within that setting, there seems to be more evidence favoring the historical analysis that *haciendas* constituted extractive institutions that affected economic development. Overall, I emphasize that it is labor coercion itself, either through *mita*, *concertaje*, or slavery, a critical institution that generated divergences in economic development across regions.

Under the lens of the evidence presented in this chapter, it is the nature of coercion what explains its negative effects. Coercion, when profitable, usually demands workers to be both retained in a certain activity (e.g., agriculture) and in a certain place, becoming a barrier for labor reallocation across sectors and regions. To perpetuate this condition, coercers have to ensure that workers' outside option is low enough. This is achieved via legal punishment (debtor's prison) and by limiting and reducing the incentives to formally acquire human capital. To achieve this last point, coercers either use their political power to block public school investments or plainly deny access to education. Furthermore, to keep a stable labor force over time, the next generation needs to be coerced from an early age, which induces a substitution of school for labor. As illiteracy relegated workers from political participation via voting, this perpetuates the lower provision of public goods and reinforces the barriers to escaping from coercion.

Moreover, the intergenerational nature of labor coercion suggests a relevant channel to study in the future is its persistent effects not only across regions but directly among individuals. This requires matching individuals across generations, as Rivadeneira (2023) does using surnames and contemporaneous tax records. This is a promising agenda that could further expand our understanding of the long-run effects of historical institutions.

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# Public Education and Indigenous People in Bolivia, 1880s–1950s

*José A. Peres-Cajías*

## 1 INTRODUCTION

A widespread view in Bolivian historiography stresses that the National Revolution of 1952 is a landmarking in terms of education and human capital accumulation (Informaciones, 1962). This idea is supported by pointing both at education inputs (public expenditure in education) and education outputs (literacy levels or level completion). A recent example of this literature is the work by Machicado and Vera-Cossio (2020), who, through the use of a differences in differences approach, highlight the relevance of the 1952 Revolution in terms of human capital accumulation.

However, there is also a very well-established literature that questions the relevance of the 1952 Revolution. For instance, by looking both at input and output indicators, Contreras (2003) suggests that the 1952 Revolution did not imply a breaking point. He suggests that educational variables followed the same trend since the Chaco War (1932–1935). It has been also suggested that changes in public expenditure in education (either in per capita terms or controlling by GDP pc levels) spurred by the Revolution were not radically different from other Latin American

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experiences (Peres-Cajías, 2017). Moreover, vis-à-vis primary education, tertiary education was still prioritized during the second half of the twentieth century, which may have negative implications in terms of inequality (Lindert, 2010). As for output indicators, full literacy and primary completion were not reached until the last decade of the twentieth century, which is in line with the meager performance of the region from a worldwide perspective (Frankema, 2009).

Taking into account these confronting perspectives, the goal of this chapter is to analyze the evolution of educational output indicators of Bolivian indigenous people from the 1880s to the 1950s. The chapter focuses on indigenous people given the recent claim by Machicado and Vera-Cossio (2020) that human capital accumulation of this group changed radically after the 1952 Revolution. By looking at the period from the 1880s to the 1950s, the chapter discusses three important changes in Bolivian education history that took place before the 1952 Revolution: the liberal reforms of the early twentieth century; the re-centralization process and the upsurge of educational initiatives by indigenous people that took place in the 1920s; legislative changes derived from the Chaco War. To be clear, the methodology proposed here does not allow concluding that legislative modifications *caused* a change in educational indicators. Instead, the presentation of basic descriptive indicators helps identifying the relevance of different critical junctures that could be analyzed in further research.<sup>1</sup>

The work also highlights the contribution that digitalization can have in old historiographic debates. Indeed, to the best of my knowledge, this is the first time that the 1976 Bolivian national census is used in order to assess human capital accumulation from the 1880s to the 1950s. In this context, the chapter offers three original contributions: (*a*) it quantifies the evolution of literacy levels at the department level (the second administrative unit in Bolivia); (*b*) it quantifies the evolution of literacy levels of three different ethnic groups; (*c*) it quantifies the evolution of literacy levels at the provincial level (the third administrative unit in Bolivia) in one Bolivian department.

The new evidence shows that, during the first half of the twentieth century, education improvements were very heterogeneous from

<sup>1</sup> In another article, different econometric techniques are deployed in order to measure potential causal effects of the liberal reform on human capital accumulation of indigenous people (Peres-Cajías & Serrate-Mendieta, 2022).

a regional, ethnic and gender perspective. After the liberal reforms implemented during the first years of the twentieth century, educational indicators improved significantly in the departments of La Paz and Oruro and among non-indigenous (both men and women) and Aymara men. By contrast, education changes in departments such as Chuquisaca and among Quechuas (both men and women) did not show significant dynamism until the 1930s. The opposite trajectories of Aymaras and Quechuas (the two most important indigenous groups in Bolivia) suggest that the negative relationship between public goods provision and ethnic diversity (Alesina & Ferrara, 2005; Stichnoth & Van der Straeten, 2009; Go & Lindert, 2010) is mediated by different factors. More research is needed in order to identify and understand these mechanisms.<sup>2</sup>

The rest of the chapter is organized as follows. Next section offers a quick review of the literature about education policies in Bolivia during the nineteenth century and the first half of the twentieth century. Section 3 discusses methods and data. Section 4 presents the evolution of literacy levels by departments from the 1880s to the 1950s. Section 5 describes several education outputs by ethnicity and sex from the 1880s to the 1950s. Section 6 explores changes in literacy levels in the department of La Paz from the 1890s to the 1940s. Last section concludes.

## 2 EDUCATION IN BOLIVIA BEFORE THE 1952 REVOLUTION

This section offers a quick review of Bolivian historiography on education policies before the 1952 Revolution. The different works cited across this text point to the existence of low improvements in education throughout the nineteenth century. This pessimistic consensus held either when the system was centralized (1825–1872) or decentralized (1872–1901).

The lack of significant changes does not imply that there were not specific efforts to expand educational services. For instance, very soon after independence, Simón Rodríguez (Simón Bolívar's tutor) wanted to introduce modern pedagogic methods and to create both primary and secondary schools in each Bolivian department. There was also a significant effort to spread popular education towards artisans and women at the

<sup>2</sup> The following project offers a very instructive revision on this issue: [www.ethnicgoods.org](http://www.ethnicgoods.org) (last access August 4, 2022).

beginning of the 1850s. Indeed, the National Convention of 1851 stated that primary education should be free and compulsory (Barragán et al., 2015). However, given high political instability and public revenues' stagnation, public spending on education was low and particularly volatile (Velásquez-Castellanos, 2017). This is one of the potential explanations about the weak impact of legislative initiatives.

Two important changes took place at the beginning of the 1870s. On the hand, *libre enseñanza* (free teaching) was declared, which gave private actors higher privileges on the organization and provision of educational services. On the other hand, an important decentralization process took place both in public finances and educational policies being the latter a prerogative of municipalities since then. Whereas President Hilarión Daza (1876–1879) wanted to recover education policies to the Central government, the beginning of the War of the Pacific (1879) and the consequent need of fiscal resources stopped this process (Barragán et al., 2015). Decentralization was reinforced in 1889, when it was decided that each municipality could create its own network of primary schools. So, at the end of the nineteenth century, there was not a national educational system, but a very heterogeneous one in which 90% of services were in the hands of municipalities (Velásquez-Castellanos, 2017).

New important changes occurred at the turn of the twentieth century. The Federal War, that took place from October 1898 to April 1899, was won by the *liberales* over the *conservadores*. Given that the economic and political interests of the winners were located in La Paz, the end of the civil war was followed by the transfer of the Executive and Legislative seats from Sucre to La Paz. Likewise, despite their initial federal claims, the *liberales* enforced a consistent centralization process. In this context, public education became again a prerogative of the central government.

This re-centralization generated new educative legislation. To begin with, it was decided that the central government would supervise the educational system and that each school across the country should follow the official normative (*Ley de 6 de febrero de 1901*). The *Plan General de Educación*, created by Misael Saracho, the Minister of Education, was enforced through the decree of December 28th of 1908. Among other measures, it determined that educational policies were a prerogative of the central government and that primary education was compulsory (Iño Daza, 2012).



There was also a consistent effort to improve and harmonize teaching abilities. In 1907, Minister Saracho brought a mission of Chilean professors to supervise and offer advices for the development of the Bolivian curricula. Two years later, thanks to another foreign mission, a specific school for primary teachers (*Escuela Normal de Sucre*) opened its doors. A school for secondary teachers was inaugurated in 1917 (*Escuela Normal Superior de La Paz*). Indigenous and rural training schools were also created: one in Umala (1915) for Aymaras and another one in Colomi (1916) for Quechuas.

All these legislative changes and educational initiatives have been analyzed by different scholars (Martinez, 2010; Talavera Simoni, 2011). Despite the existence of several debates, there is an agreement that Bolivian authorities wanted to adapt state-of-the-art pedagogic methodologies to the particularities of the country. Likewise, despite the identification of different reasons or justifications, there is also a consensus around the idea that these legislative changes sought to affect education levels of indigenous people.

In this context, one salient difference between these legislative changes and those of the nineteenth century relies on the fiscal effort. Indeed, thanks to the increase of public revenues, which was driven by the recovery of mining exports, public spending in education increased notoriously since 1904 (Peres-Cajías, 2014). In fact, 60 new schools were created in 1905, and the system of *escuelas ambulantes* (road schools) for the indigenous population began (Velásquez-Castellanos, 2017). It was also during these years that technical schools for specific sectors (agriculture and mining) were consolidated. Again, this is in contrast with the different failed attempts of the nineteenth century (Peres-Cajías & Ranestad, 2021).

The *liberales* were overthrown by a coup led by Bautista Saavedra in 1920. This change, however, just reinforced the centralization of education: central government's authorities asked back the 20% of fiscal resources that were granted for municipalities for the provision of education services. Meanwhile, grassroots initiatives in indigenous communities increased education services in rural and remote areas (Brienen, 2011; Cajías, 2011).

The trauma of a new territorial loss in the Chaco War generated a new political scenario in the second half of the 1930s. The promulgation of the Constitution of 1938 is the most salient output of this post-war scenario. As for educational services, this consolidated the centralization process. For instance, the Bolivian central government took control over the different indigenous schools that were created since the mid-1920s (Brienen, 2011). Likewise, the 1938 Constitution stated that education was the most important function of the state, that it should be compulsory and free for Bolivians from 7 to 14 years old (Cajías, 2011). These legislative changes were accompanied again by a higher fiscal relevance of educational services (Peres-Cajías, 2014).

All this shows that, before the 1952 Revolution and the promulgation of the 1955 Education Code, three important changes took place in educational policies in Bolivia: (*a*) the liberal reforms at the eve of the twentieth century; (*b*) the expansion of educational initiatives driven by state and non-state actors during the 1920s; (*c*) the increased relevance of education in the post-Chaco War period. The following sections offer descriptive evidence in order to assess the impact that these processes could have in terms of human capital accumulation of Bolivian indigenous people.

### 3 DATA

The availability of historical digitized censuses has increased recently (see the IPUMS database). Its use, in turn, has proved instructive to understand social and economic change in Latin America (Calvo-Gonzalez et al., 2020). This chapter takes advantage of these developments and uses the digitized information of the 1976 Bolivian national census. The chapter uses the complete census (4.6 million observations).

Departing from respondents' age at the 1976 census, the availability of the microdata allows constructing backward representative decadal cohorts. Given the research interests of the work, the database considers those respondents that were born between 1880 and 1959. This generates a new database of 2.4 million observations.

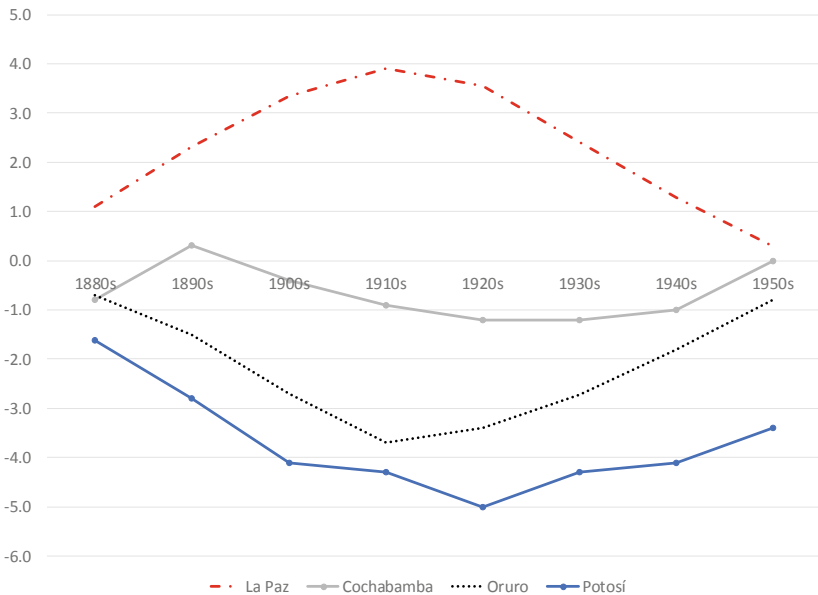
The microdata allows constructing different education outputs, such as literacy or levels of education. The database considers those that were 15 or older at the time of the 1976 national census, which implies that it considers those that could have finished *at least* primary education (six years). In one case, the analysis is restricted to those that were born between 1890 and 1949. This implies that the sample considers those that could have finished their tertiary education—typically at the age of 23–25.

Taking into account respondents' answers about spoken languages, it is possible to differentiate four ethnic groups: non-indigenous, Aymaras, Quechuas and other natives.<sup>3</sup> It is assumed that those that declared being able to speak a native language or a native language plus Spanish are indigenous. Given that the analysis looks at education differences between indigenous and non-indigenous, and between different indigenous groups, observations that declared being able to speak two different indigenous languages are not considered in the database—less than 7% of the sample. Taking into account this last change and other minor corrections, the final database is composed by 2 million observations. In turn, the share of non-indigenous, Aymaras, Quechuas and other natives is 28.7%, 28.9%, 40.8% and 1.6%, respectively.

It is also possible to make backward regional inferences in terms of human capital accumulation. The reliability of this analysis depends on one critical assumption: respondents' place of residence at the time of the 1976 Bolivian national census is the same where this observation was educated. In fact, education levels by cohort and department is different if the analysis focuses on people that were born on those places or people that lived on those places at the time of the census.

<sup>3</sup> The definition of ethnicity is not straightforward. For instance, the 2001 Bolivian national census offered three different alternatives to identify indigenous people: self-identification; spoken languages; language used to learn to speak. Depending on the chosen indicator, the relative importance of indigenous people over total Bolivian population ranged from 40 to 63%. The 1976 Bolivian National Census only offers information about spoken languages.

This is proved in Fig. 1 which shows the gap in literacy levels in four different Bolivian departments. The graph considers those that declared being born in these four departments and those that lived there at the time of the 1976 census. Whereas the gap is irrelevant for Cochabamba, it shows differences up to 5% in specific cohorts of the remaining departments. The direction of these gaps is not random given that richer departments (such as La Paz) show a consistent positive gap, while poorer departments (such as Potosí) show a negative one. This suggests that richer departments attracted literate individuals from poorer departments, while the opposite happened in the poorer departments. Given these findings, all analyses of education indicators at the departmental level carried out in this chapter consider information from observations that were born in the departments under scrutiny.



**Fig. 1** Literacy gap between people that were born and that lived in Bolivian departments, 1976 (*Source* Author's own calculation based on the 1976 National Census)

The last section of this chapter deals with education indicators in the department of La Paz from the 1890s to the 1940s. The size of the sample is big enough (468,592 observations) to offer representative information at the provincial level. Whereas the digitized microdata of the 1976 census offers information on the department of birth, it does not offer information on the province of birth. In this context, it could be the case that an observation that was in Murillo province (the province of La Paz city) at the time of the 1976 census, was born in another province. Furthermore, given that the probability of literates to migrate from poorer to richer zones is greater than that of illiterates, the existence of migration flows from rural provinces to the capital city could have increased education indicators in Murillo province. Backward estimations of literacy at the provincial level should consider these data restrictions. In the specific case of La Paz, backward estimations of education indicators could be creating an upper bound estimate for Murillo and a lower one for the rest of the provinces.<sup>4</sup>

#### 4 HUMAN CAPITAL ACCUMULATION IN BOLIVIAN DEPARTMENTS

Borders of the nine Bolivian departments considered in the 1976 Bolivian national census (Map 1) changed during the first half of the twentieth century. The loss of territory after the Acre War (1903) against Brazil, affected the size of the so-called Territorio Nacional de Colonias. Similarly, the loss of the Chaco War (1932–1935) affected the size of Chuquisaca. In 1938, the so-called Territorio Nacional de Colonias was converted into a new department (Pando), and borders between this department and Beni were consolidated. Given that all of these border changes occurred in places with very low population densities, backward regional estimations of human capital accumulation can be taken as fair estimations.

In order to better understand the evolution of department education indicators, it is important to consider the existence of regional divergent economic paths from the 1880s to the 1950s. Given the lack of regional

<sup>4</sup> Notice that migration flows from rural provinces to capital cities, as well as from western to eastern departments, increased after the 1952 Revolution and sharply accelerated after the 1980s crisis (Peres-Cajías, 2020).



**Map 1** Map of Bolivia (Source <https://gisgeography.com/bolivia-map/>)

GDPs, this divergence can be approached through the analysis of population indicators (Table 1). The dynamism in departments such as La Paz and Oruro and the relative stagnation in departments such as Chuquisaca, Cochabamba or Santa Cruz are related with different processes. On the one hand, at the turn of the twentieth century, at the same time of the Federal War, the Bolivian economy witnessed a radical change in the export basket and the consolidation of tin over silver as the main commodity export. This fostered a political and economic displacement

from the Sucre-Potosi axis to the La Paz-Oruro one. On the other hand, after the construction of the first railway line between Antofagasta and Uyuni (1889), most transport facilities were created almost exclusively in the west of the country. This fostered a higher connection between cities in the west of the country and between them and the world market, but the disarticulation of eastern departments (Peres-Cajías, 2020).

This economic divergence helps understanding the divergent evolution of literacy levels between Bolivian departments.<sup>5</sup> For the sake of simplicity, these departments have been split in two groups: those that during the 1880–1950 period were integrated (Fig. 2), and those that were less integrated to the national economy and lagged behind (Fig. 3).<sup>6</sup> During the nineteenth century, Santa Cruz and Beni presented the highest records of literacy. Moreover, differences between these departments and the rest were around 30 percentage points. Things changed radically during the first half of the twentieth century. There were constant improvements in literacy in La Paz and Oruro, particularly since the 1910s. In the case of Cochabamba, Potosi, Santa Cruz and

**Table 1** Department population in Bolivia, 1900–1950

	1900	1950	Annual growth rate
Chuquisaca	196,434	260,479	0.57
La Paz	426,930	854,079	1.40
Cochabamba	326,163	452,145	0.66
Oruro	86,081	192,356	1.62
Potosi	325,615	509,087	0.90
Tarija	67,887	103,441	0.85
Santa Cruz	171,592	244,658	0.71
Beni	25,680	71,636	2.07
Pando	7,228	16,281	1.64
Total	1,633,610	2,704,162	1.01

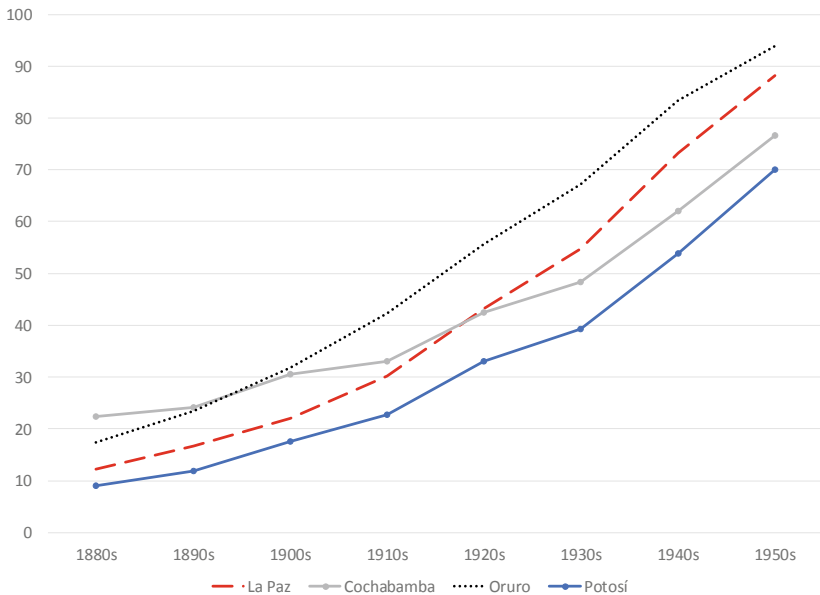
*Source* Author's own elaboration based on 1900 and 1950 Bolivian national censuses. Population information refers exclusively to *población censada*

<sup>5</sup> Literacy levels are cohort averages at the department level of the dummy variable “Literacy”, where illiterates take the value of zero and literates the value of one.

<sup>6</sup> Cochabamba was among the disintegrated and laggard departments until 1917 (Peres-Cajías, 2020). Given the lack of enough observations, the series in Beni and Pando starts in the 1890s and 1910s cohorts, respectively.

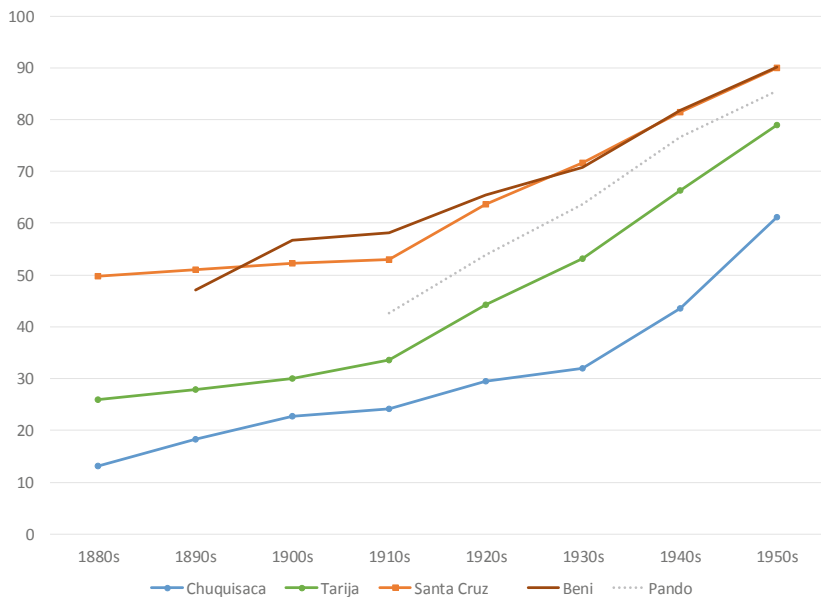
Tarija literacy improvements were negligible until the 1920s. Furthermore, there were not significant changes in literacy records in Beni and Chuquisaca until the 1940s.

The aforementioned trends suggest that different legislative changes in education policies may have had very different consequences in each Bolivian department. For instance, while the liberal reform could have played a more relevant role in La Paz and Oruro, the effects of the Chaco War in terms of education outputs were more noticeable in Chuquisaca. Given these trends and initial levels of literacy, the highest records of literacy in the 1940s were found in Beni, La Paz, Oruro and Santa Cruz. This shows that, before the 1952 Revolution, educational indicators were very heterogeneous across the space. This heterogeneity is also noticeable when looking at different ethnic groups.



**Fig. 2** Literacy levels by place of birth (decadal average by cohort, %), 1880–1950 (*Source* Author’s own calculation based on the 1976 National Census)





**Fig. 3** Literacy levels by place of birth (decadal average by cohort, %), 1880s–1950s (*Source* Author’s own calculation based on the 1976 National Census)

## 5 EDUCATION CHANGE BY ETHNICITY, 1880S–1950S

This section offers quantitative evidence on education outputs by ethnicity. To begin with, it is difficult to find a straightforward relationship between those changes presented in the previous section and the relative importance of indigenous people in each department (Table 2). It is true that, during the nineteenth century, higher levels of literacy were present in those departments where the relative importance of indigenous people was lower (Santa Cruz, Beni and Pando). However, literacy levels in Tarija, a department with a relatively low presence of indigenous people, were similar to those of Cochabamba, a department with a high presence of indigenous people. Likewise, whereas most important changes in literacy took place in two of the most indigenous departments (La Paz and Oruro), one of the less dynamic department was Chuquisaca, another department mostly populated by indigenous people.

**Table 2** Ethnic composition by Department (all cohorts, %), 1880s–1950s

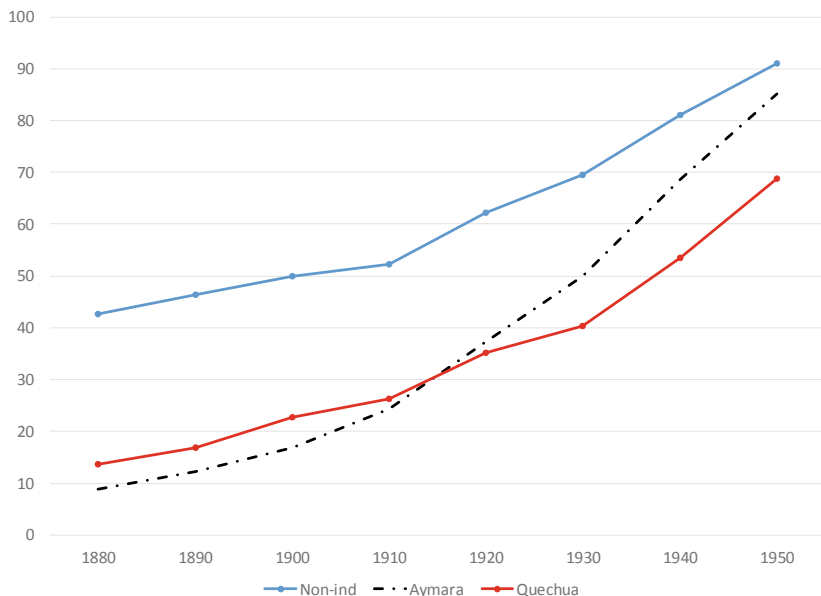
	<i>Non-Indigenous</i>	<i>Indigenous</i>
Chuquisaca	26	74
La Paz	14	86
Cochabamba	8	92
Oruro	12	88
Potosí	6	94
Tarija	88	12
Santa Cruz	78	22
Beni	90	10
Pando	94	6
Bolivia	27	73

*Source* Author's own calculation based on the 1976 National Census

Figure 4 offers further details by looking at the evolution of literacy levels of the three most important ethnic groups. Clearly, non-indigenous people presented higher levels of literacy across time. Likewise, literacy improvements in indigenous groups varied at very different paces. Indeed, while the literacy gap between non-indigenous and Quechuas remained around 40 percentage points from the last quarter of the nineteenth century to the 1940s, the gap between non-indigenous and Aymaras reduced from 34 percentage points to 12 during the same period.

The study of the literacy gap between Aymaras and Quechuas is an alternative way to highlight educational differences between indigenous groups. During the nineteenth century, literacy levels of Quechuas were slightly higher. However, Aymaras trends changed at the turn of the twentieth century so that their literacy level was higher than that of Quechuas already in the 1920s. Furthermore, the rate of change in the case of Aymaras remained high throughout the first half of the twentieth century, while that of Quechuas accelerated only since the 1940s.

This suggests that, despite the existence of a very restricted democratic system, Aymaras could have benefited from changes in educational policies since the liberal reform. To be clear, Fig. 5 shows that positive improvements were mostly restricted to men. In fact, in contrast to noticeable changes in Aymara men since the beginning of the twentieth century, literacy records of Aymara women did not change radically until the 1930s. As a consequence, the literacy gap between Aymara men and women increased from 10 percentage points during the nineteenth

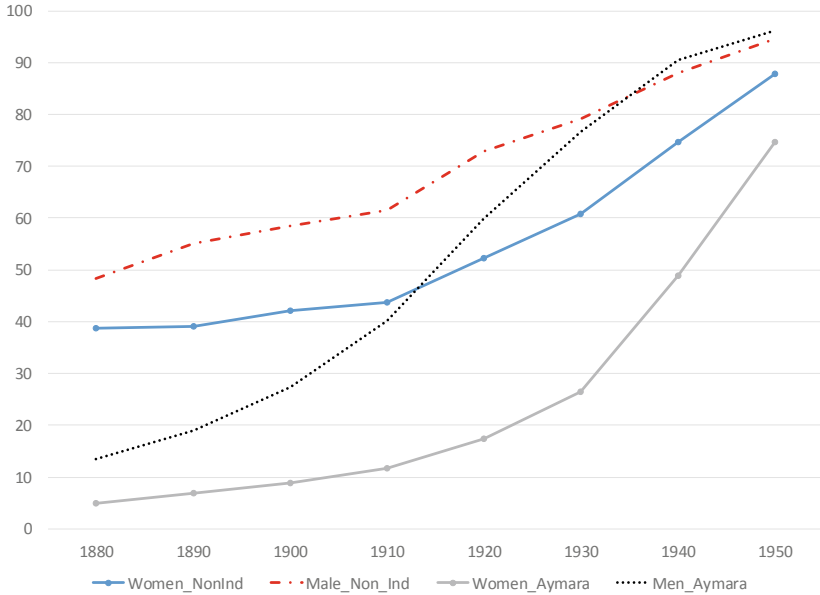


**Fig. 4** Literacy levels by ethnicity (decadal average by cohort, %), 1880s–1950s (*Source* Author's own calculation based on the 1976 National Census)

century up to 50 percentage points during the 1930s. Furthermore, whereas the gap was reduced thereafter, it was still around 20 percentage points during the 1950s; this is three times higher than in the case of non-indigenous men and women.

Some scholars have proposed that the liberal reform could have improved educational indicators of indigenous people, but that these changes were restricted to the most basic levels (Brienen, 2011; Cajías, 2011). In order to explore this idea, levels of education for non-indigenous, Aymaras and Quechuas have been estimated. Each cohort was distributed in six different groups: illiterates, literates, low primary (5 years of education), high primary (5 + 3 years of education), secondary (8 + 4 years of education) and tertiary education (Figs. 6, 7, and 8).<sup>7</sup>

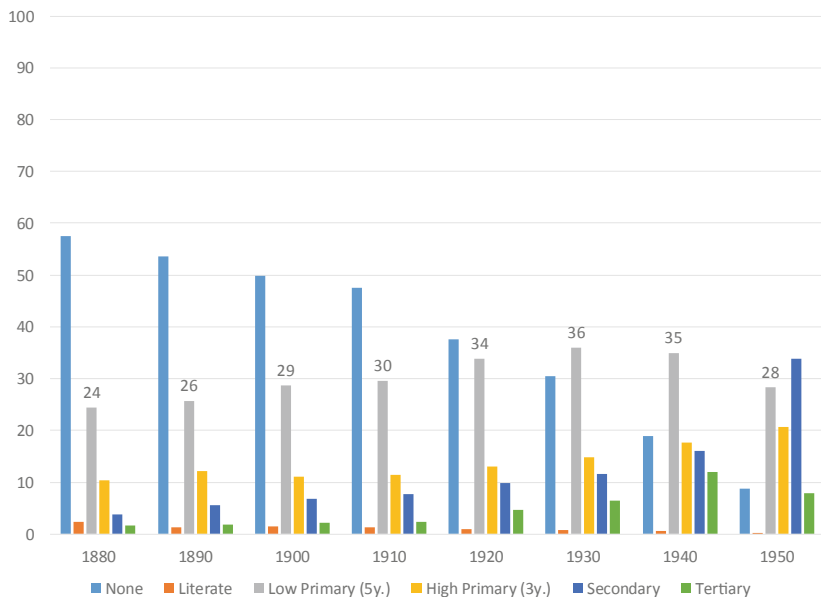
<sup>7</sup> Being in one of these levels does not imply full completion. In fact, for the sake of simplicity and given the distribution of observations, those that, for instance, declared



**Fig. 5** Literacy levels by ethnicity and sex (decadal average by cohort, %), 1880s–1950s (*Source* Author’s own calculation based on the 1976 National Census)

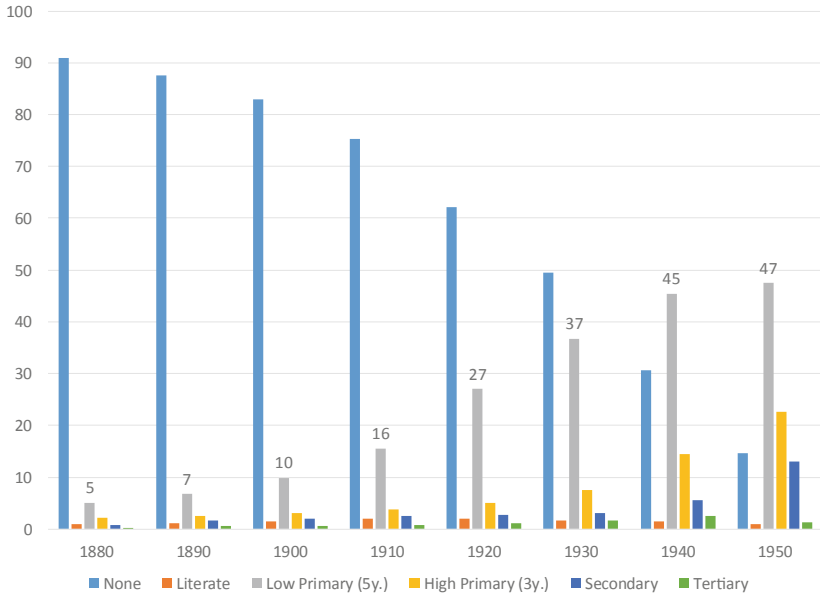
The evidence highlights once more significant differences between ethnic groups: while the primacy of illiterates lasted until the 1920s in the case of non-indigenous people, it did until the 1930s and 1940s in the case of Aymaras and Quechuas, respectively. It also confirms that educational improvements of Aymaras were restricted to the most basic levels. For instance, while at least 10% of non-indigenous people arrived to higher primary already in the 1880s, this record was not surpassed by Aymaras until the 1940s. The same is true when looking at secondary education. Furthermore, less than 1% of each Aymara cohort attained tertiary education from the 1880s to the 1950s.

have finished the second year of school are mixed with those that declared have finished the fourth year of school.



**Fig. 6** Education levels of Non-Indigenous people (distribution by cohort, %), 1880s–1950s (*Source* Author’s own calculation based on the 1976 National Census)

As for differences between Aymaras and Quechuas, a higher share of Aymaras arrived to lower primary school since the 1910s. This difference persisted until the 1950s; in this decade, whereas 47% of Aymaras attended low primary school, the figure was around 35% in the case of Quechuas. However, it also stands out that, since the 1880s until the 1930s, a higher share of Quechuas attended high primary education. Furthermore, a higher share of Quechuas could attend tertiary education from the 1880s to the 1950s. Therefore, whereas some privileged Quechuas could arrive to higher levels of education, there was a broad-based improvement (up to the first levels of education) in the case of Aymaras.

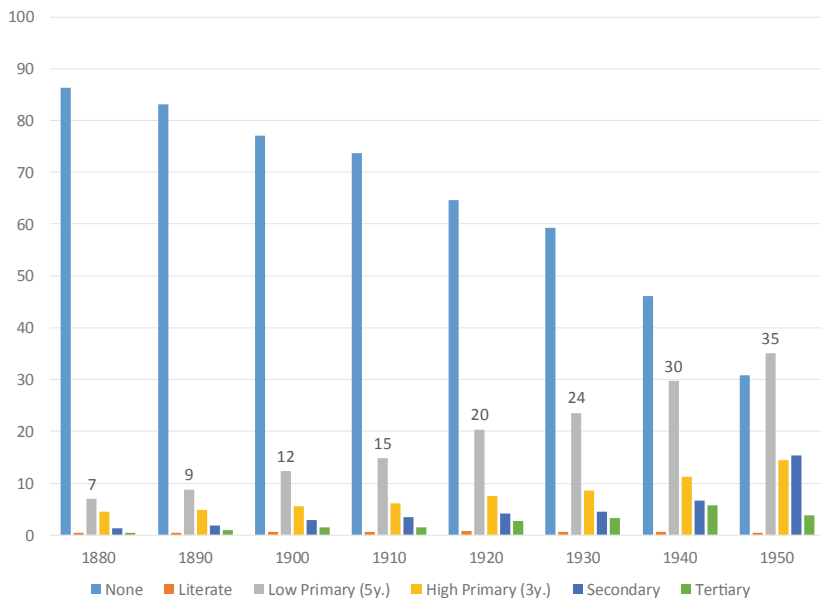


**Fig. 7** Education levels of Aymaras (distribution by cohort, %), 1880s–1950s (*Source* Author’s own calculation based on the 1976 National Census)

## 6 EDUCATION CHANGE IN LA PAZ, 1890S–1940S

This section narrows the analysis at the provincial level in order to understand the significant educational differences that arose during the first half of the twentieth century between Aymaras and Quechuas. To begin with, it is important to look at the regional distribution of these two ethnic groups: while Aymaras were concentrated in La Paz and Oruro, Quechuas were more evenly distributed across western and central departments of Bolivia (Table 3).

The concentration of Aymaras in La Paz and Oruro suggest that they could have benefited from the economic dynamism and the political centralization fostered by both regions since the early years of the twentieth century. However, there were also a significant number of Quechuas in these departments. What happened with them in educational terms? Were there literacy improvements similar to those of Aymaras? In order



**Fig. 8** Education levels of Quechuas (distribution by cohort, %), 1880s–1950s (*Source* Author's own calculation based on the 1976 National Census)

**Table 3** Indigenous composition by Department (all cohorts, %), 1880s–1950s

	<i>Aymara</i>		<i>Quechua</i>	
	<i>Observations</i>	%	<i>Observations</i>	%
Chuquisaca	742	0.1	191,230	8.1
La Paz	575,350	89.4	776,347	33.0
Cochabamba	7,036	1.1	372,541	15.8
Oruro	43,188	6.7	159,444	6.8
Potosi	11,241	1.7	356,074	15.1
Tarija	591	0.1	89,970	3.8
Santa Cruz	4,031	0.6	316,860	13.5
Beni	1,178	0.2	77,736	3.3
Pando	91	0.0	12,751	0.5
Total	643,448	100	2,352,953	100

*Source* Author's own calculation based on the 1976 National Census

to explore these questions, this section deals with educational information of the different provinces of La Paz.<sup>8</sup>

The average literacy of the department of La Paz in the 1890s was around 15%. Only two provinces (Murillo and Sud Yungas) were above this mark, with literacy levels around 38% and 21%, respectively. The province of Nor Yungas had a similar average than the department. If the study focuses on the median value, the previously cited provinces and other four (Inquisivi, Loayza, Pacajes and Aroma) were on the upper group. This suggests that before the liberal reform the most literate provinces were those of the capital city (Murillo), the east (Nor and Sur Yungas), the south (Pacajes and Aroma) and the southeast (Inquisivi and Loayza).

Table 4 suggests a strong persistence in educational terms after the liberal reform. It organizes provinces taking into account two different starting scenarios (one above and another below the median value of literacy in the 1890s) and four quartiles delimited according to the rate of change of literacy between the 1890s and the 1910s. On average, the most significant changes took place in those provinces that were best positioned before the reform. Given that G. Villarroel province was part of Aroma province until the 1960s, the only main critical exception to the persistence process would be Ingavi province, which is located in the southwest of the department.

Table 5 repeats the same exercise with the rate of change between 1890 and 1940s. Therefore, the table incorporates information about the three significant changes in Bolivian educational policies that took place during the first half of the twentieth century: the liberal reform, changes during the 1920s and after the Chaco War. The table confirms the idea of persistence but it also introduces two catching-up provinces: Omasuyos and Los Andes, two provinces located in the west of the department.

These results show, once more, the difficulties to find a straightforward relationship between literacy levels and ethnicity. True, before the liberal reform, the two most literate provinces (Murillo and Sud Yungas) were those where the relative importance of indigenous people was lower.

<sup>8</sup> The analysis starts in the 1890s because of data restrictions. Data limitations also force to remove from the analysis the province of Abel Iturralde, the Northern province located in the Amazonian basin. Likewise, given that the intention is to offer plausible explanations for education change before the 1952 Revolution, the analysis stops in the 1940s cohort.



**Table 4** Literacy levels and literacy change in the provinces of La Paz, 1890s–1910s

		<i>Growth rate</i>			
		<i>Low</i>	<i>Medium-low</i>	<i>Medium-high</i>	<i>High</i>
Initial level	Low	Munecas Saavedra M.Capac	Camacho F.Tamayo Larecaja Los Andes Omasuyos	Ingavi	G.Villarroel
	High		Sud Yungas Loayza	Murillo Aroma Nor Yungas Inquisivi	Pacajes

*Source* Author's own calculation based on the 1976 National Census

**Table 5** Literacy levels and literacy change in the provinces of La Paz, 1880s–1940s

		<i>Growth rate</i>			
		<i>Low</i>	<i>Medium-low</i>	<i>Medium-high</i>	<i>High</i>
Initial level	Low	Munecas F.Tamayo Saavedra	Camacho Larecaja M.Capac	Omasuyos Los Andes	G.Villarroel Ingavi
	High		Murillo Sud_Yungas	Nor Yungas Inquisivi Loayza	Pacajes Aroma

*Source* Author's own calculation based on the 1976 National Census

However, the remaining successful regions presented either a mixed composition of Aymaras and Quechuas (Inquisivi) or a preponderance of Aymara population (even above 95% of total population).

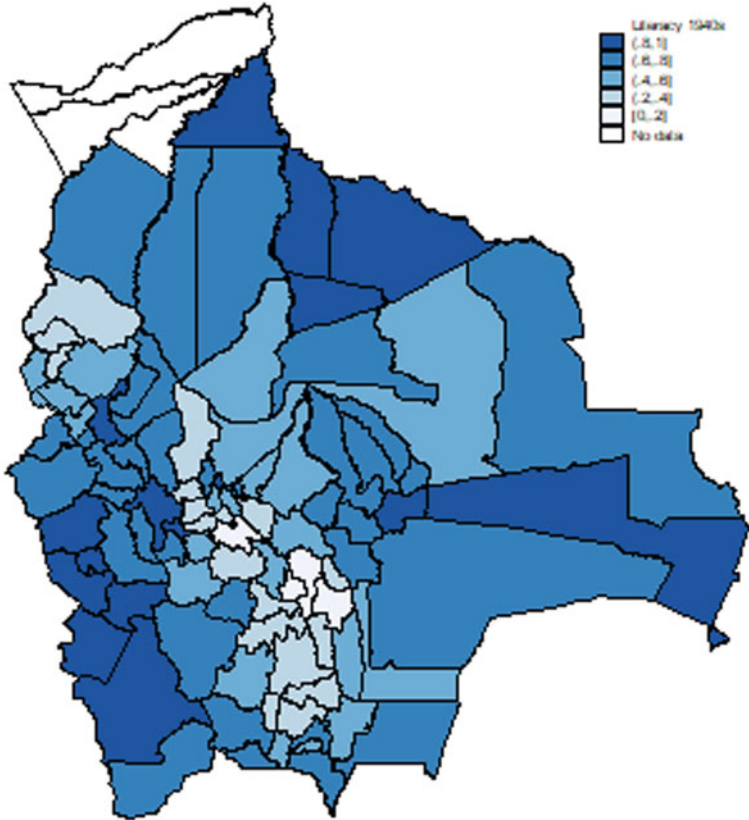
This conclusion holds if the analysis focuses on *changes* in literacy levels. For instance, while some of the higher rates of growth took place in provinces where the relative importance of Aymaras was above 95% of total population (Pacajes, Omasuyos, Los Andes), meager changes were present in provinces with the same Aymara preponderance (see Camacho or Manco Capac provinces). Likewise, it is true that the less successful

provinces were those where the relative importance of Quechua population was above 50% (Muñecas, Franz Tamayo and B. Saavedra). But, is also true that one province where the relative importance of Quechuas was significant (Inquisivi) is among the most dynamic.

This suggests that the relationship between educational progress and ethnicity could be mediated by other institutional factors such as land ownership (see, for instance, Beltrán Tapia & Martínez-Galarraga, 2018). In order to test this hypothesis, it is possible to use the Agrarian Census of 1950, which offered four different ownership structures: indigenous communities, *haciendas*, small properties and others. It was not possible to find a statistically consistent relationship between these types of land ownership and literacy levels. For instance, high rates of literacy expansion were found in provinces where the presence of indigenous communities was low (Nor Yungas, Sud Yungas, Inquisivi, Loayza) and high (Aroma, Pacajes). In the same vein, the least successful cases are featured both by a high (Bautista Saavedra) and a low (Muñecas) preponderance of indigenous communities. In the latter the predominant land structure was the *hacienda*, as it was in Nor Yungas or Omasuyos, two successful provinces.

With the exception of Omasuyos and Los Andes, the evolution of literacy levels suggests some processes of regional clustering around the east and south of the department (see Map 2). Given that this was the most integrated part of the department to the national economy, this regional clustering would be indicating the critical role that geography (see the discussion on Maloney & Valencia Caicedo, 2016) and infrastructure (Franco et al., 2021) have in the relationship between education and ethnicity.

However, the exceptional cases of Omasuyos and Los Andes also offer valuable information. In fact, both regions were characterized by the vitality of indigenous leaders and organizations since the mid-nineteenth century (Mendieta, 2010). The persistent relevance of these indigenous organizations has been identified as a significant variable to understand the radical changes brought by the 1952 Revolution (Gotkowitz, 2007; Soliz, 2021). This, in turn, highlights that human agency and political organization should be considered when looking at the relationship between education and ethnicity (Kosack, 2012).



**Map 2** Literacy levels in Bolivian provinces, 1940s (*Source* Created by the author and Liliana Serrate from the 1976 Bolivian National census)

## 7 CONCLUSIONS

Thanks to the availability of new digitized information, this chapter revises one recurrent debate in Bolivian historiography: the centrality of the 1952 Revolution to understand human capital accumulation in Bolivia. The study suggests that legislative changes implemented since the beginning of the twentieth century had significant effects on Bolivian human capital accumulation, particularly at basic levels of education (literacy and low

primary). However, it also suggests that these changes were very heterogeneous from the regional, ethnic and gender perspective. This highlights that, rather than focusing in one single political event, the understanding of human capital accumulation in Bolivia should take into consideration different waves of state-building.

Progression rather than discontinuity would also be important to understand the growing relevance of indigenous people in Bolivian politics (Robinson & Selaya, 2021). The chapter shows that Aymara men improved consistently their educational indicators throughout the first half of the twentieth century. Furthermore, whereas the chapter does not offer a *causal* analysis, it provides information that may help explaining these advances through the study of indigenous political organizations. This, in turn, is related with a historiographic tradition that states that the history of the country is not only that of the imposition of colonial or neo-colonial institutions, but that of indigenous adaptation, resistance and break of these institutions (see Peres-Cajías, 2012; Cajías & Velázquez-Castellanos, 2021).

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# The Age of Mass Migration in Argentina: Social Mobility, Effects on Growth, and Selection Patterns

*Federico Droller, Martín Fiszbein, and Santiago Pérez*

## 1 INTRODUCTION

In the late nineteenth century and early twentieth century, Argentina went through a rapid process of integration into the international economy as an exporter of primary goods. Between 1880 and 1913, exports grew at an average annual rate of 7.5% and income per capita at a rate of 3.4%. This economic take-off was based on a variety

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of factors, including new opportunities in the world economy and the national unification under a centralized government after a period of civil wars. Some estimates place Argentina among the top five richest countries in the world at the turn of the twentieth century (Taylor 2018).

A key feature of the period is that this economic take-off occurred in simultaneous with a large expansion of the country's population, propelled by the massive arrival of European migrants. This article provides an overview of this migration episode, focusing on three key questions: (1) how did migrants fare once arriving in the country? (2) what were the short- and long-run consequences of immigration for the economy of Argentina? (3) how did migrants to Argentina compare to stayers in their home countries in terms of human capital?

We start by reviewing a number of recent studies characterize the economic trajectories of European migrants while in the country (Arroyo Abad et al. 2015; Abad et al. 2021; Pérez 2017, 2021). The evidence that we summarize puts forth a positive view of immigrant integration in Argentina: migrants from all major European sending countries exhibited high rates of upward social mobility in Argentina. Moreover, it also suggests that immigrants to Argentina were faster to climb the socioeconomic ladder than those who moved to the US, possibly because Argentina's less developed economy and migrants' high human capital relative to the local population offered migrants more opportunities for social advancement.

We then review existing studies about the broader impacts of migrants in the local economies in which they settled (Droller 2018). The evidence indicates that areas of the country that received more immigration had higher levels of instruction, were faster to industrialize, and ultimately exhibited higher levels of prosperity in the longer term, in comparison with areas that received less immigration. This finding is not simply driven by areas being already more prosperous prior to the onset of mass migration. Rather, immigration had a positive *causal* effect on short- and long-run local economic development.

Our article then turns the focus to the initial stage of the migration process and provides a *new analysis* characterizing the selection of Italian migrants (the largest country-of-origin group) to Argentina on the basis



of literacy. Our main finding is that Italians who moved to Argentina, both males and females, had higher literacy rates than those who stayed in Italy (that is, they were *positively selected* on the basis of literacy). A key feature of our analysis is that, unlike in previous studies, we can compare literacy rates of Italian migrants to Argentina to literacy rates of Italian stayers while accounting for differences between migrants and stayers in birth cohort, gender, and regional origin mix. Doing so enables us to establish that these higher literacy rates were not simply driven by the higher proportion of males and younger individuals among immigrants, nor by the overrepresentation of individuals from high-literacy regions in the flow to Argentina. This new result contributes an additional element to the positive view of European migration to Argentina.

Our review of the evidence highlights the importance of Europeans' relatively high levels of human capital as a key factor underlying their positive individual outcomes and broader economic impacts. European migrants not only had higher levels of literacy than the local population, but also likely brought other skills (for instance, industrial know-how) that were locally in relatively shorter supply. The high skills of Europeans relative to the rest of the country's population may help explain both their high levels of upward mobility and the positive impacts of immigration on the process of growth and structural change.

We complement the many existing studies and reviews on the Age of Mass Migration. Abramitzky et al. (2017) provide an excellent overview of the economic history literature on migration to the US. Other important references include Hatton and Williamson (1998) and Ferrie et al. (2015). Sánchez-Alonso (2019) provide an overview of the Age of Mass Migration that includes other Latin American countries beyond Argentina. Our article contributes a detailed characterization of the Argentine case based on previous studies as well as on new evidence on the selection of Italian migrants to Argentina.

The rest of this article is structured as follows. In Sect. 2, we provide some general background on mass migration to Argentina from the mid-nineteenth century to the early twentieth century. In Sect. 3, we summarize evidence from recent studies on the economic trajectories of European migrants in Argentina (Sect. 3.1) and on impacts of immigration across local economies (Sect. 3.2). In Sect. 4, we complement these summaries with a new analysis of selection patterns (particularly selection on the basis of literacy), focusing on the case of Italian migrants to Argentina. Section 5 concludes.

## 2 BACKGROUND

During the Age of Mass Migration (1850–1913), Argentina received about 6 million immigrants from Europe. It was the most important destination of European migrants after the US, which received about 30 million migrants, considering gross figures. In per capita terms, Argentina had higher levels of immigration than any other country in the world. The large inflow of migrants was a key driver of population growth and implied a major shift for the composition of the country's population. As highlighted by the classic work of Germani (1966), this mass migration had profound implications for Argentina's economy and society, particularly in the areas of country in which immigrants tended to concentrate urban areas and the agricultural production core (the fertile plains of Buenos Aires, Santa Fe, Córdoba, Entre Ríos, and La Pampa).

The elites that governed Argentina during this period maintained relatively positive views and open policies toward European immigration. They were particularly interested in attracting white Anglo-Saxon migrants from Northern Europe, who they considered a source of “civilization” (Bastia et al. 2014). This ideology was present in Alberdi's *Bases y puntos de partida para la organización política de la República Argentina* (Alberdi 1852), a document that influenced the Argentine Constitution of 1853. Indeed, the Constitution stated that the government should encourage European immigration and limited its ability to restrict immigrant inflows.<sup>1</sup>

Although there was a trend towards a more restrictive migration policy over the course of the Age of Mass Migration, European migrants to Argentina faced relatively few policy barriers to enter the country throughout the period (Sánchez-Alonso 2013). For instance, unlike the US, Argentina never imposed a literacy test or introduced country-of-origin quotas for migrants in the 1910s and 1920s.

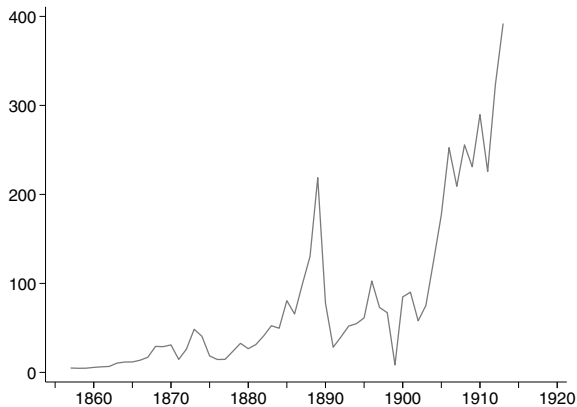
Figure 1 displays the number of yearly arrivals of European immigrants to Argentina. Inflows of migrants were relatively low (below 10,000 per year) until 1862 and started to increase rapidly thereafter. Net flows were substantially lower than the gross flows depicted in the figure, since

<sup>1</sup> Article 25 stated that “the Federal Government shall encourage European immigration, and it may not restrict, limit, or burden with any tax whatsoever the entry into Argentine territory of foreigners whose purpose is tilling the soil, improving industries, and introducing and teaching the sciences and the arts.”

outflows—including return migration—were large. In the 1857–1913 period, the gross cumulative inflows were 5.8 million and the net ones were 3.4 million. This net quantity was still massive—more than twice the estimated size of the country’s total population at the beginning of that period (1.3 million) and over half of the absolute increase in the population over the period. By 1914, the country’s population was over 7.8 million of which 30% were foreign born. The role of immigration in population expansion would be even more important taking into account migrants’ children born in Argentina.

In addition to its contribution to overall population growth, European immigration was particularly important for the expansion of the labor force during the agro-export period and beyond. The disproportionate contribution of migrants to the labor force was a direct consequence of the fact that immigrants were predominantly working-age males: By 1914, migrants had an average age of 33 and a male to female ratio close to 1.7, while the Argentine-born had an average age of 18 years old and a male to female ratio close to 1.

A key aspect that we highlight throughout this article is migrants’ relatively high levels of instruction compared to the Argentine-born population. Although migrants to Argentina hailed predominantly from two



**Fig. 1** Yearly number of immigrant arrivals to Argentina (in thousands) (*Notes* This figure shows the number of new immigrant arrivals to Argentina, based on data from Dirección General de Estadística and Dirección General de Estadística [1908])

countries (Italy and Spain) that had low levels of literacy by European standards of the time, they nevertheless were on average more literate than locals. Figure 2 offers a comparative view of the implications of international migration for human capital in the Americas. The figure shows the literacy rates of males aged 18 or more residing in 1895 Argentina or 1900 US, by country of birth. The figure shows that, in Argentina, immigrants from all major sending countries had higher levels of literacy than the Argentine-born. For instance, whereas the literacy rate was about 43% among the Argentine-born, it was 65% among Italian migrants residing in Argentina and 80% among Spaniards. By contrast, in the US, the literacy rate of the Argentine-born population was higher in absolute terms and also much closer to that among the major immigrants groups in the country.

Moreover, across all of the Argentine provinces, European migrants residing in a given province had higher literacy rates than the local Argentine-born population. Figure 3 shows the literacy rates of Argentine, Italian, and Spanish males aged 18–60, by Argentine province of residence in 1895.<sup>2</sup> The figure illustrates the substantial literacy advantage of Europeans relative to the local populations.

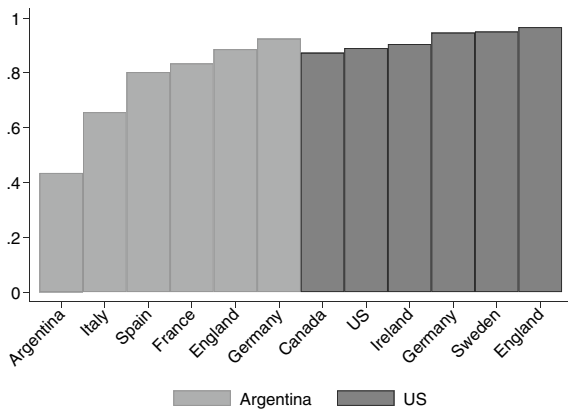
Despite the high literacy levels relative to the local population, Fig. 2 also shows that European migrants to Argentina—particularly those from Italy and Spain, the two major sending countries—had lower levels of literacy than European migrants to the US. This stylized fact echoes the notion that migration patterns fell short of the expectations of Argentine elites, who had aspired to attract immigrants from Northern Europe (Alberdi 1852).

### 3 SOCIAL MOBILITY AND EFFECTS ON GROWTH: A REVIEW OF RECENT EVIDENCE

#### 3.1 *Economic Outcomes of European Migrants in Argentina*

Contemporaneous accounts of the Age of Mass Migration in Argentina suggest that “hard working” immigrants had an easy path to upward economic mobility (Alsina 1898). This view of Argentina as a “land of opportunity” is also common in more recent historical studies,

<sup>2</sup> The figure is restricted to the fourteen original Argentina provinces.

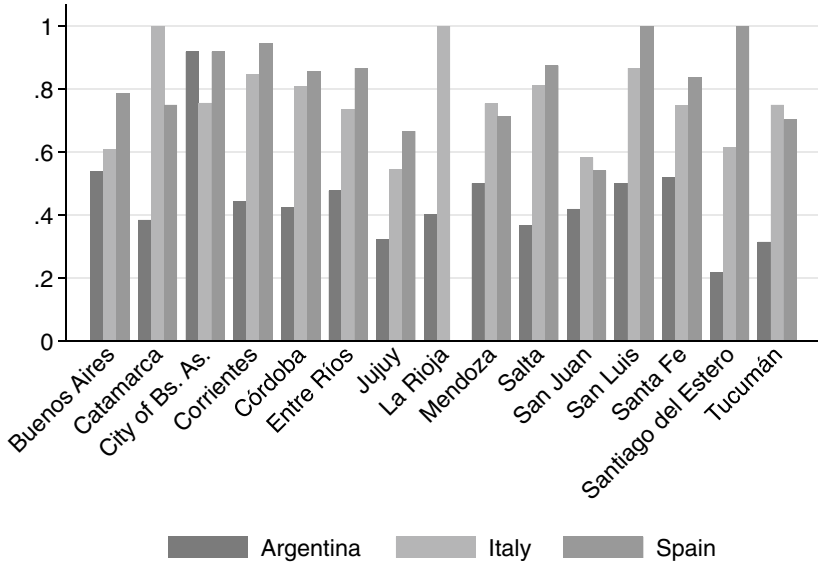


**Fig. 2** Literacy rates by country of birth and country of residence (*Notes* This figure shows the literacy rates for different groups based on their country of residence [Argentina or the US] and their country of birth [indicated by the x-axis]. The Argentine data are from Somoza [1967] and the US data are from Ruggles et al. [1997]. The sample is restricted to males aged 18 or more)

like the classic works of Diaz-Alejandro (1970), Cortés Conde (1979), and Baily (1983).

Existing quantitative evidence also supports that view, although it has some limitations. Classic studies investigating migrants' occupational mobility, including the pioneering work of Germani (1966), were based on the published census tabulations. While these studies were key to establish stylized facts, using aggregate census data makes it hard to disentangle changes in the social standing of immigrants from compositional changes in the immigrant pool (for instance, as new immigrants arrive to the country or some of them return to their countries of origin). These difficulties were exacerbated by the fact that Argentine population censuses did not include information on migrants' year of arrival to the country.

A number of studies examined individual-level data with a focus on groups by specific country-of-origin living in specific places within Argentina. For instance, Da Orden (2005) studies the occupational mobility of Spanish immigrants in the city of Mar del Plata, Szuchman (1981) study the mobility of immigrants in the city of Córdoba, and Sofer (1982) examine the occupational mobility of Eastern European



**Fig. 3** Literacy rates by country of birth and Argentine province of residence (*Notes* This figure shows the literacy rates for different groups based on their province of residence in 1895 Argentina. The data are from Somoza [1967]. The sample is restricted to males aged 18 or more)

Jewish immigrants in the city of Buenos Aires. While these contributions offer interesting, detailed characterizations of these migrants’ experiences, their focus on individuals that did not move over time may underestimate the economic mobility experienced by the typical immigrant (insofar as economic and geographical mobility is likely positively associated).

The rest of this section summarizes the findings of the recent papers that support an optimistic view on immigrant progress in Argentina during the Age of Mass Migration on the basis of newly collected individual-level data for European immigrants and their children in late nineteenth-century Argentina.

Using passenger lists records linked to the 1895 population census, Pérez (2017) show that immigrants were able to make substantial progress relative to Europe: most immigrants who worked in unskilled jobs in Europe were able to upgrade their occupations within a relatively short time span. Comparing the findings to those in Ferrie (1997) (based

on similarly constructed data for immigrants in the US) suggests that immigrants in Argentina were not only more likely to exhibit upward mobility than those in the US, but also less likely to exhibit downward mobility (that is, to experience occupational downgrading).

Moreover, using data linking both immigrants and the Argentine-born from the 1869 to the 1895 census, the paper finds that immigrants experienced faster occupational upgrading than the Argentine-born. This faster occupational upgrading was not driven by immigrants from any particular country of origin. Rather, immigrants from all major sending countries experienced faster occupational upgrading than the Argentine-born. These findings contrast with those in Abramitzky et al. (2014), who find that immigrants in the US at the turn of the twentieth century exhibited very limited occupational upgrading as they spent time in the US.

The paper concludes by arguing that the high levels of upward mobility in Argentina might explain why many Europeans chose this destination despite real wages being lower than in the US. In other words, migrants deciding between alternative destinations in the Americas might have faced a trade-off between higher wages in the short term and higher long-term prospects for upward mobility.<sup>3</sup> An alternative interpretation, however, is that the stronger economic mobility of immigrants in Argentina might have not reflected differences in the economic opportunities, but rather differences in the characteristics of immigrants moving to different destinations. For instance, Argentina might have attracted immigrants who held more skilled occupations prior to moving to the Americas than those who moved to the US.

Pérez (2021) focus on the case of Italian migration to investigate whether the higher levels of mobility of immigrants in Argentina relative to the US were driven by differences in the selection of migrants moving to each country, or by differences in the opportunities available to migrants in each destination. Italian migration is a particularly relevant case in this context: Italians were the largest country-of-origin group in Argentina (with 2.5 million Italian migrants from 1857 to 1924), as well

<sup>3</sup> For instance, when comparing Italian migration to Argentina and the US, Klein (1983) write that “the sharp differences in the Italian immigrant experience within Argentina and the United States were fully perceived by both the immigrants themselves and virtually all contemporary observers.”

the largest immigrant group among twentieth-century arrivals in the US (which attracted a total of 4.5 million Italians) (Ferenczi 1929).

The historical literature emphasizes the relative success of Italian migrants in Argentina relative to Italians in the US (Baily 2004; Klein 1983). To investigate the role of immigrants' pre-migration characteristics in explaining this relative success, Pérez (2021) assemble data following Italian immigrants from passenger lists to population censuses. These data include the year of entry, port of origin, and pre-migration occupation of Italian migrants who resided in Argentina or the US by the late nineteenth century. The analysis shows that individual-level characteristics such as pre-migration occupation or literacy explain very little of the gap in outcomes (in particular, home ownership rates and the likelihood of holding an unskilled occupation) between Italians in Argentina and the US. Part of the advantage of Italians in Argentina, however, is driven by the fact that Italians who departed from northern ports (who were over-represented in the flow to Argentina) had on average better outcomes in both destination countries.<sup>4</sup>

What explains the higher levels of mobility of immigrants in Argentina relative to the US? The evidence in Pérez (2021) suggests that (at least in the case of Italians) this relative success cannot be fully explained by migrants' characteristics (i.e., by selection). Indeed, the analysis suggests that Italians' destination choices were mostly driven by the strength of the networks connecting them to each destination rather than by characteristics related to their own human capital. One factor that may have entailed better opportunities for migrants in Argentina is the low level of economic development of the country relative to the US, which meant that some economic activities were not yet well established and thus migrants faced little or no competition from locals. Relatedly, immigrants in Argentina (in contrast to the US) had higher levels of human capital relative to the local population: As shown in Fig. 2, in Argentina, immigrants from all major sending countries had higher levels of literacy than the Argentine-born. For instance, whereas the literacy

<sup>4</sup> In a related contribution, Pérez (2019) compare rates of intergenerational occupational mobility across four countries in the second half of the nineteenth century: Argentina, Norway, the US, and the United Kingdom. In this comparison, which includes both the Argentine-born population and immigrants, Argentina stands out as exhibiting similar levels of intergenerational mobility than the US (and considerably above those of Norway and the UK).



rate was about 43% among the Argentine-born, it was about 65% among Italian migrants residing in Argentina. In contrast, in the US, the literacy rate of the Argentine-born population was much closer to that among the major immigrants groups.

In another recent contribution, Abad et al. (2021) examine the success of Italians in Argentina relative to Spaniards (the other major group). This relative success poses a historical puzzle: while Spaniards had higher literacy than Italians and had the advantage of speaking the local language, their wages in Buenos Aires were lower than those of Italians. The paper argues that the relative success of Italians was likely due to cultural aspects, in particular, their strong network ties, which helped migrants within that community to find job opportunities matching their individual skills. In contrast, the Spanish were more individualistic and less likely to help fellow countrymen to enter high-income occupations.

This novel contribution by Abad et al. (2021) points to the importance of community-wide characteristics, besides individual characteristics, in determining economic trajectories of migrants. This explanation is consistent with insights from network theory and with empirical research supporting the relevance of migrant networks in other destination countries, e.g., the study by Lafortune (2016) for the US. In the context of Argentina, the findings of Abad et al. (2021), considered in combination with the possibility of scale effects in networks, suggest that the massive scope of Italian migration to Argentina may have aided the favorable economic outcomes of individual Italian migrants.

### 3.2 *The Impacts of Immigration on Economic Development*

A large literature in economics studies the effects of migration on economic performance. Recent historical studies have leveraged rich subnational data to shed new light on this topic. For instance, Sequeira et al. (2020) exploit cross-county variation in immigration within the US created by time variation in aggregate immigrant flows interacted with the expansion of railroads, finding positive effects on income and other measures of development today. In a related contribution, Arkolakis et al. (2020) use rich patents data and a spatial model of growth to show how European migrants pushed the technological frontier in the US through dissemination of knowledge and labor. Finally, in this volume, Mussachio et al. (2022) investigate the effects of migration on agricultural productivity in the state of Sao Paulo, Brazil.

For the case of Argentina, a number of studies discuss the effects of immigration during the Age of Mass Migration on economic performance (e.g., Cortés Conde 1983; Taylor 1997). In a recent paper, Droller (2018) provide a quantitative empirical study showing how the historical migration influenced long-run development across Argentine counties.

Droller (2018) use an instrumental variables approach to estimate a causal relationship between immigration and development, and find that the presence of Europeans in 1914 had positive effects on per capita GDP in 1994. The instrumental variable exploits the interaction between yearly variation in the arrival of European immigrants to the Pampas' fertile plains and yearly variation in local land availability due to internal war. The instruments use these sources of variation to calculate a "synthetic" distribution of immigrants and the non-immigrant population across Argentine counties. Estimates for two other measures of economic development show results along the same line: a positive and significant effect of the composition of the population on the share of the population with higher education and on the share of workers with high-skilled occupations in 2001.

What explains migrants' contribution to long-run development? The proposed explanation in Droller (2018) emphasizes immigrants' human capital and skills. As discussed above, Europeans arriving to Argentina were on average more literate than locals. In 1869, the census reports an illiteracy rate of 71% among the Argentine-born population. This gap narrowed in the late nineteenth century and early twentieth century, as levels of literacy in the Argentine population sharply increased following a strong educational public policy started in 1884. By 1914, literacy was around 62% for the population aged 7 and older, that is, broadly comparable to that of European migrants. But for most of the Age of Mass Migration, European migrants had sharply higher average levels of literacy than Argentines.

Consistent with this interpretation, Droller (2018) document that European migration had significant positive effects on historical levels of literacy, going beyond what can be simply explained as compositional changes. This finding suggests that, besides compositional effects though the human capital they brought with them, European migrants may have fostered the subsequent formation of human capital.

The Argentine economy in the late nineteenth century and early twentieth century was primarily agricultural, but industrial production was rapidly growing. Between 1880 and 1915, manufacturing valued added

increased at an 8% annual rate (Cortés Conde 1994). Historical narratives suggest that European migrants were key for such rapid industrial development. According to Germani (1966, p. 168), “it was the immigrant population which provided most of the labor and entrepreneurship in the beginnings of industrial development.”<sup>5</sup> Indeed, historical census data show that immigrants had a salient participation in manufacturing activities. For instance, 59% of all industrial workers in 1895 were immigrants. In 1913, immigrants represented 49% of manufacturing labor and owned (or shared ownership) in 68% of all industrial establishments. For metallurgy and metal products, and chemical industries, some of the most technologically advanced at the time, the shares of European immigrants among owners were 77% in 1895 and 66% in 1914.<sup>6</sup>

Droller (2018) conduct two other exercises that support the relevance of various aspects of human capital as underlying the positive effect of immigration on growth. First, using county level data from the 1935 Industrial census, the paper shows that immigrants arriving from countries with higher levels of industrialization (e.g., Great Britain, Germany, Austria, Switzerland, and Italy) exhibit larger positive effects on industrial dynamism. Immigrants from Northern Italy in particular had strong positive effects on the onset of industrialization, setting up many of the industrial establishments and providing high-skilled labor. Second, using census data on occupations, the paper shows that Europeans with high-skilled occupations had a significantly higher contribution to both short- and long-run development than Europeans with low-skilled occupations.

The interpretation in Droller (2012) and the findings supporting it are in line with Hornung (2014), who documents a positive effect of skilled immigration on manufacturing productivity across Prussian towns in the early nineteenth century, and with Rocha et al. (2017), who show that regions of Brazil with more immigration in the late nineteenth century and early twentieth century have higher income per capita in the long-run due to the higher human capital of migrants. Moreover, the analysis of Droller (2018) provides results that distinguish the contributions of migrants by skill levels, which echoes the emphasis of Mokyr

<sup>5</sup> Similarly, according to Rocchi and Fernando (2006, p. 20), “[w]ith immigration, Argentina could profit from the benefits of human capital provided by recent arrivals, an issue especially important for manufacturing—many factories, indeed, could not have opened had the skills of the immigrant population not been available.”

<sup>6</sup> All of these figures come from the 1914 census. See pages 112, 246, and 248.

(2005), Squicciarini and Voigtländer (2015), and Maloney et al. (2020) on upper-tail knowledge.

#### 4 WHO MOVED TO ARGENTINA? AN ANALYSIS OF ITALIAN MIGRATION

Our review of the evidence on economic outcomes of migrants in Argentina and their impacts on economic development highlights the role of human capital and skills. In this section, we present new evidence analyzing migrants' background in the context of their home country: how did migrants to Argentina (in particular, Italians) compare to those who stayed in Europe in terms of human capital?

To do so, our analysis compares the literacy rates of Italian migrants to Argentina to the literacy rates of Italian stayers. A key practical advantage of focusing on this variable is that it is possible to gather consistent information on literacy *both* for the population of Italian migrants to Argentina and for the population of stayers. Moreover, although the ability to read and write is a relatively coarse proxy for broader human capital, it does provide useful information in a context in which such ability was still very far from universal.

Aggregate comparisons of literacy rates for Spanish and Italian migrants to Argentina to those of stayers in their home countries suggest that there was positive selection in migration. In the case of Spanish migrants, the gaps were large: the literacy rate among Spaniards in 1914 Argentina was 74%, while it was only 50% for the total Spanish population in 1910 (Sánchez-Alonso 1995). For Italians, the literacy rate among migrants to Argentina was also higher than the corresponding rate among Italian stayers (Klein 1983).

While aggregate comparisons are quite suggestive, a challenge in interpreting this evidence is that the age structure and gender mix of migrants were different from that among stayers. In particular, migrants were more likely to be male and tended to be younger than stayers. Since males and younger individuals tended to have higher literacy rates in this time period, it is hard to disentangle selection on the basis of age and gender from selection on the basis of literacy.

Here, we characterize the selection of Italian migrants to Argentina using data that enable us to compute literacy rates by gender and birth cohort for Italian stayers and Italian migrants to Argentina. First, we digitized data from the 1901 Italian population

census (Direzione generale della statistica 1902). This census reports literacy rates by age, gender, and region (“compartimenti”) for Italian residents in 1901. Second, to compute literacy rates among Italian migrants, we use two sources of data (both of which include individual-level information on literacy): passenger lists of Italian arrivals to Argentina and the 1895 Argentine population census. The passenger lists span 1882–1920 and include 1,020,000 Italians who arrived to Argentina through the port of Buenos Aires.<sup>7</sup> The census data are based on a random sample of the 1895 population census compiled by Somoza (1967).<sup>8</sup> These sources enable us to compute literacy rates for the *flow* of Italian arrivals to Argentina during this period, as well as for the *stock* of Italian migrants in 1895 Argentina.

#### 4.1 Differences in Literacy, Accounting for Demographic Structure

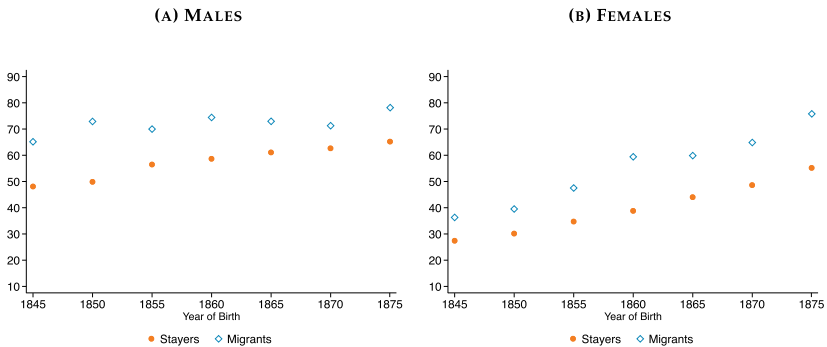
We start by showing that Italian migrants in 1895 Argentina had higher literacy rates than Italian stayers, comparing within birth cohort (in five-year bins) and gender. Figure 4 displays these differences using data on the literacy rates of Italian stayers (based on the 1901 Italian census) and Italian migrants living in 1895 Argentina (based on the 1895 Argentine census).<sup>9</sup> For males, the gap in literacy was of about 20 percentage points among the earliest birth cohorts and of about 10 percentage points among the most recent ones. Among females, the gaps also oscillated between 10 and 20 percentage points.

<sup>7</sup> These data were collected by Argentina’s National Direction of Immigration and have been digitized by *Centro de Estudios Migratorios Latinoamericanos* and *Fondazione Rodolfo Agnelli*.

<sup>8</sup> The 1895 census is the last Argentine census of the period for which we can compute literacy rates by country of origin, birth cohort and gender. The published census tabulations of the 1914 census do not enable us to perform this calculation as they do not include information on literacy rates by age *and* country of birth.

<sup>9</sup> Since our sample of stayers is based on a census conducted later in time than our sample of migrants (1901 versus 1895), we focus on birth cohorts for which this discrepancy is less likely to generate biases. First, to avoid biases due to selective mortality, we limit the analysis to individuals who were at most 60 years old at the time of the census. Second, to avoid biases due to individuals becoming literate later in life, we limit the analysis to individuals who were at least 20 years old at the time of the census. Our assumption is that individuals who were illiterate by age 20 are very likely to remain so later in life.

We next compare the literacy rate of the *flow* of Italian migrants to Argentina to the literacy rate among Italian stayers. To do so, we use the passenger lists data and compute literacy rates by birth cohort, gender, and decade of arrival to Argentina from the 1880s to the 1910s.<sup>10</sup> Looking at the flow provides us with additional information about the selectivity of migration for three reasons. First, to the extent that return migration is selective, the literacy rate of the migrant stock might differ from that of the migrant flow. Second, focusing on the immigrant flow enables us to investigate the extent to which selectivity changed across different arrival cohorts. Finally, it enables us to observe migrants' literacy rates *before* their arrival to Argentina. Doing so helps deal with the concern that the higher literacy rates that we observe in the Argentine census might be driven by immigrants becoming literate during their stay in Argentina rather than the result of immigrant selectivity.



**Fig. 4** Literacy rates of Italian stayers and Italian migrants in 1895 Argentina, by year of birth (*Notes* This figure shows literacy rates by gender and birth cohort [in five-year bins] of Italian stayers and Italian migrants. The data on Italian stayers are from the 1901 Italian population census [Direzione generale della statistica 1902]. The data on Italian migrants in Argentina are from the 1895 Argentine population census [Somoza 1967]. The data are restricted to individuals who were between the ages of 20 and 60 at the time we observe them in the census)

<sup>10</sup> An analysis of migratory flows is not possible with the census data since the Argentine census does not include information on year of arrival to the country.

Figure 5 shows that, regardless of their arrival decade, Italian migrants to Argentina were positively selected on the basis of literacy. However, the figure suggests some heterogeneity across decades on the degree of positive selection. In particular, migrants arriving in the 1880s and 1900s tended to be the most positively selected on the basis of literacy, whereas the most recent arrivals (those arriving in the 1910s) appeared to be less so.

This pattern echoes a common finding in the migration literature—a trend toward negative selection over time (see, e.g., Borjas 1987; Abramitzky et al. 2014). The usual explanation for this pattern emphasizes the network component of migration, which reduces the costs of migration over time widening the pool of potential migrants that find the migration decision feasible and convenient (Massey et al. 1993).

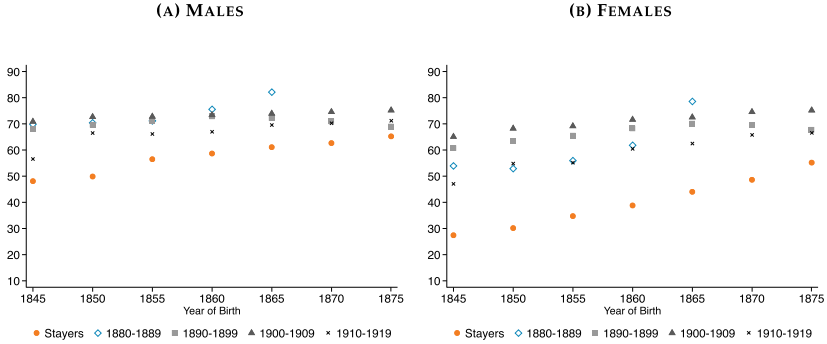
#### 4.2 *Adjusting for Regional Gaps*

Italian migrants to Argentina were disproportionately likely to hail from the north of the country (Klein 1983). Since during this time period literacy rates were higher in the north of Italy than in the south, the higher literacy rate among Italian migrants might have simply reflected the overrepresentation of northerners in the immigrant flow to Argentina.<sup>11</sup> Alternatively, Italian migrants might have been positively selected also *within* their regions of origin.

Recent work by Spitzer and Zimran (2018) on Italian migration to the US underscores the importance of accounting for regional patterns when analyzing selection. Using stature data from Ellis Island arrival records, in combination with Italian subnational cohort-level height distributions, the analysis uncovers contrasting selection patterns for different levels of aggregation. At the national level, they find negative selection patterns, with average height for Italian migrants lower than for all Italians in a given birth cohort. However, this was due to overrepresentation of southern Italians among migrants: At the local level, that is, comparing migrants to the populations in their provinces of origin, the results indicate positive selection.

To test if the higher average literacy of Italian migrants to Argentina relative to Italian stayers can be accounted by the overrepresentation of

<sup>11</sup> More broadly, by the mid-nineteenth century the north of Italy was already richer (as proxied by real wages) than the south (Federico et al. 2019).



**Fig. 5** Literacy rates of Italian stayers and Italian migrants in Argentina, by decade of arrival (*Notes* This figure shows literacy rates by gender and birth cohort [in five-year bins] of Italian stayers and Italian migrants, by decade of arrival to Argentina. The data on Italian stayers are from the 1901 Italian population census [Direzione generale della statistica 1902]. The data on Italian migrants to Argentina are from the passenger list data as described in the main text. The data are restricted to individuals who were between the ages of 20 and 60 at the time we observe them)

regions with higher-than-average literacy rates, we reweight the data on Italian stayers based on the number of migrants to Argentina that hailed from each Italian region. To do so, we combine data on the number of migrants to Argentina in the 1876–1894 period by Italian region (from Dell’Emigrazione 1927), with data on literacy rates by region (*compartimenti*) from the 1901 Italian population census. Specifically, for each gender and birth cohort, we compute:

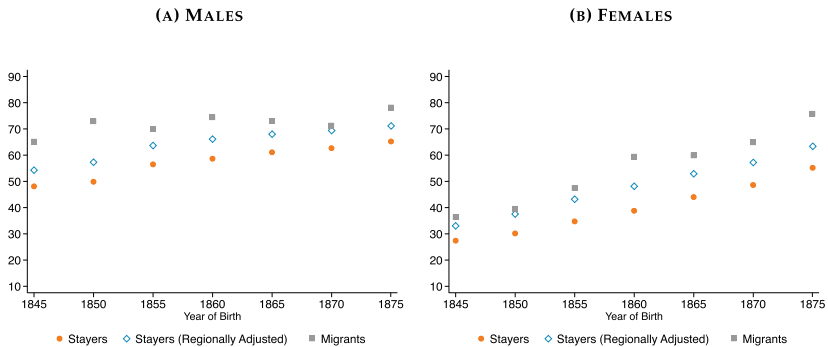
$$l_{gc} = \sum_r \alpha_r l_{gcr} \tag{1}$$

where  $\alpha_r$  is the share of Italian migrants to Argentina who hailed from region  $r$  in the 1876–1894 period, and  $l_{gcr}$  is the literacy rate among Italian stayers of gender  $g$  and birth cohort  $c$  in Italian region  $r$ . This formula enables us to compute literacy rates for a “synthetic” Italy in which the regional shares are based on the relative representation of different regions in the migrant flow to Argentina.



Figure 6 shows that the literacy rates of the synthetic Italy were higher than the actual rates, reflecting the overrepresentation of high-literacy regions in the flow to Argentina. However, the literacy rates of the synthetic Italy are still lower than those among Italian migrants to Argentina. Hence, the positive overall selection of Italian migrants to Argentina on the basis of literacy does not appear to have been fully driven by the overrepresentation of regions with high-literacy rates in the flow to Argentina.

Overall, the evidence suggests that both Spanish and Italian migrants to Argentina were positively selected on the basis of literacy: immigrants to Argentina from both these countries had higher literacy rates than stayers of the same age and gender, and this advantage is not fully accounted for migrants' regional mix. The trend toward diminished positive selection in migration discussed before also appears here, though somewhat less clearly for females than for males.



**Fig. 6** Literacy rates of Italian stayers and Italian migrants in Argentina, adjusting for migrants' regional origins (*Notes* This figure shows literacy rates by gender and birth cohort [in five-year bins] of Italian stayers and Italian migrants. The data on Italian stayers are from the 1901 Italian population census [Direzione generale della statistica 1902]. The “regionally adjusted” data on Italian stayers are weighted based on the share of migrants from each Italian compartimenti among Italian migrants to Argentina in the 1876–1894 period [using data from Dell’Emigrazione 1927]. The data on Italian migrants in Argentina are from the 1895 Argentine population census [Somoza 1967]. The data are restricted to individuals who were between the ages of 20 and 60 at the time we observe them in the census)

## 5 CONCLUSIONS

Argentina was the second largest destination country during the Age of Mass Migration, receiving nearly six million migrants. In this article, we first summarized recent findings characterizing migrants' long-term economic assimilation and their contributions to local economic development. We then introduced new empirical evidence on the selection of Italian migrants to Argentina. Overall, the evidence supports a positive view of immigration to Argentina: Europeans experienced rapid upward mobility and immigration contributed positively to the process of economic development. Moreover, our new analysis of selection patterns shows that Italians who moved to Argentina were positively selected on the basis of literacy.

Our findings may suggest a possible explanation for why Argentina remained relative open to immigration throughout the Age of Mass Migration when compared to the US (Sánchez-Alonso 2013). In the 1910s and 1920s, the US imposed a literacy test and introduced country-of-origin quotas for migrants. According to some studies (see Goldin 2008, for a discussion), these restrictions may have been induced by changes in migrants' characteristics—a shift toward origin countries perceived as more “culturally distant” and lower levels of education relative to Americans than in previous immigrant waves. In contrast, migrants to Argentina had all throughout the period higher levels of instruction than the local population and there were relatively little changes in regional origins, with Italy and Spain consistently accounting for nearly 80% of migrants.

Our review of the evidence and new analysis focused on the *economic* impacts of European migration to Argentina. However, as emphasized in classic studies of the period (for instance, Germani 1966), this mass migration also likely had profound cultural and political implications for the country. We think that studying these additional implications using recent methods and advances in quantitative historical analysis is a promising avenue for future research.

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# European Immigration and Agricultural Productivity in Sao Paulo, Brazil, 1898–1920

*André Lanza, Manas Maniar, and Aldo Musacchio*

There is a large literature trying to examine the effect of historical migration, especially from Europe, on receiving countries. This literature finds that immigrants usually contributed to the economic prosperity and human capital accumulation of the places to which they migrated (Gould et al., 2004; Grosjean and Khattar, 2019; Sequeira et al., 2020; Tabellini, 2020) and assimilated relatively rapidly, allowing for social mobility over time, and oftentimes leading to a political backlash against immigration (Abramitzky et al., 2021; Fouka et al., 2022; Pérez, 2017). Still, we know relatively little about the effects such European immigrants had on the

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agriculture development in their host countries. This is particularly important because, when Europeans arrived in considerable numbers to the Americas, the largest receiving countries (the United States, Argentina, Canada, and Brazil) were still largely agricultural economies. In Argentina and Brazil, a large number of immigrants ended up working in farms and that allowed the expansion of the agricultural frontier (Bates, 1997, Germani, 1994; Holloway, 1980; Milliet, 1941) and the substitution of slave labor in the Southeast of Brazil (de Mello, 1977; Holloway, 1980).

Part of the problem of studying the impact of immigrants on improvements of agricultural or industrial productivity in their destinations is that there are selection issues (e.g., immigrants chose the best or most productive places to locate). Ideally, we would want to have an experiment in which random groups of European immigrants were randomly assigned to work in comparable regions in the New World with different levels of local labor, allowing us to compare regions with immigrants to those with no immigrants, or different “dosages” of European immigrants across regions. Moreover, i.e., if there is enough randomness in the composition of immigrant flows in terms of their country of origin, we could also compare the effect of specific nationalities on agricultural productivity, controlling for characteristics of the destination farms and of the immigrants themselves. Even if this ideal experiment does not exist, we postulate that there are historical experiments with some randomness that allow us to take a first look at the relationship between European immigrants and agricultural productivity, namely the official European immigration program of the state of Sao Paulo, Brazil, between the 1880s and 1920s.

The study of European immigration in the Brazilian historiography has been important for a number of reasons. First, the official immigration policy has been considered key for the peaceful transition from slavery to free labor (Holloway, 1977, Toplin, 1973). Second, European immigration has been linked to the rise of wage labor and to the beginning of modern capitalism in Brazil (De Mello, 1982). Third, European immigration, the rise of wage labor, and the coffee boom have also been linked to the beginning of industrialization in Brazil (Dean, 1969; Stein, 1957). Finally, there is a growing body of literature examining the assimilation of European immigrants to Brazilian society and the socioeconomic mobility of these immigrants in the country (Lanza, 2021a, b). Here, we argue that the nature of the official immigration program of São Paulo state and its quasi-random assignment of immigrants to coffee fazendas (i.e.,

farms) all over the state provides a unique opportunity to study the impact of European migrants on agricultural productivity and mechanization in the coffee farms of the Southeast of Brazil.

There are three sources of quasi-randomness that make the assignment of immigrants to farms an interesting setting in Sao Paulo between the 1880s and 1920. First, it can be assumed that immigrants had limited choice on where to go. Families of European immigrants that were part of the official program were recruited in Europe to work in agriculture in São Paulo, arrived to a relatively controlled station at the port of Santos, and were sent to an official hostel in the city of Sao Paulo (named *Hospedaria de Imigrantes*) from where they found job in farms all over the state. The immigrant families' ship tickets from Europe were subsidized and their train tickets were also paid for once they committed to work for a farm for a year. Part of the randomness comes from the fact that immigrants did not choose the farm beforehand (especially during our period of study). That is, their destination was left to a certain level of chance. When they arrived to the Hostel, families had to find farm jobs in the Department of Labor office—usually within the first week after their arrival. What farm work was available upon their arrival was not clear to them when they left Europe and the number of families needed for coffee farming in the coffee fazendas changed throughout the year by region, across municipalities, and even within a specific municipality (Tessari, 2012, 2014a, b). Second, since the government only subsidized food and accommodation at the Hostel at São Paulo city for up to seven days, immigrants had to sign a job contract relatively fast, thus reducing the capacity they had to choose their destination based on pre-conceived ideas of specific locations or based on connections they had with previous immigrants. The interesting randomness comes from the demand for immigrants in specific farms, which depended, to a large extent, on exogenous conditions that were out of the control of immigrants, such as which farms were foreseeing to need more(less) labor during the harvest season, which varied across, and even within, municipalities. Third, immigrants in the Official Program were not allowed to look for work in the City of Sao Paulo or outside the official program, otherwise they had to pay the costs of their trip from Europe, which could represent months of wages for families traveling together (Trento, 1989). The program was designed as a way to compensate coffee farmers for the abolition of slavery and as such was aimed at providing them with abundant labor to continue the production of coffee in large plantations.



The mix of immigrants that arrived to Brazil was constantly changing and depended on both push factors in Europe and other factors that were outside of the control of immigrants and mostly outside of the control of coffee farmers, especially after 1900. Thus, in this Chapter, we take advantage of this quasi-experimental nature of the official immigration program of Sao Paulo to exploit these sources of randomness in the destination of immigrants and in the composition of the flows of immigrants from Europe to Brazil.

In a first, reduced form estimation, we find that total number of immigrants that arrived in each municipality between 1898 and 1920 (normalized by population in 1905) is highly correlated with coffee output per farm in 1920, and the intensity with which farms used mowers, cultivators, plows, and other tools for agriculture (also in 1920). When we examine the correlation of these variables with immigrant nationality, we find that it only holds for municipalities with large proportions of Italian immigrants. Yet, we do not know if Italians brought something with them that might have driven productivity and mechanization in the farms in which they worked, or if they simply arrived in a moment in which they facilitated the expansion of the coffee frontier.

One final issue is whether the mechanization that we observe in 1920 is the product of having technologies with skill complementarities or if the machinery itself was adopted to substitute European labor after it became scarce during WWI. In the preliminary regressions we have, we find that receiving more Italian immigrants was correlated with being a municipality with more plows, harrows, cultivators, and mowers per farm in 1920.

The Chapter is organized into four sections, apart from this introduction. In the first section, we explain the specifics of the official European immigration program of Sao Paulo, Brazil. In the second section, we describe an example of historical experiments and the original data we compiled and combined for our study in this chapter. In the third section, we present the results of the empirical exercises to examine the effect of European immigrants on coffee farm productivity and machinery adoption in Sao Paulo between 1898 and 1920, disentangling causality when possible. The fourth section concludes.

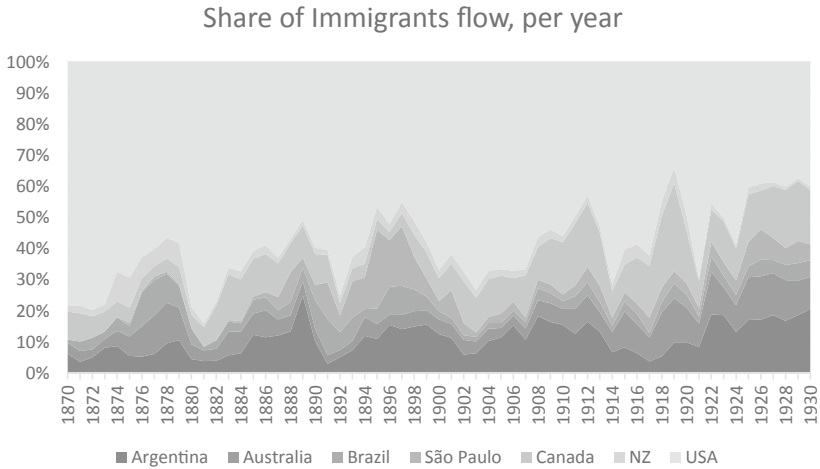
During the Age of Mass Migration, from 1880 to 1930s, Brazil was the fourth most important destination for European migrants to the Americas—after the United States, Argentina, and Canada (Jacks and Tang,

2018). Brazil alone received over 4.5 million people, mostly from Italy, Spain, and Portugal. The southeastern state of Sao Paulo was the destination of over 60% of these immigrants. At the time, the state was one of the largest coffee producers in the world and was turning into the most developed area in Brazil (Love, 1980). The historical literature associates European immigration with the peaceful abolition of slavery in 1888 and with the expansion of the coffee frontier after the 1880s (Milliet, 1941; Holloway, 1980; Monbeig, 1984).

On the period covered in this study, São Paulo in fact had the largest official/subsidized immigration program in the world. Brazil as a whole received more Europeans than Australia (1.6 vs. 1.5M), and the State of Sao Paulo received more Europeans than New Zealand as a whole (991k vs. 709k). Figure 1 compares the annual inflow of immigrants to Brazil, and to the State of Sao Paulo, with other major receiving nations during the Era of Mass Migration, particularly between 1881 and 1927. In this Figure, we want to highlight that the numbers for Brazil and Sao Paulo are not trivial. From the abolition of slavery in 1888 to the Great Depression, approximately 2.5 million immigrants went to São Paulo and roughly 60% of them were subsidized during this period. We focus our study on the period 1898–1920 due to data availability on inflows of immigrants by municipality.

In 1882, pressured by the coffee farmers facing the imminent shortage of labor due to the gradual abolition of slavery, the government passed a bill to cover the total cost of the transatlantic trip for families of European agricultural laborers to come to São Paulo to replace chattel labor in coffee farms. This law was the basis of the program of mass migration to São Paulo in the next four decades. This program took off rapidly and turned into a successful source of labor, after many failed previous initiatives had focused on encouraging spontaneous European migration to the State (Forjaz, 1924; Holloway, 1980; Buarque de Holanda, 2004; Viotti da Costa, 1999, ch 5).

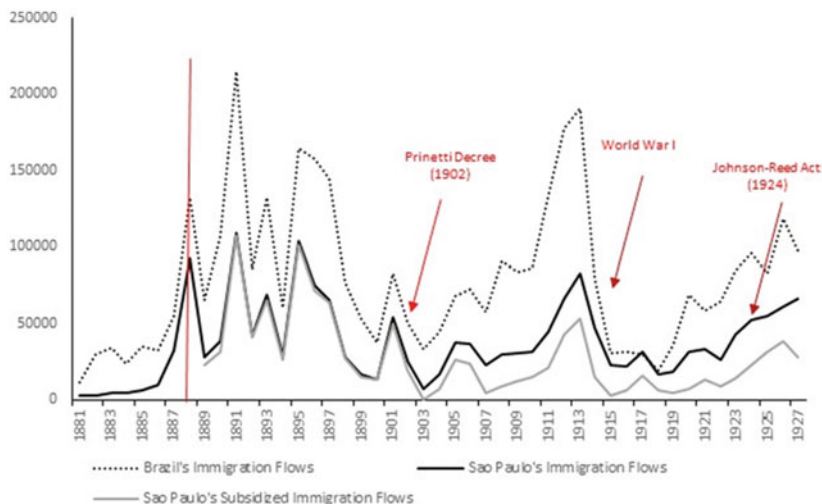
In 1886, coffee farmers founded the *Sociedade Promotora da Imigracao* (The Society for the Promotion of Immigration) to coordinate the mass migration program in São Paulo. The Society was a non-profit organization established and ran by the private sector but funded by the State. Its main responsibility was to avoid the shortage of labor in coffee farms through the promotion of European immigration, spreading information about employment opportunities available in Sao Paulo, covering the travel costs of European farmer families, supervising the arrival of



**Fig. 1** Share of immigration flow per receiving nation (*Source* Constructed by the authors with data from Jacks and Tang [2018])

immigrants in Brazil, housing them in a large hostel in the capital of the state and assigning immigrant manpower to coffee farms across the state (Holloway, 1980). Members of the Society argued that only immigrants without resources and supported by favors granted by the government would choose to migrate to São Paulo (Sociedade Promotora, 1888). The idea of paying only for families was intended to avoid having immigrants who would leave a coffee farm after a few months and not set roots in the São Paulo. Similarly, they thought that financing poor families would create labor availability for farms, rather than attracting a class of potential landowners. According to the official sources, Europeans were industrious, white-skinned, and desirable to assimilate and transform the Brazilian society (São Paulo, 1887). In 1895, The Society was absorbed by the Sao Paulo state Department of Agriculture (Holloway, 1980). The Department, then, became responsible for establishing the criteria for subsidizing immigration and for the entire subsidized program (Gonçalves, 2017).

Figure 2 shows the inflow of total and subsidized immigrants into the State of Sao Paulo from 1882 to 1927. It is clearly on the figure the rapid increase in immigrants flow to São Paulo from 1884 onwards, when the subsidized program took. We highlight four major events that led



**Fig. 2** Annual inflows of immigrants to So Paulo (State), 1881–1927 (Source For 1888–1892, *Annual Statistical Report of 1908*; for 1893–1897, the data comes from Holloway [1980]; and for 1898–1900: Statistics Section and Archive of the State of Sao Paulo, *Annual Statistical Reports*, 1901–1927. The data for Brazil is obtained from the Appendix of IBGE. *Brazil: 500 years of settlement*. Rio de Janeiro 2000)

to specific patterns in the migrant inflows. The first vertical line on the left depicts the abolition of slavery in 1888, when São Paulo's subsidized program was already in operation. Then, we highlight the Prinetti Decree of 1902. This Italian Decree, named after Italy's Minister of Foreign Affairs at the time, Giulio Prinetti, made it illegal for immigration agencies that worked for the Brazilian government to recruit immigrants in Italy. Many Italians tried to evade the new law but the net effect was a noticeable decline in Italian immigrant inflows, compelling Brazil and its agents in Europe to turn to Spain and Portugal to look for families of farmers.

Then, we highlight World War I, when, due to shipping disruptions—and disruptions of business in general—immigration from Europe had a dramatic fall. During 1915, the number of Europeans leaving São Paulo through the port of Santos (26,183) was larger than the number of entries (16,618). The subsidized immigration from Europe had a low point in

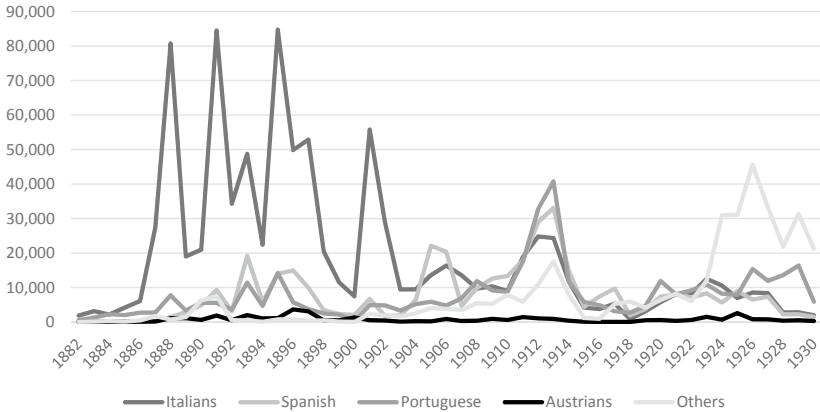
1915, as only 2,710 immigrants went to São Paulo, recovering a bit for 1916 with 6,786 entries. By 1916, there was somewhat of a recovery, with 20,351 Europeans entering (the majority from Spain). In fact, in 1915 and 1916, the official immigration program took measures to deal with the drastic fall in the number of immigrants, it allowed 11,903 workers from the capital of the state to participate in the Department of Labor's allocation of workers, among them allowing more Brazilians—mostly from the north of the country—to replace about a third of the supply of Europeans to the farms (Secretaria de Agricultura, 1916). Still, of the 3,220 families requested to work for a year in coffee farms (the *colono* contracts), there were only 2,770 hired in 1915. In 1916, when the exit of immigrants who finished contracts started in 1914 made the need for new immigrant labor more binding, there was a call for 3,214 *colono* families, with only 2,151 takers (Secretaria de Agricultura, 1916; 163).

The third arrow in Fig. 2 points to the Johnson-Reed Act enacted in the United States to impose country-specific immigration quotas to restrict entry to two percent of the total number of each nationality in the United States. The US quotas largely affected immigrants from Northern and Western Europe—many of them Jewish—pushing them to look for opportunities in Brazil.

Figure 3 shows the inflow of immigrants to the State of Sao Paulo by nationality for the period 1881–1930, and it also shows that there is some randomness in the composition of the immigrant flows that depended on push factors and on the policies of other receiving countries. Up to 1903, mostly Italians, Spanish, and Portuguese entered São Paulo. After the Prinetti Decree, the share of Italian immigrants decreased such that for the years 1911–1920, the average number of Spanish and Portuguese immigrants exceeded the average inflow of Italians, and public officials also started to rely on other sources of immigrant labor, such as Japan, Russia, and Germany.

## 1 THE ASSIGNMENT OF IMMIGRANTS TO FARMS

One of the main components of the subsidized program was the reception center created in São Paulo in 1888, known as *Hospedaria de Imigrantes* (henceforth referred to as “the Hostel”). It was mandatory for all immigrants arriving as part of the subsidized program to go through the Hostel and it was also common for self-funded immigrants and even nationals



**Fig. 3** Nationalities of inflows of immigrants to Sao Paulo during the era of mass migration, 1882–1930 (*Source* Relatório da Secretaria da Agricultura do Estado de São Paulo, 1898–1920)

from other parts of Brazil to use the facilities in order to obtain a farm job. Immigrants could only stay in the Hostel up to seven days as part of the sponsored program. Built as part of an important strategy to centralize labor services and to retain control over the assignment of immigrants, the Hostel was designed to minimize contact with urban labor markets for subsidized immigrants after their arrival in the Port of Santos and while they waited for their final destination in a farm in the interior (da Cruz Paiva and Moura, 2008; Gonçalves, 2017).

Inside the Hostel, the state government operated a labor office (eventually called the Agency for Official Placement), which helped to place immigrants in farms that demanded labor in the interior of the state. This office was also part of the control mechanisms to prevent subsidized immigrants from looking for work outside the Hostel. The offices received letters from farmers demanding a specific number of families as farm labor (Boletim do Departamento Estadual do Trabalho, 1912–1920). Contracts were made under the Agency's supervision according to a standard template. The farmers themselves or their representatives were authorized to negotiate the terms of the contracts with the immigrants, using official interpreters when necessary. The immigrants could then choose the offer that interested them the most from those available at the time of their arrival. Furthermore, immigrants had a notion

of the average rate of wages, either from accounts received from relatives and countrymen, and from the, often exaggerated, official propaganda distributed in Europe by the agents of the government of São Paulo. Having chosen the best offer at the time, the immigrant and the farmer, in front of an Agency employee, signed the terms of the contract. Given the constant inflow of immigrants into the Hostel, the need to be allocated to a job contract as soon as possible, and the high demand for work, it is plausible to assume immigrants, in the end, could not go to the places they intended at first, having to choose the best available offer when they started their job search. Waiting for better jobs was also not an option, as the Hostel was intended to be for short stays only.

Even if immigrants could stay up to seven days in the Hostel, they usually spent less than that and, in some years, given the very high demand for immigrants, families stayed in the Hostel just a couple of days (Hall, 1969). After signing a contract, the bulk of European immigrants were committed to working for a farm for at least one year before they could either revisit the terms of the contract or they could go back to the Hostel to look for a new farm job—between 1900 and 1920 there were more than 707,000 workers sent to farm work in the interior and of those 23% were reentries to the Hostel.

Each head of household immigrant was given a booklet containing, in his/her mother tongue, the laws and provisions regarding the hiring of work and the duties and obligations of both parties. It was in this booklet that the salaries and expenses of immigrants and their families were recorded. In addition, it served as an official document for any potential issue collecting salaries from the coffee farmer. Once the contracting procedures were completed, the immigrant and his family received a free train ticket and the dispatch of their luggage to their final destination (Denis, 1912, pp. 196–199; Solorzano y Costa, 1913, pp. 100–103; São Paulo, 1916, pp. 188–191).

In a traditional migration model (Roy, 1951, Borjas, 1987; Docquier et al., 2014), potential migrants would rationally and carefully weigh the expected costs and benefits of immigration and they would ensure that their decisions reflect a well thought-out review of expected returns, costs, and conditions in the host country. In the context of Sao Paulo, however, more often than not, the lack of information and sometimes the misguided exaggerated offers provided in pamphlets and propaganda campaigns in Europe, probably caused many to overestimate the expected positive differential in response to the economic incentives (even more

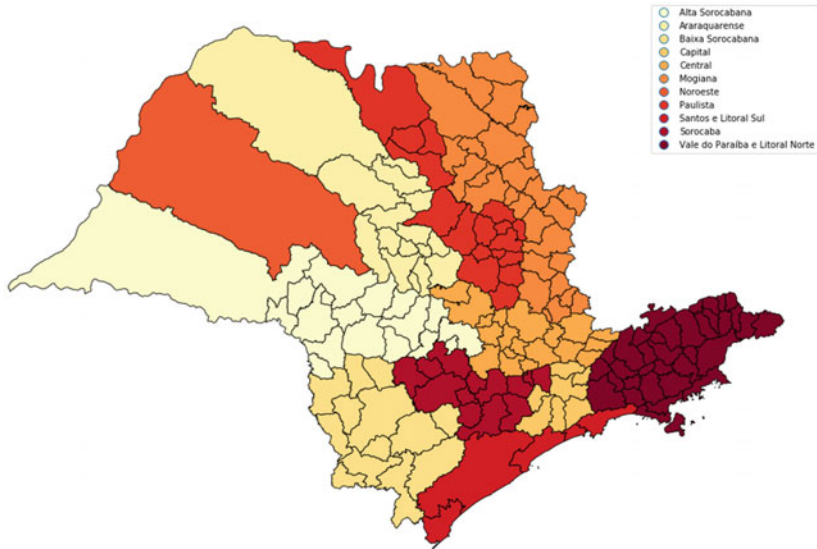
since they faced economic distress in their origin countries), and ultimately left the immigrants with no choice but to hope to be assigned to a good plantation owner.

To understand the demand for farm labor in São Paulo agriculture sector, first one needs to understand its dynamics. Most farms had low capital intensity at the time. Therefore, weather, seasonality, temperature, and rain dictated the demand for labor in the farms as they determined the best time to plant, seed, and harvest coffee. Moreover, as the coffee frontier expanded, the demand for labor increased in the new, more productive farms, while it decreased in areas where coffee was losing importance or was no longer cultivated (Milliet, 1941). Given our goal of presenting the official immigration program and the presence and effect of immigrants in the state of São Paulo and given that new municipalities were created between 1898 and 1920, we used 1905 municipalities borders to allow comparison throughout the years.<sup>1</sup> We also use here a regional division of the state into eleven zones taking into account minimum comparable areas based on Colistete (2015, p. 334) and Milliet (1941): Capital, Vale do Paraíba e Litoral Norte, Sorocaba, Central, Mogiana, Paulista, Araraquarense, Noroeste, Alta Sorocabana, Baixa Sorocabana e Santos e Litoral Sul. This Division is graphically represented in Fig. 4.

Vale do Paraíba was the pioneer region in coffee cultivation in São Paulo and dominated the production until the 1870's. At the beginning of the twentieth century, the region had already lost importance. From that zone, coffee production moved into the interior of the state in the 1850's, mainly into the Central zone and from there to Mogiana and Paulista regions—which were the frontier regions through the early part of the twentieth century. During the 1880's and 1890's, following the railway expansion into the interior, these two latter zones experienced the peak of coffee production as Central started to lose importance. Then, by the first decades of the twentieth century, Mogiana and Paulista were still the main coffee producers of São Paulo but slowly started to be replaced

<sup>1</sup> In 1886, São Paulo State had 122 municipalities, increasing to 171 in 1905 and 203 in 1920. São Paulo, *Relatório apresentado ao Exm. Sr. Presidente da Província de São Paulo pela Comissão Central de Estatística* (São Paulo, Leroy King Bookwalter, Typographia King, 1888). São Paulo, *Anuário Estatístico de São Paulo para o ano de 1905*, v. 1 (São Paulo: Typ. Espíndola e Cia. 1907); Brasil, Directoria Geral de Estatística, *Recenseamento do Brasil, Realizado em 1 de Setembro de 1920*, v. IV, 1a. Parte (Rio de Janeiro: Typ. da Estatística, 1926).





**Fig. 4** São Paulo state divided into coffee zones, with 1905 borders (*Source* Created by the authors using the IBGE shapefiles and the coffee zones from Colistete [2015, p. 334])

by the new frontier zones of Araraquarense, Noroeste, e Alta Sorocabana (Milliet, 1941, pp. 57–66).

Araraquarense was an intermediate space between the more ancient areas of settlement and exploitation and the newest ones, having a more rapid development from 1895 onwards—mostly as the railway expanded. In 1905, Araraquarense and Alta Sorocabana were still relatively scarcely populated areas, yet in the next fifteen years, as they were integrated to the rest of the state, they received a large inflow of nationals and immigrants, thus increasing population density and agricultural development. The Noroeste zone had only one municipality in 1905—Bauru—connected to the rest of the state at that same year by the Sorocabana railway (Holloway, 1980, pp. 21–22). Between 1910 and 1919, the Noroeste zone gained relevance in the coffee production, though the major economic coffee center still rested upon Mogiana. Only in the 1920's did the coffee axis shift toward Araraquarense, Noroeste, and Alta Sorocabana, followed by the growth of old zones and the rise of

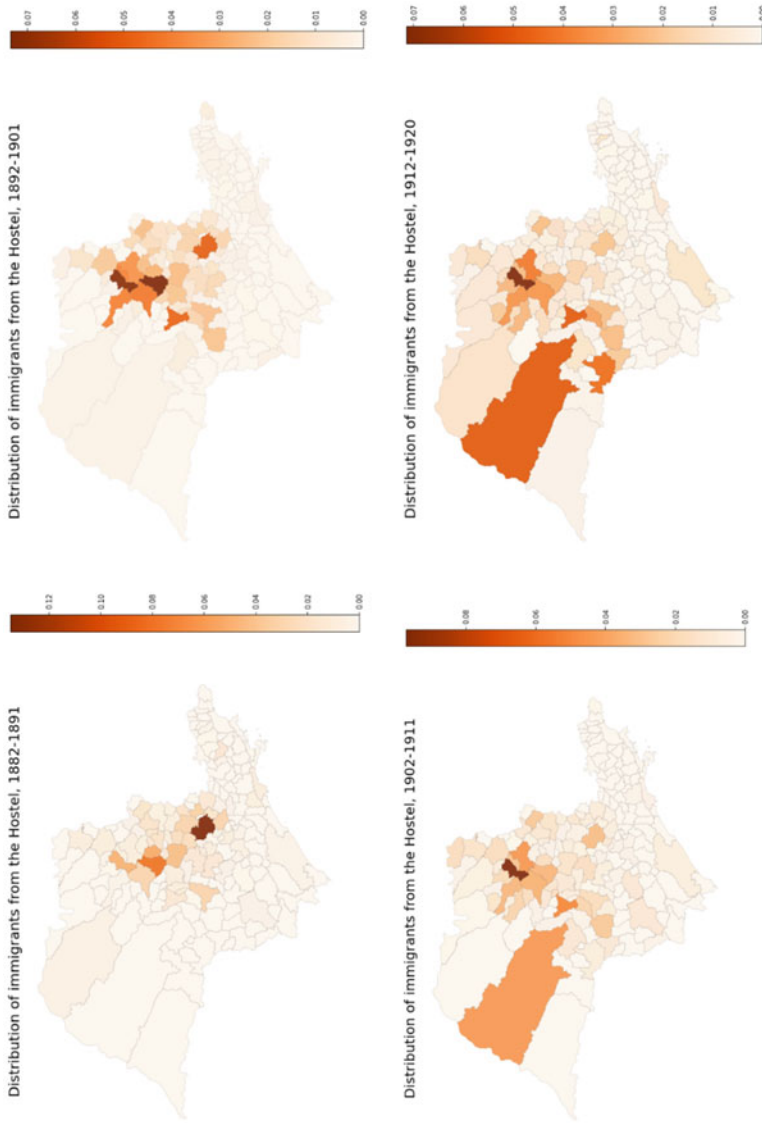
new municipalities and the accelerated entrance of immigrants (Monbeig, 1984, pp. 184–192).

The maps in Fig. 5 present the distribution of immigrants throughout the state of São Paulo in four different phases. On the first map, at the beginning of the subsidized program and the mass migration to São Paulo (1882–1891), immigrants went specially to areas of the Central, Paulista, and Mogiana zones. When comparing the first and the fourth maps, we notice the continuous displacement of attraction zones to the northwest of the state. After 1900, the Northwest zones of Alta Sorocabana, Noroeste, and Araraquarense started to attract more immigrants, as those areas were newly connected to the rest of the state as the railways expanded, while coffee farms in the old areas of Central and Paulista became less and less productive (Milliet, 1941).

Within the same farm, the demand for labor varied over the year. Planting and harvesting were the most labor-intensive periods for coffee farms. This happened during the dry season, between April and September. Coffee picking started in May and lasted until August. The harvest had to be done all at once before the bloom period otherwise it could interfere in next year's production. Then, in September, it was time to prepare the soil for new coffee trees. It was time for cutting the residues of previous crops, cleaning the soil, plowing, and planting new coffee trees. As planting had to happen in September, the soil preparation occurred together with the harvest. Coffee also had to be processed and shipped to avoid losses that might occur due to rain or floods. Therefore, the dry season demanded a great amount of work in the coffee farms (Ramos, 1923; Alvim, 1986, pp. 77–78; Tessari, 2012, pp. 64–70).

During the rainy season, between October and March, due to the intense heat of the Brazilian summer and the heavy rain, the workload on the coffee farms was reduced considerably. In that season, one of the main activities in coffee farms was the cleaning and weeding of the soil (Tessari, 2012). Other crops, such as corn, rice, and beans, were cultivated in the rainy season by the immigrants for self-consumption, as part of their usual contracts (Colistete, 2015; Lanza, 2021).

Farmers tried to estimate the labor needed for the next agricultural year based on the blooming of coffee trees, happening between September and November. The blooming of coffee trees and the productivity of each tree depended also on the region of the state, fertility of the soil, age of coffee trees, size of the property, climate in a given year, etc. Thus, having an impact on the demand for immigrant and temporary



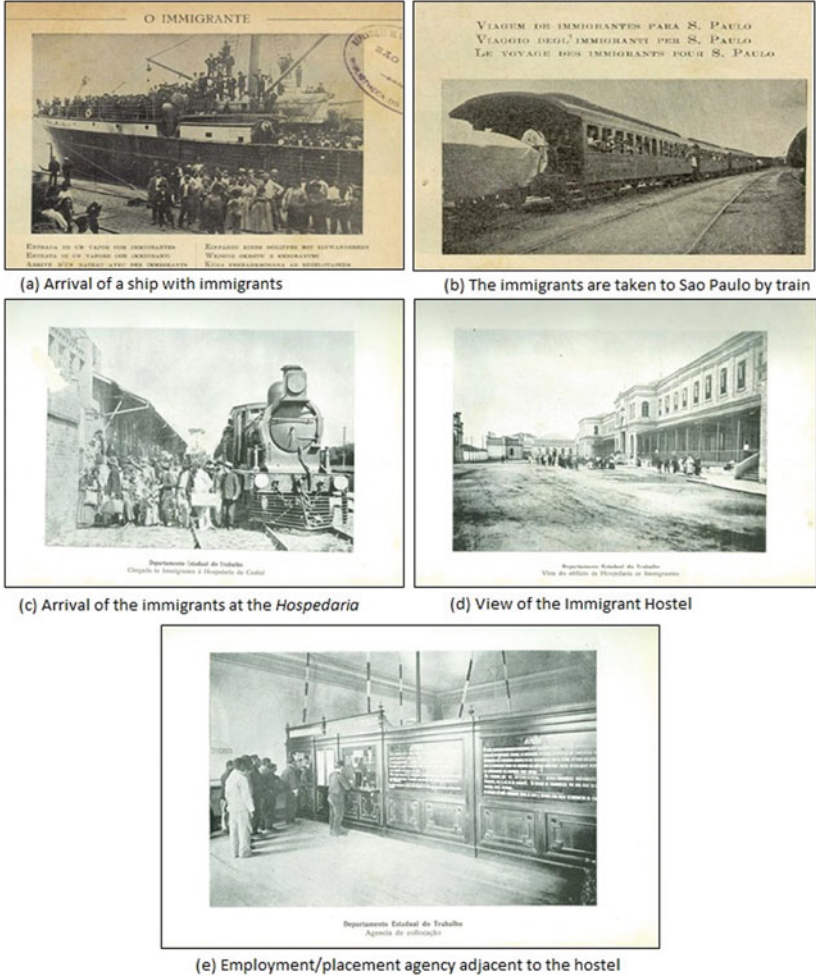
**Fig. 5** Maps with the distribution of immigrants from the hostel, 1882–1920 (*Source* Created by the authors with data from the Arquivo do Estado de São Paulo, Registro de Matrícula dos Imigrantes da Hospedaria de Imigrantes)

workers a farm would need. A big bloom usually meant the harvest would be large and could provide an indication that more farm hands were needed for the next harvest (Tessari, 2012, pp. 87–89). It was in that moment that farmers would search for immigrants and sign new (or renew) job contracts. Nevertheless, heavy rains or cold weather could lead to a complete loss of the harvest, too. Therefore, the demand for labor in coffee farms was not only seasonal but also highly volatile. Farmers would contract permanent laborers to work on the in-between harvest periods as well, taking care of the coffee trees and the soil, complementing this labor with temporary workers during the labor-intensive, dry season.

As mentioned before, farmers would contact the Hostel to contract families of immigrants. Between 1911 and 1915, the Bulletins of the State Department of Labor published general data on the subject. In these five years, Paulista farmers sought 61,744 families. From this data, it is possible to notice the concentration of the search for families in the zones where coffee was grown. The coffee farmers of the traditional coffee zones requested most of the families. Farmers at Mogiana zone requested 19,118 families (30.9% of all the requested families), followed by the ones at Paulista with 14,066 (22.7%) and at Araraquarense with 11,124 (18.0%). We can also notice the search for families in the frontier zones of São Paulo. Areas that were being open for coffee cultivation as the railways entered further in the northeast area of São Paulo started demanding hands for the farm in the nineteen tens, such as Alta Sorocabana, where farmers sought nearly 10,000 families, around 16% of the total. These four regions accounted for 67.5% of the total number of immigrants who left the Hostel between 1911 and 1915. Farmers in the old coffee regions of Vale do Paraíba and Sorocaba, and the less productive Baixa Sorocabana, together, demanded only 430 families, 0.7% of the total registered in the bulletins, and no announcements were made by farmers in the Santos and Litoral Sul areas.

Figure 6 displays photographs of the process immigrants had to follow as they arrived to Brazil. All the way from the reception at the port to the moment when they signed contracts with coffee farmers in the Department of Labor's Placement Office.

In this section, we will present an exercise where we use the quasi-experimental nature of immigration to São Paulo to check how the Official European Immigration program could have contributed to agricultural productivity in the state. There are three hypotheses of how European immigrants might have improved coffee farm productivity



**Fig. 6** Immigrant's destinations from the immigrants hostel, 1893–1929 (Source For (a) and (b): From the edition of the propaganda magazine *O Immi-grante*, first edition of January 1908. Obtained from Public Archive of the State of Sao Paulo. For (c)-(e): Reports of the Secretary of Agriculture of Sao Paulo)

in São Paulo. First, there is the *culture view* (Sequeira et al., 2020). According to this view, European immigrants took a different culture as they migrated to the Americas. Either they worked harder, they were used to farm work, etc. and that is what drove farm productivity. If this is the case, then European immigrants should have a different effect on farm productivity as say Brazilian immigrants who were part of the same official program.

Second, there is the *human capital view*. According to this view, European immigrants had higher human capital and that facilitated the adoption of technology or better agricultural techniques. There is a growing literature showing that German immigrants to Brazil were both more educated and were better at demanding higher quality schools in the places in which they settled (Rocha et al., 2017; Witzel de Souza, 2018). There is evidence that more literate Italians self-selected to migrate to Argentina, thus having better outcomes themselves in Argentina (Pérez, 2021). Thus, following this idea, thanks to the superior human capital of immigrants, farms would have become more productive and mechanized—mostly because of improvements in the intensive margin. If this view is the main explanation, then municipalities and farms with more literate immigrants, e.g., those from Germanic origin (i.e., German, Swiss, Austrian), would have been the most productive and would have adopted more machinery by 1920 (the first Census we have with detailed data on agricultural machinery by municipality). Also, we should find, like Pérez (2021), that other European immigrants were also more educated than the locals.

Third, there is the *labor availability hypothesis* (Acemoglu and Wolitzky, 2011; Engerman and Sokoloff, 2012). Since Brazil had a large, unexploited agricultural frontier, having an organized European immigration program that guaranteed the inflow of a large number of agricultural workers—bound by contracts to work in farms for at least a year—facilitated the expansion of the agricultural frontier, thus allowing farmers to open farms with economies of scale. This is an extensive margin story. Initially, European immigration substituted slave labor in farms (after slavery was abolished gradually between 1850 and 1888), but after the official immigration program was implemented, together with the expansion of the railways and interconnection of the interior of the state with the capital, it allowed the expansion of the coffee frontier into areas with land availability, leading to the development of larger and more productive farms. That is, according to this hypothesis, the effect of the

immigration program on productivity would be through the expansion of the coffee frontier and through the substitution of slave labor in coffee farms (Seyler and Silve, 2021). This view, however, is not about European labor specifically, but about labor availability in general.

The labor availability view, however, does not explain why some farms ended up being more mechanized than others. On the one hand, the kind of agricultural tools and machines used in coffee farms could have been compliments to the skills of immigrants. Thus, rather than labor saving, the agricultural technology adopted in these farms could have had skill complementarities (Goldin and Katz, 1998). On the other hand, because we measure mechanization in 1920, a few years after a big, exogenous decline in the number of immigrants from Europe due to the disruptions of World War I, it could be the case that the adoption of machinery and tools in coffee farms was a consequence of the decline in the availability of immigrant labor.

## 2 DATA AND METHODOLOGY

We collect the inflow of European (and Brazilian) immigrants who used the Hostel into each municipality from 1898 to 1920. The data includes the nationality of immigrants as well as the municipality/destination to which they are assigned, but does not include other details about the immigrants such as their marital status/children etc. Given that there were ebbs and flows of immigrants of various nationalities, there are five nationalities or groups of immigrants we can clearly track over time (and for which there are significant flows each year). We can track the flow of Italian immigrants, of Spaniards, Portuguese, those of Germanic Origin (e.g., from Germany, Austria, and Switzerland), and Brazilians who used the official immigration program and the Hostel to both get a job and a train ticket to the farms in which they were going to work. From 1898 to 1900, we were able to add data from entries and exits from the Hostel using the website of the *Museu da Imigracao*. Since the destinations of immigrants in these latter records were not always municipalities, we had to track the train stations and farms mentioned as “final destination” and recode them using our municipalities using the IBGE 1905 shapefile (See Lanza, 2021, ch. 2). Using the *Anuarios*, we track the inflow of immigrants to various municipalities in Sao Paulo year-by-year, from 1900 to 1920. The data includes the nationality of immigrants as well as the municipality/destination where they ended up with yearly contracts.

While we have yearly data for immigrant flows, we create an average flow variable to use it in our baseline cross-sectional regression using outcomes from the 1920 Census.

Since most of these immigrants worked in farms, we hypothesize that the inflow of immigrants into a municipality has an impact on agricultural productivity and mechanization. The Census of 1920 provides data on coffee, maize, sugar, and rice output. We focus on coffee output because that is where immigrants had more of an impact on productivity.<sup>2</sup> We normalize output by the number of farms and use it as dependent variables in our analysis. Additionally, we also hypothesize that trends in immigrant flows may also have an impact on the adoption of certain machinery. The Census of 1920 also provides data on the number of tractors, mowers, plows, harrows, seeders, and cultivators. Geographic control variables (i.e. latitude, longitude, elevation, soil, etc.) were also extracted from the 1920 Census. While we test all available variable with robust data, we focus our analysis on coffee productivity since majority of the immigrants were employed in coffee farms (Hall, 1969; Lanza, 2021b; Vangelista, 1991).

We also use the detailed (by farm) data of the *1905 Agricultural and Zootechnical Statistics of Sao Paulo*. We aggregate farm data into municipalities and use it in many of our tests. To link the 1905 Agricultural Statistics at the municipality level with the 1920 Population Census, we use the 1905 shapefile from the *Instituto Brasileiro de Geografia e Estatística* (IBGE), matching many of the municipalities by hand. This exercise allows us to connect these two important data sources, but carries with it the penalty of losing observations from the 1920 Census that were part of the same municipality in 1905. To merge those observations, we use a weighted average of land area. The Agricultural Census of 1905 was also used to extract data on output/productivity of coffee farms. Variables from 1905 are used as a control variables and help account for the baseline differences in productivity since it is the earliest year with complete, reliable data for most municipalities in our database.

Our baseline regression uses the 1920 Census to obtain key dependent variables at the municipal level, such as the average output of coffee per establishment (i.e., per farm) in metric tons (1 metric ton is equivalent to 2,204 pounds). We also collect data on the average number of plows,

<sup>2</sup> We also find significant correlations (in a multivariate regression) between rice output and the number of Portuguese immigrants.



harrows, seeders, cultivators, mowers, and tractors per farm. Not all of these tools were relevant for coffee production, especially when trees were grown, but they were key for the cleaning of the land in-between harvest and planting seasons, to cultivate other staples like corn and rice, or to move around workers and/or sacks of coffee (in the case of tractors). We devise a specification in which we have these variables in the left-hand side and we examine their correlation with our variables measuring the intensity of European inflows into a specific municipality. The baseline specification looks like this:

$$Y_{it} = \alpha + \beta * \text{Share immig to pop 1905} + \gamma * \text{geographic controls}_{it} + \delta * \text{1920 Census controls} + \varphi \text{ 1872 census controls} + \epsilon_{it}, \quad (1)$$

where  $Y_{it}$  includes average coffee output per farm and the percentage of farms with plows, harrows, seeders, cultivators, mowers, and tractors per farm. Our variable of interest is either the share of immigrants to population in 1905, or variations of the intensity with which municipalities get immigrants. We also decompose the share of immigrants to population among Italians, Spanish, Portuguese, and those of Germanic origin in some specifications. The share of immigrants is estimated as the sum of total immigrants sent to a municipality between 1898 and 1920 by the official immigration program (we also tried alternative definitions and the results are mostly the same). We then add a series of geographic controls (longitude, latitude, elevation, slope of the terrain in degrees, and terrain roughness), controls for initial conditions using the 1872 Census, including the share of foreigners to population and the share of slaves to population, as immigrants initially were sent to farms to replace slave labor. Our 1920 Census controls include a dummy for railway stations, a dummy for municipalities that had an immigrant settlement, and variables that control for the area devoted to coffee, corn, rice, and sugar, since different municipalities had different agricultural configurations. We run this with robust standard errors, clustered at the coffee zone level. There are 11 coffee zones, including (1) Alta Sorocabana; (2) Mogiana; (3) Paulista; (4) Sorocaba; (5) Vale do Paraiba; (6) Central; (7) Araraquarense; (8) Noroeste; (9) Baixa Sorocabana; (10) Santos; and (11) Capital (for the area around the City of Sao Paulo). For all our estimations we drop the observations from the Baixa Sorocabana, Santos, and Capital zones, the first two because they did not have much coffee production (or immigrant movement) and the latter one because the jobs

immigrants performed there were of a different nature—i.e., there were more urban jobs. In one of our estimations, we interact our variable of interest with the coffee zones, to see if the effect of immigrants we are measuring is mostly clustered in “newer” zones (more recently populated) with more productive soil.

We then replicate the baseline regression using the coffee output figures from the 1905 Agricultural Statistics (which is at the farm level), all aggregated at the municipal level. The geographic and 1872 controls are the same, we also add controls for the share of agricultural land devoted to coffee, rice, sugar, and corn. We have a dummy for whether the municipality had a railway station (at least) in 1905. The variable of interest changes to the number of immigrants between 1898 and 1905 to population in 1905. We use the same estimation and clustering approach as in the baseline regression.

Obviously, one may claim that the flow of immigrants into specific municipalities was not exogenously determined. That is, we do not know if there are observables driving flows of immigrants, or flows of immigrants from specific nations, into specific municipalities. In the Appendix we run a regression of the treatment variable, total immigrant inflows to 1905 population, using observables. We run it as a cross-sectional regression using the same observables we have in the baseline specification above and we also run it as a panel with random effects and year effects using all of our inflow data that is annual, including a dummy for when each municipality got a railway station. In both of these exercises, it looks like latitude is one of the only significant variables and in the panel estimation, the railway dummy is also significant. The latitude variable is not that surprising because the expansion of the coffee frontier and of the distribution of immigrants followed the railway lines that went inland in Sao Paulo, which broadly tracked the Tropic of Capricorn (around the 23 degree line). Moreover, some of the main locations had other characteristics that allowed for the cultivation of coffee, like high steepness. We also run a time series estimation with three lags to see if some nationalities were stickier by municipality. We find that Italians and immigrants from Germanic descent had more significant lags, maybe suggesting that there is a bit of bunching that could be related to communications between people from the same country sharing news about employment opportunities or favorable working conditions.

Our baseline estimations empirical strategy aims to examine the impact of European immigrants on the agricultural sector of Sao Paulo. Thanks

to the nature of the allocation of immigrant workers to farms we start with the assumption that they did not choose the farm to which they were sent. We then hypothesize that the immigrants may have a short- and medium-term impact on agricultural productivity as well as machinery use in the municipalities where they are sent. The baseline regression tests whether municipalities that received a higher inflow of immigrants (i.e., total immigrants between 1898 and 1920 as a percentage of population in 1905) had an impact on coffee productivity as well as on the intensity with which various tools/machinery were used by farms in 1920. We use immigrant data from 1898 to 1920, providing a sufficient sample and time to see any potential effects our dependent variables. Furthermore, we control for geographical factors and baseline productivity to tease out the impact of immigrants on our dependent variables.

In Table 1, we can see that the coefficient for our variable of immigrant intensity (to population in 1905) is positive and significant. This means that having more immigrant inflows is correlated with having more productive farms on average. The dependent variable is average tons of coffee per farm by municipality. The average farm in Sao Paulo produced 13.89 tons of coffee per year (15.49 tons per farm in the sample included in the regression). A municipality with one standard deviation higher immigrant intensity (i.e., 0.27), produced 6.7 additional tons of coffee. This is a 43% increase in average coffee output per farm.

In Table 2, we disaggregate the intensity of immigrant flows by country of origin. We can separate immigrant flows through the official program into Italians, Portuguese, Spanish, those of Germanic origin, Brazilians (who used the official program), and an umbrella category for all other European (and Japanese) immigrants. We measure the intensity of these immigrant flows between 1898 and 1920 relative to the population in 1905. We find that the share of intensity in the inflow of Italian immigrants had a strong and significant correlation with coffee output per farm in 1920, no other European immigrant inflow was correlated with more coffee output. A one standard deviation increase in the Italian share of population in 1905 (0.081) is correlated with a 9.8 ton increase in coffee per establishment (a large increase if we consider the mean output per establishment by municipality is 14.49 in the sample used for the regression). That shows how important these immigrants were for the farmers.

**Table 1** Baseline estimates using outcomes from the 1920 census

<i>Variables</i>	(1) <i>Avg. coffee arobas per farm</i>	(2) <i>Avg. Plows per farm</i>	(3) <i>Avg. Harrows per farm</i>	(4) <i>Avg. Seeders per farm</i>	(5) <i>Avg. Cultiva- tors per farm</i>	(6) <i>Avg. Mowers per farm</i>	(7) <i>Avg. Tractors per farm</i>
Immig intensity to pop 1905	24.942**	0.567	0.120	0.026	0.447*	0.029	0.001
	(7.418)	(0.372)	(0.090)	(0.024)	(0.193)	(0.028)	(0.007)
Constant	214.929**	1.959	0.839	0.465*	1.396	0.598*	0.085
	(61.814)	(2.484)	(0.889)	(0.203)	(1.572)	(0.276)	(0.049)
<b>Controls:</b>							
Geographic controls	Y	Y	Y	Y	Y	Y	Y
1920 controls	Y	Y	Y	Y	Y	Y	Y
1872 controls	Y	Y	Y	Y	Y	Y	Y
Pop density	Y	Y	Y	Y	Y	Y	Y
Observations	131	135	135	135	135	135	135
R-squared	0.44	0.32	0.33	0.25	0.27	0.09	0.13
Adj. R <sup>2</sup>	0.36	0.23	0.24	0.15	0.17	-0.03	0.01
Number of clusters (Coffee Zones)	8	8	8	8	8	8	8
Mean of Dep Var	15.49	0.54	0.17	0.03	0.18	0.03	0.01
Std. Dev. of Dep Var	15.36	0.62	0.26	0.06	0.30	0.08	0.02

*Notes* Geographic controls include longitude, latitude, elevation, slope of the terrain in degrees, and terrain roughness. The 1872 Census controls include share of foreigners to population and slaves to population. 1920 controls include a dummy for railway stations, a dummy for municipalities that had an immigrant settlement, and variables that control for the area devoted to coffee, corn, rice, and sugar, since different municipalities had different proportions. We excluded the Baixa Sorocabana zone because it did not have much coffee production (or immigrant movement). Robust standard errors clustered at the Coffee Zone level. Significance denoted as \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

When we look at the correlation of immigrant inflows with the intensity in the use of agricultural machinery, we find that an increase of one standard deviation in the inflow of Italians relative to population in 1905 (0.081) is correlated with having 0.31 more plows per farm (a 58%

**Table 2** Baseline regression with immigrant intensity by country of origin (1920 Census outcomes)

<i>Variables</i>	(1) <i>Avg. coffee arrobas per farm</i>	(2) <i>Avg. Plows per farm</i>	(3) <i>Avg. Harrows per farm</i>	(4) <i>Avg. Seeders per farm</i>	(5) <i>Avg. Cultivators per farm</i>	(6) <i>Avg. Mowers per farm</i>	(7) <i>Avg. Tractors per farm</i>
<b>Intensity of inflows by origin</b>							
Italian migrants to 1905 pop	121.146	3.865	0.729	0.113	2.073	0.142	0.023
	(26.969)	(0.751)	(0.138)	(0.043)	(0.585)	(0.094)	(0.018)
Spanish imm. to 1905 pop	-20.335	-1.135	-0.547*	-0.070	-0.777	-0.150	-0.011
	(19.478)	(0.894)	(0.282)	(0.060)	(0.561)	(0.143)	(0.031)
Germanic imm. to 1905 pop	-38.839	5.440	2.488	0.350	2.569	0.608	-0.013
	(72.884)	(6.897)	(2.692)	(0.509)	(4.723)	(0.897)	(0.270)
Portuguese imm. to 1905 pop	-48.948	0.318	0.981	0.028	0.074	0.023	0.029
	(54.748)	(2.421)	(0.901)	(0.123)	(1.451)	(0.191)	(0.055)
Brazilian imm. to 1905 pop	34.194*	-1.937**	-0.708*	-0.118**	0.093	-0.056	-0.021
	(15.803)	(0.802)	(0.314)	(0.049)	(0.648)	(0.126)	(0.023)
Other imm. to 1905 pop	9.841	6.082***	2.468***	0.694**	2.089**	0.701	0.032
	(54.991)	(1.356)	(0.547)	(0.220)	(0.626)	(0.432)	(0.055)
<b>Controls:</b>							

<i>Variables</i>	(1) <i>Avg. coffee arrobias per farm</i>	(2) <i>Avg. Plows per farm</i>	(3) <i>Avg. Harrows per farm</i>	(4) <i>Avg. Seeders per farm</i>	(5) <i>Avg. Cultivators per farm</i>	(6) <i>Avg. Mowers per farm</i>	(7) <i>Avg. Tractors per farm</i>
Geographic controls	Y	Y	Y	Y	Y	Y	Y
1920 controls	Y	Y	Y	Y	Y	Y	Y
1872 controls	Y	Y	Y	Y	Y	Y	Y
Pop density	Y	Y	Y	Y	Y	Y	Y
Observations	131	135	135	135	135	135	135
Num. of clusters	8	8	8	8	8	8	8
(Coffee Zones)							
R -squared	0.542	0.495	0.405	0.307	0.368	0.123	0.143
Adj. R <sup>2</sup>	0.453	0.401	0.295	0.178	0.251	-0.0405	-0.0164
Mean of Dep Var	15.49	0.535	0.167	0.0288	0.176	0.0257	0.00748
Std. Dev. of Dep Var	15.36	0.624	0.257	0.0577	0.299	0.0789	0.0191

increase from the mean), 0.06 harrows per farm (a 35% increase from the mean), 0.113 more seeders (a 32% increase from the mean), and 2 more cultivators (a 95% increase from the mean). That is, the effects seem large. We find no effect for mowers and tractors, we think, because the tractor penetration was extremely low at the time and because mowers were not that important in coffee farms, which was the dominant crop in the Sao Paulo farmland.

In Table 3, we try another variation of the baseline model. Here we run the same specification, but we use dependent variables as of 1905. That is, the dependent variable is tons of coffee per establishment and per tree in 1905, and the variable of interest is total immigrants between 1898 and 1905 to 1872 population and total Italians to 1872 population. We keep the same controls—without the 1920 controls—and adjust the railway station dummy to reflect the stations available in 1905. The results show a strong positive correlation and they are particularly stronger for the Italian intensity variable. We find that one deviation increase in the inflow of immigrants normalized by population (mean 0.11, SD of 0.33) is correlated with an 8.6-ton increase in coffee output per establishment (large relative to the mean of 20.39 tons). We also include an interaction with the existence of a railway station, since in 1905 the railway network was still unevenly distributed among municipalities, with only 77% of them having at least one station. Interestingly, the railway station dummy is not significant and its interaction with the dummy for “high dosage” of immigrants or Italians has a negative sign. When we replicate the estimates with coffee per tree, we find that a one standard deviation more immigrants normalized by population in 1905 would yield an increase of only 0.00099 tons per tree, which is a 1.8% increase over the mean.

We then extend our study to include the fact that the agricultural frontier was expanding in Sao Paulo as immigrants were arriving. For this purpose, we examine if the municipalities that had a “high dosage” of immigrants between 1898 and 1920 (as a share of 1905 population) ended up being more productive. Yet, we do this by also interacting this dummy with the eight coffee zones we are examining. We are particularly interested in the outcomes in the frontier zones in 1920 of Alta Sorocabana, the Araraquarense, and the Noroeste (results not reported in this Chapter). We find that effect of the high intensity dummy is clearly larger in three of the zones, the Alta Sorocabana, the Noroeste, and, surprisingly, in the old coffee zone, i.e., the Vale do Paraiba. The Araraquarense

**Table 3** Baseline regression with 1905 agricultural census data

<i>Variables</i>	(1) <i>Avg. coffee</i> <i>(tons) per farm</i>	(2) <i>Avg. coffee</i> <i>(tons) per farm</i>	(3) <i>Avg. coffee</i> <i>(tons) per farm</i>	(4) <i>Avg. coffee</i> <i>(tons) per farm</i>
High immigrants 98-05 to Pop 1905	27.074*** (4.905)	45.335*** (6.872)		
1.highimm98_05#1.rr_est_dummy		-36.273*** (3.870)		
High Ital_98_05/pop72			38.907*** (6.750)	47.999*** (6.237)
High Italians x railway				-23.082* (10.169)
Railway station dummy	1.637 (2.865)	5.752 (3.609)	1.980 (2.818)	3.977 (2.832)
Slaves_share_72	1.763 (27.990)	4.789 (30.645)	2.682 (25.370)	- 0.014 (28.022)
Settlement_dummy	-2.076 (4.756)	3.770 (7.639)	-3.506 (3.839)	1.265 (6.192)
Constant	-114.776 (80.744)	-95.637 (115.204)	-116.758 (82.082)	-164.114* (75.941)
Observations	99	99	99	99
R-squared	0.616	0.473	0.613	0.529
N_clust	8	8	8	8
r2_a	0.572	0.406	0.569	0.470
Mean of DV	20.39	20.39	20.39	20.39
Std Dev of DV	22.16	22.16	22.16	22.16

*Note* Geographic controls include longitude, latitude, elevation, slope of the terrain in degrees, and terrain roughness. The 1872 Census controls include share of foreigners to population and slaves to population. Controls include dummy for railway station in municipality, a dummy for municipalities that had an immigrant settlement, and the share of the municipality area devoted to coffee. We excluded the Baixa Sorocabana zone because it did not have much coffee production (or immigrant movement). Robust standard errors clustered at the Coffee Zone level. Significance denoted as \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$



zone, another one of the frontier zones does not have a significant difference between high and low intensity municipalities. Thus, the effects of immigration are higher in at least two of the frontier zones, where immigration allowed farmers to expand coffee production into new farms, usually with larger scale. Interestingly, the Vale do Paraiba region, which is the oldest, more traditional coffee region, also has higher productivity in municipalities with a high dosage of immigrants, so immigrants are not only helping on the extensive margin, but there is some intensive margin effect.

One final question is whether the mechanization that we observe in 1920 is the product of having technologies with skill complementarities or if the machinery itself was adopted to substitute European labor after it became scarce during WWI. So far, we have explained that the adoption of some basic agricultural machines and/or tools was correlated with having more immigrants, something that may denote that there was some skill complementarity. In another regression, we check whether the municipalities that had the largest falls in immigrant inflows between 1914 and 1916, when the disruption in shipping affected severely the immigration program, are correlated with the adoption of more(less) agricultural machines. The results, not displayed here, yield an interesting finding. Places with the largest falls in inflows of immigrants during World War I did not adopt more plows, harrows, seeders, or mowers, most of which seem to have had skill complementarities or complementarities with the skills of immigrants. Yet, those municipalities that suffered more labor shortages during WWI actually adopted more cultivators and tractors. The latter one clearly being a labor replacing technology is used to move things around farms and to connect to mowers, cultivators, etc. From what we can gather from agricultural bulletins of the time, coffee farms were still relying on man-powered agricultural tools such as harrows, plows, and mowers during the two first decades of the twentieth century. Thus, the WWI shock may be one of the early propellers of the mechanization of large-scale Brazilian farms.

The historiography on the origins of industry in São Paulo gives lots of importance to the role played by immigrants for the adoption of industrial technology, yet less attention has been paid to the role of agricultural technology in during the Age of Mass Migration (Marson, 2012). As a matter of fact, there is no single empirical study of the effect of European immigration on technology adoption in farms. Most of what we

know is scattered evidence of their importance for the adoption of technology overall. We know that during the 1860's and 1870's, the increase in demand for modern agricultural equipment led foreign companies to install factories and workshops and importers and inventors to open offices and workshops in the municipalities of São Paulo to offer their services to the coffee farmers (D'Arbo, 2014; Dean, 1971). Dean (1971) mentions several examples of immigrant importers who opened factories in São Paulo to supply locally the machinery and manufactured products they had been importing from Europe, but this is mostly for manufacturing firms. D'Arbo (2014) concluded that the adoption of modern machinery to process coffee by the farmers in Ribeirão Preto area (in the heart of the Mogiana zone) in the 1870's and 1880's was motivated by the idea of using the available labor in the crops and the harvest (D'Arbo, 2014, p. 190). There is also evidence of immigrants introducing technology in the cultivations in the Ribeirão Preto area (Prado Junior, 1944, pp. 344–345).

### 3 CONCLUSIONS

Our findings contribute to the historiography of immigration and agriculture in Brazil in at least three ways. First, we document in a systematic way some of the traditional insights of the Brazilian historiography around coffee production, which highlighted the importance of the expansion in the coffee frontier to explain the improvement in productivity in Brazil. Second, we are the first ones to examine systematically the role of European migrants as drivers of agricultural productivity and mechanization of coffee farms. Third, we are the first ones to provide hypotheses of why coffee farms in Sao Paulo, by 1920, started to adopt tools and machinery to substitute labor. This is important because the agricultural frontier in Sao Paulo, and in Brazil as a whole, is the most productive in the world for products like soy, sugar, and cattle. The productive units today are also large farms (500 hectares and up), mechanized, and with low labor intensity. Thus, our research can be construed as contributing to the origins of mechanization and large-scale agriculture that propelled Brazil to be a food supplier to the world in the twentieth century.

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# Modernizing Elites in Latin America: Social-Network Evidence from the Emergence of Banking in Antioquia, Colombia

*Javier Mejía*

## 1 INTRODUCTION

Public opinion frequently refers to economic elites as monolithic entities. This interpretation is common among several intellectual traditions, including mainstream economic history. For example, the classical understanding of the consolidation of modern capitalism is frequently framed as the result of the triumph of an elite deeply synchronized by the interests of capital (Clark 2008; Acemoglu et al. 2005). In reality, however, elites are actually composed of heterogeneous individuals, each of whom

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might face different types of incentives at different moments in time. For instance, business and entrepreneurial history extensively show, in plenty of periods and regions, the singularity and innovative behavior of certain members of the economic elite, which frequently challenged the interests of other members of the elite (Landes et al. 2010). Therefore, how can one reconcile the individuality of entrepreneurs and business people in their daily activities with the synchronized collective behavior that led to the consolidation of modern capitalism?

This paper answers this question by studying the nuances of social interactions between bankers and the rest of the elite in one of the most iconic episodes in the consolidation of modern capitalism in the region: the modernization of Antioquia, Colombia, in the late nineteenth and early twentieth centuries. I combine a newly collected data of bankers in Antioquia with the information on social interactions among the elite of the region by Mejia (2018).

In a broader context, this paper contributes to one of the seminal conversations of Latin American social sciences. I referred to a conversation that emerged in the 1960s, which saw the modernization of Sao Paulo, Monterrey, and Medellín as the key to understanding the essence of Latin America's development path see (Lipset et al. 1967; Hirschman 1968; Twinam 1982).<sup>1</sup> These episodes resembled in many ways the modernization of Western Europe and North America, sharing features such as the expansion of markets, the adoption of capital-intensive technologies, the growth of the financial system, and the acceleration of urbanization. However, certain attributes deeply ingrained in Latin American history and culture, such as the persistence of lineages that controlled key political and economic spheres, the profusion of informal markets, and the dependence on foreign trade dominated these modernization episodes and were hardly relatable to the experiences in other latitudes. In that sense, Sao Paulo, Monterrey, and Medellín (and their broader regions, i.e. the State of Sao Paulo, Nuevo León, and Antioquia) could be seen as the genesis of modernity *à la* Latin America.

This paper takes one of these prominent cases and brings large-scale data at an individual level to explore the specific mechanisms through which social interactions shaped the business environment and

<sup>1</sup> These were non-capital cities where industry early emerged and where an industrious identity came out of it. In the words of Albert Hirschman, these were “*isolated, inbred and self-consciously proud industrial centers*” [p. 23] (Hirschman 1968).



the economic activity. In such a way, this paper brings a renewed perspective to the seminal conversation around the social fabric behind the modernization of Latin America.

The paper is organized as follows: In Sect. 2, I present a brief context of the modernization of Antioquia. Section 3 summarizes the cycles in the banking sector and the ownership structure of the business. Section 4 reflects on the location of bankers among the broader elite of the region, and Sect. 5 explores the value of social connections for bankers. In Sect. 6, I provide qualitative evidence to describe the nuances of the progressive amalgamation of bankers and industrialists. Finally, Sect. 7 offers some concluding remarks by contextualizing the results in the broad conversation on elites in Latin American history.

## 2 CONTEXT: THE MODERNIZATION OF ANTIOQUIA

Antioquia is a region in the western part of Colombia. Its formal borders have changed over the years, but, for the sake of this paper, I will consider what today is the department of Antioquia. It is a region of approximately 63,000 square kilometers, of mostly mountainous territories. In 1905, about 12% of the Colombian population lived in this region. The difficult geographical conditions led to exceptionally high transport costs and long-lasting geographical isolation, both within the region and with the rest of Colombia and the outside world (see Fig. 1).

Notwithstanding the geographical conditions, Antioquia was the key region in the emergence of modern capitalism in Colombia. Modern capitalism emanated in Antioquia in the late nineteenth and early twentieth centuries in a process that became iconic in Latin America.

Nevertheless, in contrast to every other episode of early modernization in the region, the Antioquian modern economy emerged as the result of local efforts. Mejia (2018) shows that the role of immigrants and foreign firms in the industrialization of Antioquia was minuscule. Immigrants owned 5% of industrial firms, which was an equivalent number to the participation of immigrants in the whole population. This contrasts with the situation in the other industrial poles in the Americas, such as the Buenos Aires region, where 80% of industrial firms were owned by immigrants, representing almost three times the fraction of immigrants in the population.



**Fig. 1** Map of Antioquia (*Note* This figure presents the map of the area of study)

Beyond this indigenous drive, which remains an issue to be studied, the modernization of Antioquia was quite conventional. Although there is some evidence that, already by the mid-nineteenth century, mining activity could have made Antioquia slightly more prosperous than the rest of Colombia, it was still a rather poor traditional society.

Average households lived barely above the subsistence level. The income per capita in Antioquia by the 1860s was about 35% of the one of the US (Mejía 2012). Authors like Brew (1977) and Poveda (1981) describe the average diet in the region as one based on large amounts of cheap carbohydrates with extremely low amounts of animal proteins. In 1851, the population of Medellín was less than 18 thousand people, of which only half lived in the urban area. In the region as a whole, more than 70% of the workforce was still employed in agricultural or mining activities by the 1880s (Botero 1888).

It was precisely during the 1880s when banking thrived, bringing vitalization of different sectors of the urban economy all over the region. This

boom included the colonization of the south and west of the region, which eventually would become the epicenter of the coffee economy. By the early twentieth century, industrial production had emerged, representing the final stages of the modernization of the region.

In this chapter, I will cover this entire period, focusing on the birth and consolidation of banking and its relations with the expansion of other components of the modern economy, industry, in particular.

### 3 EMERGENCE AND CONSOLIDATION OF BANKING IN ANTIOQUIA

#### *3.1 Regulation and Banking Cycles*

Despite the geographical isolation of Antioquia, the broader institutional framework of Colombia certainly impacted the modernization of the region. Monetary policy and financial regulation, in particular, deeply shaped the emergence and consolidation of the banking system in Antioquia.

To begin with, the Catholic Church controlled through consuetudinary practices most of the large-scale credit in Colombia during the Colonial period (see Marulanda 2013) for evidence for Antioquia). Throughout the nineteenth century, with the expansion of their trade business, commercial houses increasingly got involved in the provision of credit services and the role of the Church systematically declined. Several legislative and entrepreneurial efforts to create banks took place during the century. However, only after the approval of Law 35 of 1865 were those efforts successful.

Law 35 permitted regional governments to legislate in favor of the creation of banks that accepted deposits, performed transfers, traded with exchange letters, and, more importantly, issued currency. Thus, the emergence of banking in Colombia was closely related to the liberal and federal reforms of the second half of the century. As intended by these reforms, their result was the generation of a highly fragmented free-banking system, in which regional banks prospered (Acuña and Álvarez 2014).

It was within this context that the first banks in Antioquia emerged. They rapidly integrated with the trade and mining economy of the region. Indeed, several of them were created with the specific purpose of leveraging mining projects and most of them with the general aim of relieving

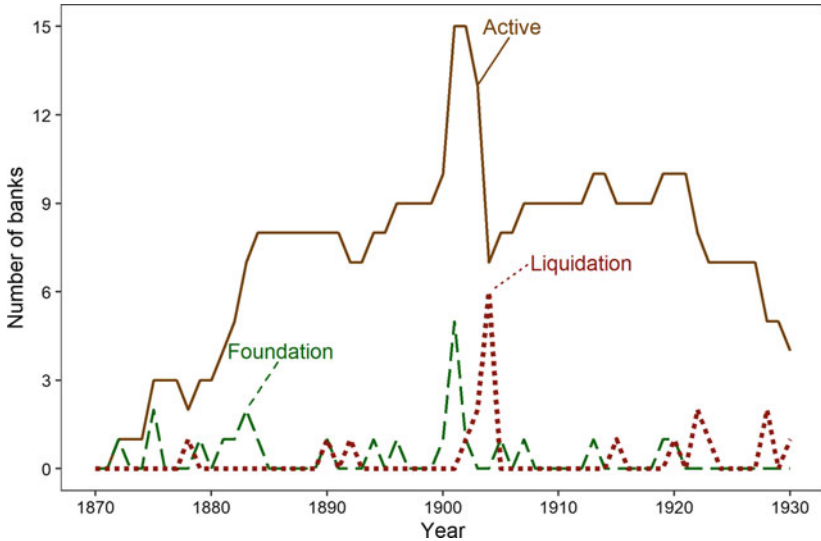
bullion to international transactions (Botero 1984). By the mid-1880s, Antioquia had a fairly sophisticated banking system composed of eight institutions that were highly interconnected in terms of both their property and their operations. *Banco de Antioquia*, founded in 1872 as a joint venture between the State of Antioquia and the elite of the region, played the role of a coordinating monetary authority.

Free banking was a fairly stable regime in Antioquia until 1886, when the new centralist government in Bogotá decided to fully prohibit the private emission of currency across the country and strengthen the role of a proto-central bank, *Banco Nacional* (Mejía 2012). The constrained financial regime promoted during this period led to a deep stagnation of the banking business in Antioquia. Only with the reforms of the change of the century and the speculation opportunities that the monetary chaos brought, the banking business was revitalized in the region.

After a brief interruption resulted from the financial crisis of 1903–1904, the expansion of the coffee activity and the take-off of industry provided new business opportunities for the banking sector in Antioquia. During this period, banks played an important role as direct investors in a vast range of entrepreneurial projects.

In 1923, the government implemented the recommendations of the first Kemmerer Mission, which famously included the creation of *Banco de la República* as a conventional central bank. Some less famous recommendations were the restriction of banks to commercial activities and a set of precise precautionary measures of financial stability, such as the definition of minimum capital requirements for all banks. In general, these reforms led to a series of acquisitions of small regional banks by large banks in Bogotá and Medellín. This process generated a much more concentrated banking system (Mora 1992). By 1930, there were only four banks with their headquarters in Antioquia.

Overall, between the creation of the first bank in 1872 and the beginning of the Great Depression, the banking business in Antioquia followed a cyclical pattern. Periods of expansion on the creation of banks were rapidly followed by periods of destruction (see Fig. 2). Each period was motivated by a different set of incentives and, accordingly, the focus of the system exposed different features. Namely, a cycle of emission banks between the 1870s and the early 1890s, a cycle of speculation banks from the late 1890s until the early 1900s, and a cycle of investment banks from the late 1900s until the late 1920s.



**Fig. 2** Banking cycles. Antioquia 1870–1930 (Note This figure presents the number of banks that opened, closed, and were active in Antioquia. It is based on Table 3)

### 3.2 Banks' Ownership in Antioquia

In order to connect the emergence of banking with the evolution of the economic elite, I built a new dataset of all the banks founded in Antioquia during this period. These data come from their founding charters. It includes information on their equity, founding and closing dates, location of their headquarters, ownership structure, and identity of the founding shareholders and board of directors (see summary Table in 3).<sup>2</sup>

In total, there were 24 banks created during the period, with an average equity of 143 thousand pesos, i.e. about 0.5% of the annual GDP of Antioquia in 1900 (Mejía 2015). On average, a bank had 61.4 shareholders and survived for 20.1 years.

<sup>2</sup> Only three banks are not part of this dataset: *Banco del Zancudo*, *Banco de Sopetrán*, and a nineteenth-century *Banco Republicano*. No systematic evidence of these firms is preserved.

Some banks had a classical family-business structure, the dominant partnership figure in the region at the time. Under this figure, the head of the family shared the ownership of the business with his adult children and their wives or husbands. New partners would come to the society as the family grew. This figure occasionally implied more than one founder, usually two, one who contributed the capital and the other, the labor. The families of both founders would be included as described above. Marriage connections between families that had business partnerships were common.

Examples of single-family banks were *Restrepo y Cia*, *Vicente B. Villa e Hijos*, and *Botero Arango e Hijos*. However, even these had one or two minority partners who were not directly family related. Examples of multifamily banks were *Chaves Vásquez y Cia* and *Vásquez Correa y Cia*.

Most banks, however, were modern corporations. Indeed, *Banco de Antioquia* and *Banco de Medellín* were arguably the first firms with such structure in the region. *Banco de Antioquia* had 61 shareholders and *Banco de Medellín* 442. They were managed by a board of directors who followed well-defined statutes, which intended to align their interests with those of the shareholders. Some of these organizations embraced classical practices of information transparency and corporate governance. For example, the publication of financial statements in local newspapers was not infrequent.

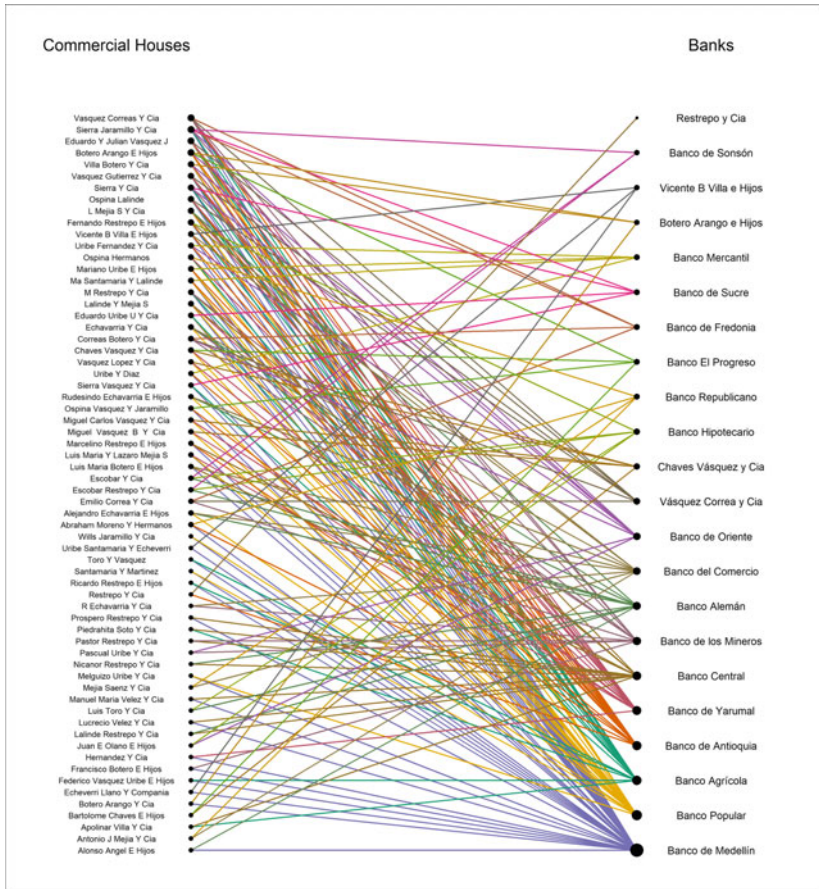
The interaction between these two organizational models, the family business and the corporation, is one of the most poorly understood phenomena in the business history of the region. The classical literature frequently refers to it as a sequential process, in which corporations eventually dominated the business environment previously based on family connections (Brew 1977). Nevertheless, following the banking sector, it is clear that this process was much more complicated. Corporate identity never fully replaced family connections in the ownership, neither in the management, of banks.

Indeed, it is possible to see the strings through which specific families still controlled banking corporations even in the last days of the period. The fundamental element to observe this is the mediation of the *commercial house*, which was the legal figure by which a good part of families organized most of their business activities.

Figure 3 shows that some families consolidated, through their commercial houses, participation in several banks and actively behaved as family

conglomerates. This was the case of the Vásquez, the Correas, the Sierras, and the Boteros.

Moreover, the leaders of some of these families were able to have a big word on the decisions of the entire banking system. This was the case of Eduardo Vásquez Jaramillo, who, as a shareholder of *Ospina Lalinde*,



**Fig. 3** Commercial houses ownership of banks (*Note* This figure presents the commercial houses that owned stocks in more than one bank. Links between commercial houses and banks indicate that ownership)

*Vásquez Correas y Cia*, *Vásquez Gutiérrez y Cia*, and *Eduardo y Julián Vásquez J.* (in addition to his individual participation), was the main shareholder of *Banco de Antioquia*, *Banco de Medellín*, *Banco Agrícola*, *Banco de Yarumal*, and *Vásquez Correa y Cia*. Another worth mentioning example is the figure of Maximiliano Correa Uribe. As a shareholder of several of the commercial houses that had banking stocks, Correa was able to be part of the board of directors of *Banco de Fredonia*, *Banco Alemán Antioqueño*, *Vásquez Correa y Cia*, and *Banco de Sucre*.

As I will describe in Sect. 4.3, this extraordinary control over the banking corporations was functional in the broader purposes of entrepreneurial families. The Vásquez and the Correas will be a clear example of it at that stage.

## 4 BANKERS AS PART OF THE ELITE

### 4.1 *The Elite of Antioquia and Their Social Network*

The previous section introduced the intuition that banking emerged as an initiative of a prosperous social class. Indeed, the classical work on the history of Antioquia gives the business elite a fundamental role in the expansion of modern capitalist structures, and banking in particular (Brew 1977; Botero 2007). Usually, this argument follows a narrative in which the elite engaged in a series of business waves, beginning with mining and traditional agriculture, followed by trade and banking, eventually reaching coffee growing and industry.

Different pieces of this narrative have been revisited in recent years thanks to the disposal of new data. A fundamental part of this renewed interest is the dataset on the social interactions of the elite by Mejía (2012) and its extension in Mejía (2018).

This dataset results from 100 primary sources located in 15 archives and around 185 secondary sources (see Appendix “[Social-interaction Data](#)” for details on the data construction). It follows 1,876 individuals of the elite of Antioquia in the late nineteenth and early twentieth centuries over their entire lives. It presents information on six dimensions of interactions: family, friendship, politics, business, intellectual discussion, and civic initiatives.

Each dimension takes the shape of a network, in which individuals are connected if they had a social interaction in that sphere. Table 1 summarizes the criteria used in the construction of those networks. These



criteria attempted to guarantee the proper identification of significant social interactions from the information available in the primary sources.

As each network represents a particular type of social dynamic—for example, interactions among family members are different than those among political allies—they have different structures (see Table 4). In this chapter, I will not focus on the variation across these networks. I will instead concentrate on the complete network, which gathers the interactions with individuals in all the different social dimensions. The complete network can be interpreted as the aggregate map that describes the entire set of connections in society.

Ties and nodes appear and disappear as individuals enter and leave the elite and as they construct and destroy interactions with each other. Therefore, the network is dynamic. It evolves every decade. Therefore, what these data show is how the structure of this community changed, decade by decade, for over a century (see Fig. 4 to have an idea of its evolution). Table 5 provides a statistical description of the evolution of the network over time.

## 4.2 *Bankers as a Community*

The banking system during the period had 924 shareholders. Of those, 719 are part of the social-interaction dataset of Mejia (2018). Based on this, I can compare bankers with the rest of the elite (see Table 2). The first thing to notice is that, among bankers, it was more common to see males, people that came from wealthier families, and people that were less educated than among non-bankers. Bankers were also more likely to have experience as politicians, miners, or merchants.

It is interesting to compare these features with the ones of industrialists, the other relevant modern economic elite of the region. Although they shared some common features—we will discuss the long-term convergence of two in Sect. 6—it is precisely on the features that they did not share where the relevant lessons seem to rest.

Industrialists were better educated, and they were more likely to have lived abroad and to have an engineering degree. In addition, industrialists did not come from particularly wealthy families. In other words, while bankers seem to have come mostly from the traditional elite, industrialists seem to have been a sort of renovated elite that was better connected with the world and with modern technologies.

**Table 1** Criteria used in the construction of the social networks

<i>Network</i>			<i>Nodes</i>	<i>Edges</i>	<i>Weights</i>	<i>Period</i>
Family			All*	Parents, couples, children and siblings	None	1740–1999
Political			Public servants	Members of common cabinets. Direct bosses. Direct subordinates	Number of interactions	1820–1950
NGOs	Civic		Members of civic organizations	Members of the same civic organization	Number of interactions	1840–1950
	Guilds		Members of guild associations	Members of the same guild association	Number of interactions	1880–1935
Business	Modern sector	Modern transport	Shareholders of non-animal driving firms	Shareholders of the same company	Number of interactions	1880–1930
		Urbanization	Urbanization shareholders	Shareholders of the same company	Number of interactions	1880–1930
	Traditional sector	Agriculture	Agricultural shareholders	Shareholders of the same company	Number of interactions	1850–1930
		Animal husbandry	Shareholders of animal husbandry firms	Shareholders of the same company	Number of interactions	1850–1930
		Mining	Mining shareholders	Shareholders of the same company	Number of interactions	1750–1880
		Mule driving	Mule driving shareholders	Shareholders of the same company	Number of interactions	1750–1865

(continued)

**Table 1** (continued)

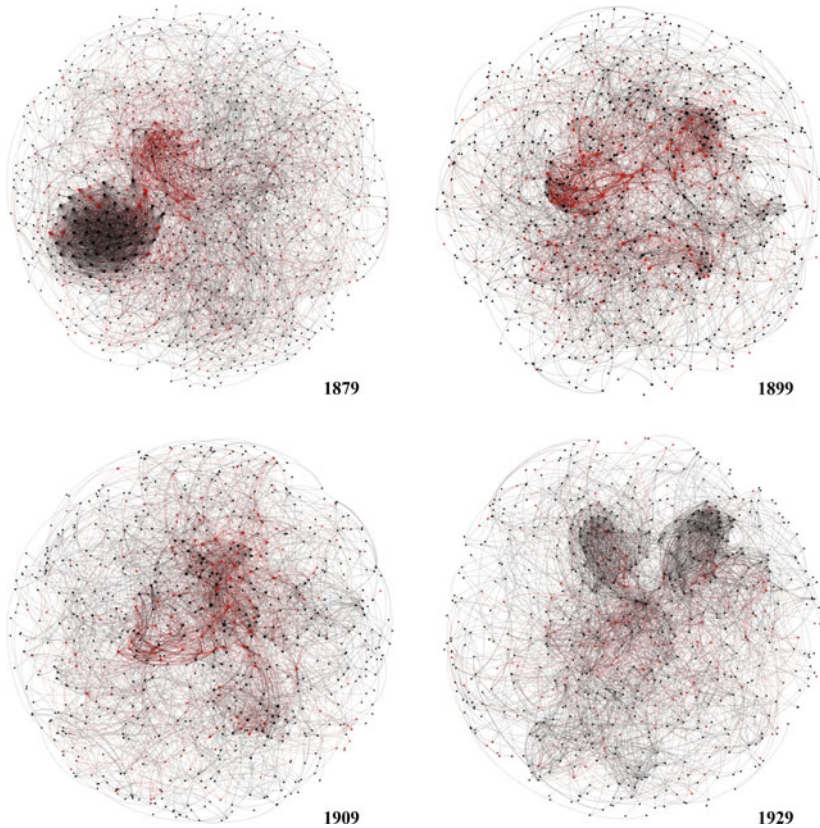
<i>Network</i>	<i>Nodes</i>	<i>Edges</i>	<i>Weights</i>	<i>Period</i>
Intellectual	Members of intellectual circles	Partners at any intellectual project	Number of interactions	1750–1999
Friendship	All*	Friend. Member of the same social club	None	1750–1999
Complete	All*	All excepting banking edges	Number of interactions	1750–1999

\*All means that any individual in the sample could be part of the single network  
 Note This table presents the criteria used for defining interactions  
 Source Mejia (2018)

Having pointed out the particularities of the average banker, it is important to recognize that the banking community was quite heterogeneous. In addition to the evident variation across the features of Table 2, the distribution of the capital invested in the system was far from uniform. Indeed, it was a remarkably skewed distribution. The median banker had 800 pesos invested, which is equivalent to about 20 times the yearly GDP per capita of Antioquia in 1900. Meanwhile, the top 10% of the largest bankers of the region had an average investment of 9,000 pesos, and the top 1%, 40,000 pesos.

This difference is not only a reflection of the natural wealth distribution of this community, it is also informative of a certain heterogeneity in the business character of the banking activity. While most bankers had a passive role, limiting their activity to owning some participation of a given bank, a few others had an active role in the management of several of the banks. I would call the first group *rentiers*, while the latter, *entrepreneurs*.

Probably, the most explicit mechanism through which banking entrepreneurs controlled banks was participating in their board of directors. Bankers with larger investments in the business were more likely board members. More specifically, the probability that a person was a board member increased by 0.07 as her capital invested in the banking business increased by 1,000 pesos.



**Fig. 4** Complete network over time (*Note* This figure presents the graph of the complete network in four instants: 1879, 1899, 1909, 1929. Dots represent individuals (i.e. nodes) and lines represent interactions between them (i.e. edges). Red nodes are bankers. The size of nodes is proportional to their degree)

Banking entrepreneurs used their control over banks to direct resources from these institutions to other productive projects in which they had interests. This was common since the early days of banking, particularly, among family banks. In some cases, this was a profit-driven behavior. For instance, *Restrepo y Cia* leveraged a good part of the expansion of the mining company *El Zancudo* of which the bank had stocks since its constitution (Botero 2007). However, broader social motivations were also part

**Table 2** Bankers and industrialists' attributes compared with the broader elite. Antioquia. Nineteenth and twentieth centuries

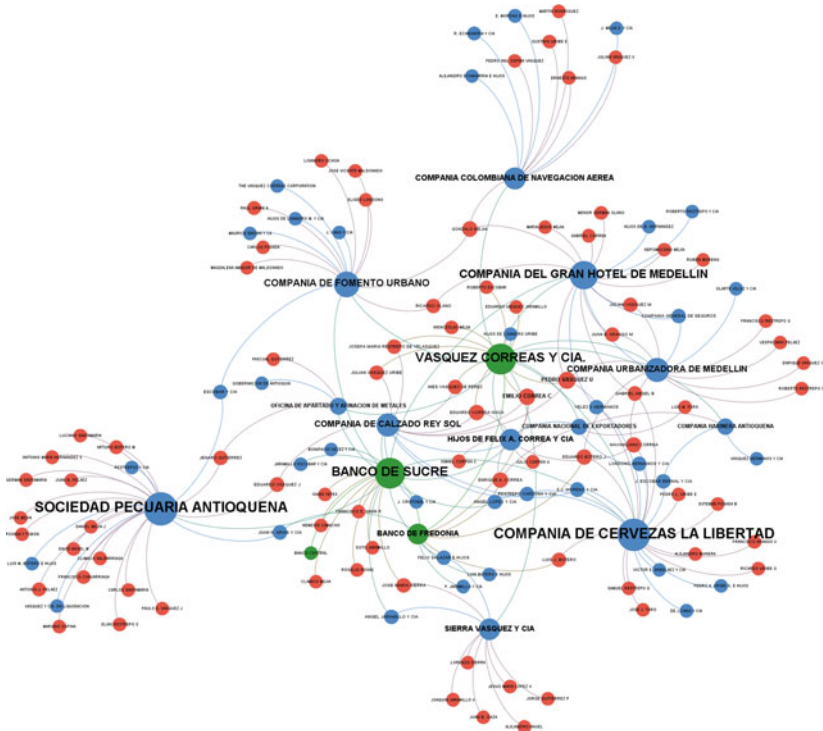
<i>Attributes</i>	<i>Bankers</i>			<i>Industrialists</i>		
	<i>Yes</i>	<i>No</i>	<i>Difference</i>	<i>Yes</i>	<i>No</i>	<i>Difference</i>
Male	0.829	0.718	0.111***	0.97	0.74	0.230***
Immigrant	0.005	0.02	-0.014	0.026	0.015	0.011
Higher education	0.021	0.056	-0.035***	0.114	0.036	0.079***
Family wealth 1850	1.659	1.358	0.302***	1.409	1.417	-0.008
Live abroad	0.006	0.014	-0.008*	0.042	0.008	0.035***
Politics	0.308	0.215	0.094***	0.4	0.21	0.190***
Trade	0.427	0.166	0.261***	0.452	0.185	0.267***
Mining	0.151	0.064	0.088***	0.2	0.064	0.136***
Landowning	0.076	0.072	0.004	0.148	0.062	0.086***
Engineer	0.043	0.036	0.007	0.13	0.025	0.105***

*Note* This table presents the means of a set of attributes between bankers and non-bankers and industrialist and non-industrialists. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

of this logic. For example, Luciano Restrepo, the head of *Restrepo y Cia*, was an active member of the Liberal Party, being governor of Antioquia in the 1880s after the invasion of Liberal forces from southern states. One of Luciano's strongest supporters among the elite of the region was Carlos Amador, the head of *El Zancudo*. In the long term, this type of politically motivated investment had a negative impact on the performance of bankers, as I will show in Sect. 5.

Nevertheless, the efforts to direct banks' resources toward projects of interest of their owners and their connections were not exclusive of family banks. This was also a common practice among banking corporations during the investment-banking period. An example of this was *Banco de Sucre*. In addition to its investments in already mature firms, *Banco de Sucre* was a founding shareholder of seven companies, six of which were non-financial, and all of them were part of the portfolio of the Vásquez and Correa families, the largest shareholders of *Banco de Sucre*. Indeed, the portfolio included not less than an urban developing company, a hotel, a shoe factory, a beer company, and an agricultural society. The participation of the Vásquez and Correa families was done either through one of the commercial houses they collectively owned, including the bank *Vásquez Correa y Cia*, the commercial houses and other firms that they separately owned, or the direct investment of some of the members of the

families. Figure 5 shows the multidimensional network of the Vásquez and Correas.<sup>3</sup> In this network, individuals are connected through firms if they collectively owned them.



**Fig. 5** Multiplex network of the companies of *Vásquez Correa y Cia* and *Banco de Sucre* (Note This figure presents the property network of companies founded by *Banco de Sucre* and *Vásquez and Correa y Cia*. Red nodes represent individuals; green, banks; and blue, other types of firms)

<sup>3</sup> Multidimensional network is one of the terms used to refer to systems in which connections exist between different types of entities. In this case, individuals are connected to firms, and firms are also connected through firms. Notice that this differs from the simple networks of the social interactions presented in Sect. 4, in which connections only exist between individuals. For a review on multidimensional networks, see Kivelä et al. (2014).

Altogether, the Vásquez and Correas consolidated an entire conglomerate that covered an extensive set of activities supported on the funding of banks controlled by them. Other influential families, such as the Sierras, Boteros, and Uribes, were articulated into this conglomerate.

This example, beyond describing a concrete mechanism through which families controlled corporate environments, points out a specific dimension in which the banking elite overlapped the industrial elite. Industrialists tended to be banking entrepreneurs rather than banking rentiers. A simple way to observe this is to notice that among those bankers that were industrialists, the average investment in the banking system was 6,900 pesos, more than twice the one of the non-industrialists—2,900 pesos. Moreover, bankers who were industrialists had a 3% higher probability to be board members of a bank.

In Sects. 5 and 6, I will expand on the benefits of the connections between bankers and industrialists and the long-term trends of those connections.

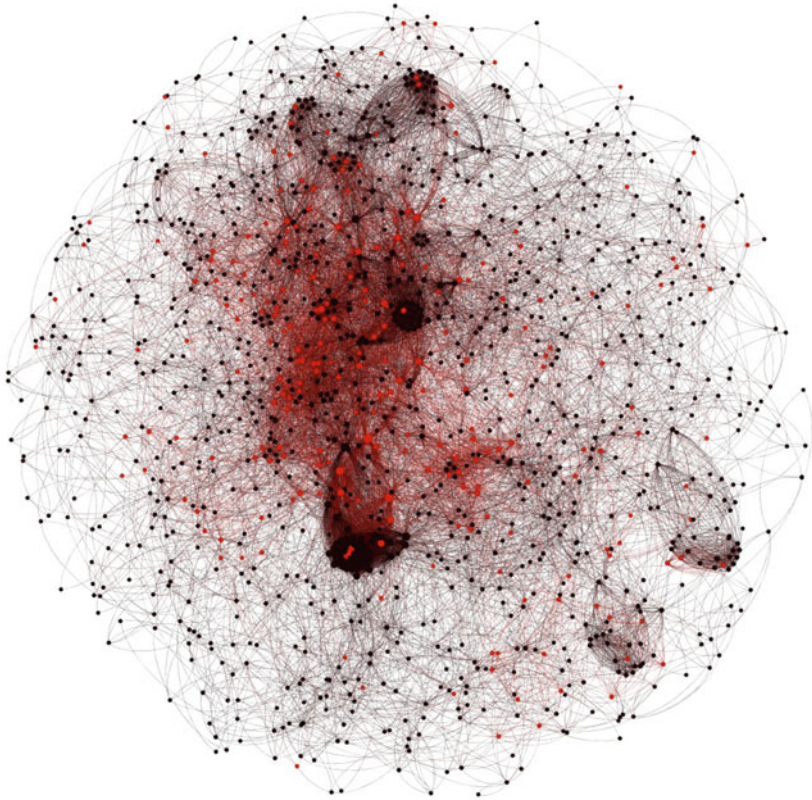
### 4.3 *The Centrality of Bankers*

To have a more systematic understanding of the way in which bankers interacted with the rest of the elite, it is necessary to complement the previous analysis with a structural view of those interactions.

To do so, I analyze the location of bankers in the broad network of the elite. To avoid the complexities of the dynamic dimension of the analysis, I extract one single full map of all the interactions that existed during the period (see Fig. 6).

From a basic statistical analysis of this network, one can extract several lessons. The first lesson is that bankers were particularly central in a very specific way, and they had more connections—i.e. higher degree.<sup>4</sup> More precisely, an average banker had about twice the number of connections than an average member of the elite. This is still the case when you control for observable attributes. In other words, a banker with a specific set of

<sup>4</sup> Centrality is a fundamental concept in network analysis. It refers to the notion of how important the position of a given node is in the network. The most commonly used centrality measures are *degree*, *closeness*, *eigenvector*, and *betweenness*. Except for degree, none of these centrality measures is robustly correlated with any feature of banking once one controls for degree. For a review of network centrality, see Borgatti (2005).



**Fig. 6** Complete network. Static perspective (*Note* This figure presents the graph of the complete network as a cross-section. Red nodes are bankers. The size of nodes is proportional to their degree)

features (e.g. male, immigrant, highly educated) had more connections than another member of the elite with identical features.

Moreover, Fig. 7 shows a positive and significant correlation between the degree of individuals and the prediction of the intensity of the involvement in banking by the observable attributes those individuals had. Put it differently, individuals with larger investments in the banking sector, measured either as the total number of banks in which they had stocks or



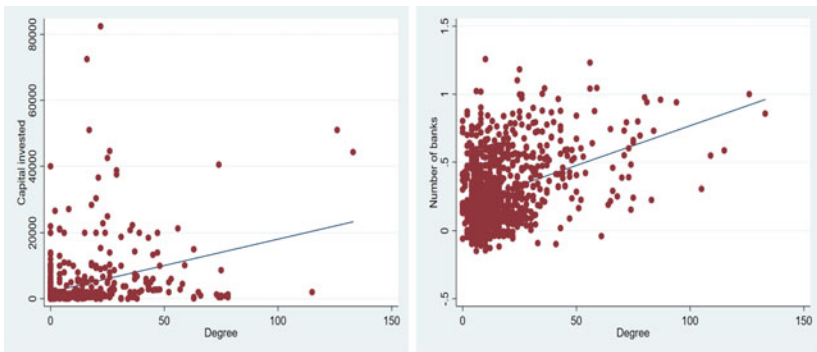
the value of their total investment, had a higher degree than other similar members of the elite.

This regularity suggests that the number of connections might have been an advantage at the time of being a banker. It could also mean that being a banker was useful to increase the connectivity of individuals.

To explore this question, we can exploit the temporal dimension of the network. In a longitudinal regression setting, where individual and time-fixed effects are considered, we can observe over time the same individual and see if her higher centrality followed her banking investments or her higher banking investments followed her centrality.

In such a setting, it is clear that banking investments followed centrality and not the other way around. More precisely, an increase in one connection is significantly associated with an increase in 51.5 pesos invested in the banking system in the following decade. Meanwhile, an increase in one peso is significantly associated with a decrease of 0.0001 contacts in the following decade.

Several different explanations are consistent with this result. However, I would like to point out that being the founder of one of these banks was a limited investment opportunity. Even when small investment positions



**Fig. 7** Banking and network centrality

(*Note* This figure presents significant correlations between the predictors of banking activity and degree. The predictors of banking come from a classic OLS regression which has as independent variables family wealth in 1850, gender, birth year, death year, marital status, place of birth, political party, and dummies of industrialist, engineer, miner, politician, and trader)

were available, there was not a fully open market where those positions could be freely acquired. Knowing more people represented higher opportunities to have information regarding the existence of projects open for investors, as well as opportunities to access the prerogatives necessary to be accepted as an investor in one of those projects.

This is an interesting result in light of our knowledge of industrial entrepreneurship in the region. In contrast to what Mejía (2018) finds for industrial activity, where global connectivity was the key, in this case, local connectivity seems to have been the relevant element in explaining banking investments. This indicates another fundamental difference between industrialists and bankers.

Industrial firms were usually endeavors created by a small number of founders, who had an active involvement in the operations of the firm. Their activity required the collection of a diverse set of resources that were spread out all over the network—e.g. financial capital, technical knowledge, legal permits. Meanwhile, banks were supported on traditional business infrastructure and did not require much more than large amounts of capital. The expectations of most banking founders were only to provide the capital needed. In that sense, one should not expect that social connections played identical functions for businesspeople in both activities.

## 5 BANKING PROFITS AND THE VALUE OF SOCIAL CONNECTIONS

Now, we know that connections seem to have been beneficial to have access to more investment opportunities in the banking business. However, it is not clear if those investment opportunities were particularly profitable. After all, banking was only one of the many different investment alternatives available for someone with a large number of connections.

There is quite limited systematic evidence preserved on the profits of the banking business. Nonetheless, the data on the creation and destruction of banks suggest that they followed the cyclical pattern described in Sect. 3.1. Anecdotal evidence supports this as well. We have information on the annual rate of return for *Banco de Antioquia* from its foundation until 1885 (Botero 1984). This rate moved between 12% and 40%, being

significantly higher than those of other activities, such as trade,<sup>5</sup> and much higher than the growth of the economy at the time.<sup>6</sup>

For the early twentieth century, we have again information on profits. By the late 1920s, in the midst of the Kemmerer reforms, the annual rates of return in the banking system in Antioquia moved between 6.6% and 12.7% (Mora 1992). These figures were much closer to the rate of growth of the economy<sup>7</sup> and fairly below the returns in the leading sectors, such as textile manufacturing and coffee growing.<sup>8</sup>

Despite the data limitations, it is possible to construct a couple of proxies of the long-term performance of banks. The first proxy is one that captures their life length. The second proxy is one that captures their survival to specific crises—i.e. the end of free banking, the 1904 crisis, and the reforms of the Kemmerer mission. Arguably, banks that survived for longer were more successful, as well as those that overcame particularly difficult conjunctures.

Aggregating these proxies across the institutions in which individuals had investments, it is possible to see which bankers had a better-performed portfolio. Which type of people were more successful bankers?

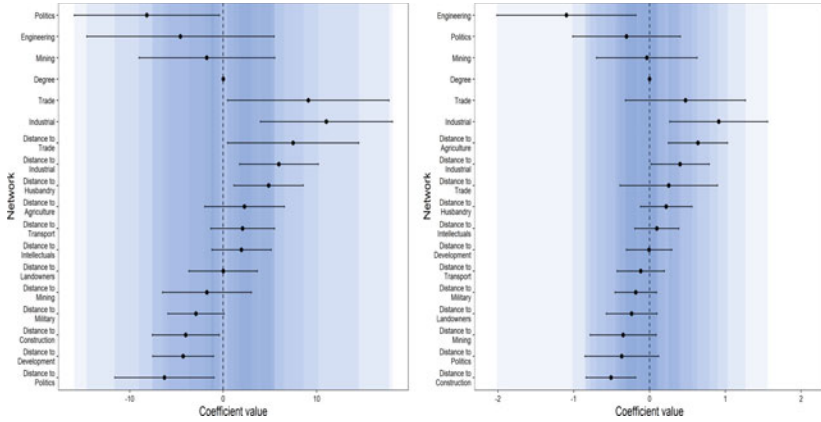
To address this question, Fig. 8 shows the coefficients of a pair of conventional linear regressions, in which I compare the performance of bankers controlling for observables. In these regressions, I explore the association of the portfolio performance with the individual attributes of the banker and her position in the network. In particular, I consider the banker's distance to other members of the elite. I measure social distance as the minimum number of steps in the shortest path across the complete network necessary to connect with a given type of person.

<sup>5</sup> Mejía (2015) estimates that the average annual growth rate of the GDP of Antioquia between 1800 and 1913 was approximately 2.5%.

<sup>6</sup> As a point of reference, following the data by Vélez Villegas (2017), the annual rate of return of *Botero Arango e Hijos* on their trading business was around 2.4% during the late 1870s. This should be interpreted as a lower bound estimate of the returns on trade.

<sup>7</sup> Based on the data by Echavarría (1999), one can infer that a 20% annual rate of return was not atypical among textile companies in Antioquia. Similarly, Palacios (1979) shows that *Vásquez and Correas* in the late 1900s had an annual rate of return between 12% and 27% in their coffee-export business.

<sup>8</sup> Estimates by GRECO (1999) indicate that the Colombian GDP grew between 5.4% and 9.9% in the 1920s.



**Fig. 8** Banking success. Coefficient plot (*Note* This figure presents the point estimates and 95% confidence intervals of the coefficients in a couple of classic OLS regressions. The unit of observation is the individual. The dependent variables are (i) number of years the average bank in an individual’s portfolio operated (right) and (ii) number of crises that banks in an individual’s portfolio survived (left). Each regression controls for family wealth in 1850, gender, birth year, death year, marital status, place of birth, and political party)

The first thing to notice is that the degree is uncorrelated with the long-term performance of bankers. Therefore, although more connections made individuals more likely to be bankers, a larger number of connections, on its own, did not represent accessing better-performing investment opportunities within banking.

Another insightful element of Fig. 8 is that being a politician and being close to politicians were some of the features more negatively correlated with the performance of bankers. The fact that these correlations are only significant when considering the life length of banks suggests that, most likely, political capital opened up business opportunities highly sensitive to the volatility of the political cycle.

*Banco de Antioquia* well illustrates the problems that the political cycle could bring to the banking business. It highly benefited from the prerogatives that the State of Antioquia provided to it as its official bank in the 1870s and early 1880s. However, the existence itself of the bank depended on the autonomy that the local state had under the federal period. This autonomy vanished with the consolidation of centralists in

the national government and the bank's struggles began. Thus, in contrast to several of the other banks that emerged during the free-banking era, which survived until the 1903-04 crisis, *Banco de Antioquia* could not bear the lack of governmental support, and it closed its doors a decade earlier.

On the opposite side, it is interesting to notice that the proximity to industry was a good predictor of banking success. For example, the average bank in which industrialists invested operated for 10 more years than one of the non-industrialists. Even among non-industrialists, being one step closer to an industrialist was associated with investments in banks that lasted on average five years more.

Interpreting this regularity is not easy, but the experience we discussed regarding *Banco de Sucre* and *Vásquez Correa y Cia* gives useful elements to hypothesize around it. Industrial activity seems to have been a useful hedge from the volatility that characterized financial activities during the period. *Banco de Sucre* itself emerged in 1905 as a project that intended to avoid the speculative model that dominated the banking business until the 1904 crisis.

Most banks during the speculation period had two main sources of revenue. First, they used to buy gold and coffee with paper money, expecting to benefit from future devaluations of the exchange rate. Second, they received long-term deposits in gold at high interest rates to finance short-term credits in paper money; usually, these credits were taken by people also speculating with gold and coffee (Brew 1977). This made the system particularly sensitive to shocks in coffee prices and, more importantly, to changes in the monetary policy. The abrupt interruption of money printing and the stabilization of the exchange rate in 1903–1904 was, indeed, a scenario for which these banks were not prepared (Mejia and Parra 2021).

Instead of following this model, *Banco de Sucre* based its activity on the support of productive businesses with a longer-term perspective. In addition to the equity contributions to nascent firms that I described in Sect. 4, *Banco de Sucre* had extensive interests in the industrial sector as a creditor. For example, *Compañía Antioqueña de Tejidos* was founded in 1920, with Maximiliano Correa Uribe as one of its shareholders. *Banco de Sucre* funding was so important for the company that it was popularly known as the textile company of *Banco de Sucre* (Botero 1985).

This type of long-term interest in the real sector should have been beneficial for banks in order to deal with what was still a fairly unstable monetary environment.

## 6 THE AMALGAMATION OF BANKERS AND INDUSTRIALISTS

Although this paper has extensively described the differences between bankers and industrialists, it has also pointed out several forces that illustrate the advantages that brought to entrepreneurs the articulation of banking with other activities in the real sector—industry, in particular. These forces led to a progressive, but not complete, amalgamation of bankers and industrialists in the long term. I will use this section to qualitatively describe the process that led to such amalgamation.

To begin with, an important part of the symbiosis of bankers and industrialists happened through the equity and credit linkages that I described when referring to the Vásquez and Correas' network. Nevertheless, in addition to the channeling of resources from banks to industry, this amalgamation was also a social process that took place over the decades. Traditional banking families built marital, political, and friendship connections with traditional industrial families, generating an entirely new social class whose components were hardly distinguishable.

Consider, for example, Vicente B. Villa Gómez. He was the head of *Vicente B. Villa e Hijos*, one of the family banks of the free-banking period. In addition to his banking business, he had an extensive array of investments in mining, trade, land speculation, and agriculture jointly with several other members of the elite of the region, including Pedro and Julián Vásquez Calle, some of the largest bankers of the free-banking era and the forefathers of some of *Vásquez Correa y Cia.*'s founders.

The following generation of the Villas, some of which married children of the Vásquez Calle, remained in banking and other traditional businesses. However, their children, the Villa Vásquez, did gain interest in industrial entrepreneurship. Saliently, Vicente B. Villa Vásquez was well known for directing *Compañía de Instalaciones Eléctricas*, the first energy generation and distribution company in the region, until 1918 when it was nationalized (Álvarez 2003).

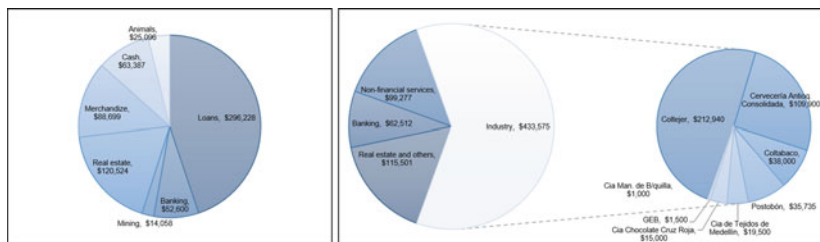
A good way to observe the evolution of the investment profile of this lineage is to compare the wealth data on the testament of Vicente B. Villa

Vásquez's with those on the testament of his grandfather, Julián Vásquez Calle (see Fig. 9.9).

The first thing to notice is that both individuals had strikingly similar fortunes.<sup>9</sup> Vásquez's assets were estimated to be worth 660,000 pesos, while Villa's 710,000 pesos. Nonetheless, the composition of their portfolios was radically different.

Julián Vásquez, just as his contemporary and in-law Vicente B. Villa Gómez, had his entire fortune in traditional sectors, mostly structured under customary figures. For example, the vast majority of his assets were in the shape of personal loans he gave to dozens of individuals, firms, and governments. His wealth as lender was complemented by an important number of shares of *Banco de Medellín*, *Banco Industrial de Manizales*, *Banco del Progreso*, and *Banco Colombiano de Guatemala*. The remaining assets of his fortune were merchandise, cattle, cash, mine titles, and real estate properties—most of them in rural areas.

Meanwhile, at the time of his death, 30 years later, Julian's grandson, Vicente B. Villa Vásquez, had more than 80% of his fortune in stocks



**Fig. 9** Wealth at death of Julián Vásquez (1894) and Vicente B. Villa (1925) (Note This figure presents the composition of the assets in the testaments of Julián Vásquez Calle (right) and Vicente B. Villa Vásquez's (left). Coltejer = Compañía Colombiana de Tejidos, Cervecería Antioq. Consolidada = Cervecería Antioqueña Consolidada. Coltabaco = Compañía Colombiana de Tabaco, Postobón=Compañía de Gaseosas Posada Tobón, GEB = Compañía de Energía de Bogotá, Cia Man. de B/quilla = Compañía Manufacturera de Barranquilla. *Source* Based on Botero [1985], and Hoyos [2006]

<sup>9</sup> Notice that these figures are in current prices. However, the introduction of the new peso corrected most of the war-period inflation. For details on the value of money in Colombia during the period see (Mejía and Parra 2021).

of companies. This indicates the rapid progression of corporations in the business environment of the region during those decades. Among the firms he had property on there were three banks: *Banco Alemán Antioqueño*, *Banco Republicano*, and *Banco Hipotecario de Colombia*. Nevertheless, most of his stocks were in industrial firms. His largest position was at *Compañía Colombiana de Tejidos*—i.e. *Coltejer*.

Vicente's involvement in *Coltejer* brings us back to the social fabric behind the amalgamation of bankers and industrialists. *Coltejer* was a textile company that became the symbol itself of the industrialization of Antioquia. It was an initiative of the commercial houses of two brothers: Alejandro Echavarría and Rudesindo Echavarría. Both of the Echavarrías were traders, having business relations with Vicente B. Villa Gómez. The Echavarrías dabbled in the banking sector as founders of *Banco Popular*. Alejandro had stocks and was board member of *Banco de Crédito Antioqueño*, *Banco del Atlántico*, *Banco de Comercio*, *Banco de los Mineros* y *Banco Alemán Antioqueño*. Rudesindo died young and was replaced as head of the family's commercial house, *R. Echavarría y Cia.*, by Vicente B. Villa Vásquez, who had married one of his daughters.<sup>10</sup> As such, Vicente got involved in *Coltejer* when it began operations in 1907.

At the end of Vicente's life, the children of Rudensindo Echavarría founded, with the children of Lazaro Mejía, *Fabrica de Hilados y Tejidos del Hato*—i.e. *Fabricato*. Fabricato was a textile company, whose popular recognition was only shadowed by *Coltejer*. Lazaro had an active banking activity with his brother Luis María. They had stocks of *Banco de Medellín*, *Banco Popular*, *Banco de Yarumal*, *Banco de los Mineros* y *Banco Agrícola*. Luis María's son, Gonzalo Mejía Trujillo, grew up to become an influential industrialist, being remembered for his pioneering role in the airline and film-making sectors.

Two of Gonzalo's sisters married with children of Jose Miguel Botero Pardo, leader of the family bank *Botero Arango e Hijos*. The remaining sister married Camilo C. Restrepo, son of the banking entrepreneurs Fernando Restrepo and one of the founders of the first textile company of the region *Compañía de Tejidos de Medellín*. The main shareholder of *Compañía de Tejidos de Medellín* was Eduardo Vásquez Jaramillo, founder of *Vásquez Correa y Cia* and nephew of Julian Vásquez Calle.

<sup>10</sup> Vicente B. Villa Vásquez married two of Rudensindo Echavarría's daughters, actually. He married Ana. After Ana passed away, he married Lucía.



Although it is possible to continue this intricate thread of connections as a saga of *One Hundred Years of Solitude*, the point is probably now clear. Marriages, partnerships, and friendships were the natural channels through which the elite expanded into the industrial sector, overlapping in a non-trivial way with the interests of banking entrepreneurs. It also points out the cohesiveness with which families evolved. This cohesive community is what the public opinion would see as *la élite industrial antioqueña* and what Nicanor Restrepo would, more rigorously, call *élites patronales* (Restrepo 2016).

As an explicit effort of these *élites patronales* emerged the entire institutionality that would symbolize the elite of Antioquia during the twentieth century. Organizations such as la *Sociedad de Mejoras Públicas de Medellín*, la *Asociación Nacional de Industriales*—i.e. *ANDI*, or la *Bolsa de Valores de Medellín* were collective efforts to provide a series of public goods for conglomerates in Antioquia, including political influence (Restrepo 2016).

The existence of this cohesive elite had corporate implications still evident in the twenty-first century. Facing the risk of hostile takeovers in the second part of the twentieth century, local entrepreneurs tried to shield their control over Antioquian companies through an interlock structure—i.e. *el enroque paisa*—which ended up with what is frequently known as *Grupo Empresarial Antioqueño*. This conglomerate is composed of four main holding companies which can be traced back to our story: a construction holding (*Grupo ARGOS*), an insurance and investment holding (*Grupo SURA*), a banking holding (*Bancolombia*), and a manufacturing holding (*Nutresa*). The downstream effects of the events herein accounted persist.

## 7 FINAL REMARKS

Modern capitalism is frequently framed as the result of the triumph of a community deeply synchronized by the interests of capital. This community, loosely labeled as the capitalist elite or the bourgeoisie, usually refers to the business leaders of modern sectors, mainly banking and industry, and it is described as a profoundly homogeneous group.

In this paper, I question that view by exploring in detail the banking community of Antioquia and its relationship with other components of the elite during the modernization of the region. I find that bankers were

a diverse community, which included individuals from quite different backgrounds who had different types of business objectives and practices.

In the midst of that diversity, the average banker could be described as a late remainder of the traditional elite, more than as a regular part of the modern elite. She differed from an average industrialist, the prototypical representative of the modern elite, who was better educated, with a deeper knowledge of engineering, and with more exposure to the global economy.

Moreover, the paper shows that, within the broad elite, the specific attributes and the network position that an individual had mattered for determining if this person ended up being a banker and how successful she was as a banker. Higher local connectivity was useful for having access to investment opportunities in the banking business, but it did not represent an advantage for the portfolio performance of bankers—i.e. individuals with more connections were more likely to be bankers, but they were not particularly successful as bankers. Nevertheless, the social proximity to certain communities did relate to the portfolio performance of bankers. Bankers that were close to industrialists in the social network were more successful; meanwhile, those closer to politicians were less successful.

This is consistent with the growing evidence around social capital, which describes that the benefits and costs of social connections are context dependent (Burt 2005). Depending on the context, even connections that seem inevitably profitable, such as political connections, can have downsides that overcome their benefits in the long term (Bertrand et al. 2018; Kubinec et al. 2021). Furthermore, these individual-level observations are coherent with aggregate-level results in a wide variety of contexts, which suggest that engineering communities, exposed to international scientific knowledge, were essential in the expansion of industrial activity and the consolidation of the modern economy (Mokyr 2005; Squicciarini and Voigtländer 2014; Maloney and Valencia Caicedo 2017).

Pushing further in that direction, the paper also sheds light on the interaction between the different components of the elite. In particular, it shows how bankers, this rather traditional elite, ended up amalgamating with industrialists, the forefront of the modern elite. This was possible thanks to a set of complementarities between the two groups. Bankers benefited from the new business opportunities that industrialists provided, and industrialists found the resources and prestige of bankers highly valuable.

Both social and economic mechanisms played important roles in the amalgamation of these elites. On the social side, an intricate network of marriage, friendship, and political connections approximated bankers and industrialists. On the economic side, certain families used the figure of the commercial house to control several banks and channel resources to industrial projects where they or their connections had interests. Banking never fully disappeared as an important activity among the business elite, but the industrialist identity became the most salient feature of this community.

Vestiges of this process are still visible today in Colombian society, where an interlock of industrial and banking, corporations controlled by entrepreneurs from Antioquia, has extraordinary economic and political influence. This points in the direction of a permanent conversation regarding the essence of Latin America: the persistence of elites.

The persistence of elites, which has recently captured also the attention of economists in the US and Europe (Piketty et al. 2014; Clark and Cummins 2014; Barone and Mocetti 2021), has been part of the academic discussion in Latin America for decades (Stone 1990; Casaús Arzú 1992; Acemoglu et al. 2007) and has been frequently interpreted from a political economy perspective (Acemoglu and Robinson 2008; Robinson 2012; Piketty 2020). This paper brings to this conversation systematic evidence of the non-political mechanism through which elites have persisted over time. These mechanisms do not show solid elites that used their ancestral political privileges to protect their rents by keeping the status quo. Instead, they show circulating elites that kept their status by embracing and adapting to the forces of modernization.

Hopefully, this type of reflection opens new avenues of research that can contribute to a better understanding of the long-term evolution of inequality and social mobility in Latin America. The new research that will follow the lines of this paper should focus on identifying the differential origins of modern elites, paying particular attention to those at local levels and their articulation with their national counterparts. Similarly, an important aim of future research on this agenda should be studying the social mechanisms that elites used to concentrate power and wealth. A fundamental element of such aim would be analyzing family as an institution, digging into the concrete practices that connected its social and business purposes.

## APPENDIXES

### *Social-interaction Data*

The data on social interactions used in this paper come from Mejía (2018). These data result from a comprehensive revision of both primary and secondary sources. More specifically, this dataset combines two independent components that sample the elite of Antioquia in the nineteenth and early twentieth centuries.

The first component is a snowball sample. The starting point of the snowball was the four largest shareholders of the banking system in 1888, who were expected to be well connected to the rest of the elite, making them good candidates to start mapping the whole network.

The dataset included all the information about the lives of these four individuals available in genealogical sources, business reports, periodic publications, chronicles, historical narratives, and the economic literature of the period. From these four individuals, the dataset grew by incorporating their connections, for whom all the available information was also collected, continuing an identical process of data reproduction emerged from them. The temporal boundaries of the sample were 1740 and 1905.

The final result is a sample of 953 people, for whom there is a biographical profile and the evolution of their most important social-interaction behavior over their life spans.

The second component intends to minimize the biases that result from the snowball sampling. It consisted of expanding the sample through a strategy that did not relate to the starting point of the snowball. More specifically, the dataset included members projects considered representative of the elite's public spheres of interaction—e.g. social clubs, intellectual associations. The common participation in a project was considered a tie between individuals.

Through the second component, 923 new individuals were included in the dataset. For these new individuals, there is no other information than the one related to their participation in the projects.

In total, the dataset contains information on 1,876 and 11,717 edges.

### *Additional Tables*

See Tables 3, 4 and 5.

**Table 3** Main characteristics of banks. Antioquia. 1870–1930

	<i>Foundation</i>	<i>Number of shareholders</i>	<i>Number of shares</i>	<i>Value per share</i>	<i>Equity</i>	<i>Equity per shareholder</i>	<i>Closure</i>
Banco de Antioquia	1872	61	1,399	\$500	\$694,500	\$11,385	1892
Banco de Mercantil Restrepo y Cia	1875	4	40,000	\$1	\$40,000	\$10,000	1878
Botero Arango e Hijos	1875	4	84,750				1915
Banco de Medellín	1879	4					1893
Banco de Medellín Popular	1881	442	15,392	\$100	\$1,539,200	\$3,482	1902
Banco del Progreso	1882	22	60	\$1,000	\$60,000	\$2,727	1904
Banco de Oriente	1883	7	100	\$1,000	\$100,000	\$14,286	1904
Vicente B. Villa 'e Hijos	1883	227	6,291	\$20	\$125,820	\$554	1944
Chaves Vázquez & cia.	1884	8			\$20,000	\$2,500	1904
Banco de Sonson*	1890	3			\$20,000	\$6,667	1904
Banco del Comercio	1894	8			\$50,000	\$6,250	1934
Crédito Antioqueño	1896				\$400,000		1903
Banco Agrícola	1900		4,000	\$10	\$40,000		1904
Banco Central	1901	125	10,000	\$10	\$100,000	\$800	1903
Banco de los Mineros de Antioquia	1901	55	4,000	\$10	\$40,000	\$727	1928
Banco de Yarumal	1901	127	12,000	\$5	\$60,000	\$472	1904
	1901	20	2,000	\$5	\$10,000	\$500	1946

(continued)

**Table 3** (continued)

	<i>Foundation</i>	<i>Number of shareholders</i>	<i>Number of shares</i>	<i>Value per share</i>	<i>Equity</i>	<i>Equity per shareholder</i>	<i>Closure</i>
Banco Republicano	1901	9	6,000	\$10	\$60,000	\$6,667	1928
Banco de Jerico	1902		1,500	\$10	\$15,000		1930
Banco de Sucre	1905	14	1,200	\$1	\$1,200	\$86	1920
Vásquez Correa & cia.	1907				\$140		1922
Banco Alemán Antioqueño	1913		3,000	\$1,000	\$3,000,000		1942
Banco de Fredonia	1919	9	5,000	10	\$50,000	\$5,556	1922
Banco Hipotecario de Medellín	1920	12	500	\$20	\$10,000	\$833	1923

*Note* Based on Marulanda Valencia (2007); Botero (1984), and Mora (1992) and founding charters of banks.

**Table 4** Cross section: main characteristics of the social networks

<i>Network</i>	<i>Nodes</i>	<i>Edges</i>	<i>Diameter</i>	<i>Density</i>	<i>Connected Components</i>	<i>Betweenness</i>	<i>Ego-density</i>
Complete	1,876	11,717	14	0.003	8	721.1 (1759.1)	26.37 (35.95)
Family	903	4,781	18	0.001	23	630.9 (1365.7)	5.94 (7.61)
Political	228	320	9	0.0009	14	0.798 (10)	1.45 (10.71)
Friendship	184	979	5	0.0003	23	0.106 (1.86)	5.86 (23.19)
Intellectual	153	723	9	0.0002	11	1.17 (15.2)	5.54 (21.96)
Traditional sector	162	738	9	0.0002	15	0.067 (1.1)	7.44 (25.73)
Agriculture	83	469	2	0.0001	15	0.0001 (0.006)	4.24 (20.13)
Mining	57	125	5	0.0004	7	0.014 (0.246)	2.30 (14.57)
Animal husbandry	26	113	1	0.0003	4	0 (0)	1.18 (10.79)
Mule driving	15	37	1	0.0001	4	0 (0)	0.80 (8.92)
Modern sector	685	105,871	5	0.03	3	78.5 (1595.2)	35.15 (47.19)
Banking	651	105,653	4	0.03	1	12 (274.8)	34.16 (47.00)
Urbanization	23	75	2	0.0002	3	0.005 (0.21)	1.20 (10.84)
Modern transport	19	145	2	0.0004	3	0.009 (0.39)	0.13 (1.51)
NGOs	282	4,111	7	0.01	4	0.834 (14.7)	14.46 (34.71)
Civic	193	2,957	7	0.0008	6	0.259 (5.14)	10.00 (29.74)
Guilds	101	1,159	4	0.0003	4	0.009 (0.22)	5.31 (22.32)

*Note* This table presents descriptive statistics of the social networks in the static framework. Nodes refer to total number of non-isolated nodes. For the aggregate networks the set of nodes is the union of the single networks' set of nodes. The set of edges is the union of the single networks' set of edges. Edges are weighted by the number of dimensions in which nodes are interacting. Betweenness refers to the average betweenness centrality and ego-density refers to the average ego-density. In parenthesis the standard deviation. Betweenness is escalated by  $10^6$  and ego-density, by  $10^2$ .

**Table 5** Panel: main characteristics of the complete network

<i>Decade</i>	<i>Nodes</i>	<i>Edges</i>	<i>Density</i>	<i>Diameter</i>	<i>Average path length</i>	<i>Betweenness</i>	<i>Ego-density</i>
1770	30	37	0.085	2	1.1	164.2 (899.3)	64.4 (47.9)
1780	62	103	0.054	2	1.2	176.2 (1091.8)	60.7 (48.6)
1790	93	58	0.014	4	2.1	413.5 (1406.3)	18.2 (37.4)
1800	208	243	0.011	11	4.5	1973.0 (7741.5)	28.6 (40.3)
1810	284	371	0.009	13	4.9	2658.1 (9135.1)	28.6 (39.0)
1820	404	557	0.007	13	4.9	2049.8 (7193.9)	29.5 (38.9)
1830	513	885	0.007	11	4.8	2197.8 (7601.8)	30.1 (37.9)
1840	1,162	3,362	0.005	16	4.5	422.9 (1698.1)	24.8 (38.3)
1850	1,363	3,987	0.004	16	4.8	504.8 (1950.3)	28.4 (39.5)
1860	1,500	4,204	0.004	12	4.8	514.9 (2045.5)	27.8 (38.3)
1870	1,617	5,054	0.004	15	4.9	588.6 (2011.5)	30.4 (38.2)
1890	1,762	4,124	0.003	16	4.7	425.9 (1603.0)	26.1 (36.7)
1900	1,411	3,706	0.004	18	4.6	628.6 (2231.1)	29.2 (38.2)
1910	1,287	3,933	0.005	12	4.1	562.6 (2165.0)	31.6 (39.2)
1920	696	3,580	0.015	13	4.2	2771.1 (8896.1)	53.8 (38.5)
1930	491	2,044	0.017	11	3.9	2427.1 (9570.0)	51.3 (39.7)
1940	338	930	0.016	14	4.5	3089.5 (12771.1)	47.1 (42.2)
1950	180	333	0.021	13	4.8	4120.9 (14666.2)	39.1 (42.8)
1960	79	64	0.021	4	1.4	130.67 (627.35)	28.2 (43.1)

*Note* This table presents descriptive statistics of the complete social network in the dynamic framework. Nodes refer to non-isolated nodes. Betweenness refers to the average betweenness centrality and ego-density refers to the average ego-density. In parenthesis the standard deviation. Betweenness is escalated by  $10^6$  and ego-density, by  $10^2$ .



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# Colombia: Democratic but Violent?

*Leopoldo Fergusson and Juan F. Vargas*

## 1 INTRODUCTION: COLOMBIA'S PUZZLE

Ebbs and flows aside, over the last 200 years, Latin America and the Caribbean (LAC) has steadily replaced authoritarian regimes with democratic ones and has strengthened its political institutions. Based on the democracy score computed by the Polity IV project, Fig. 1 compares the democratic performance of LAC with that of the rest of the world from the early 1800s until today. Since the early 1980s, when Argentina got rid of the Military Junta and José Sarney became the first civilian president

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of Brazil after the 1965 military coup, only Western Europe and North America have had stronger democracies than LAC.<sup>1</sup>

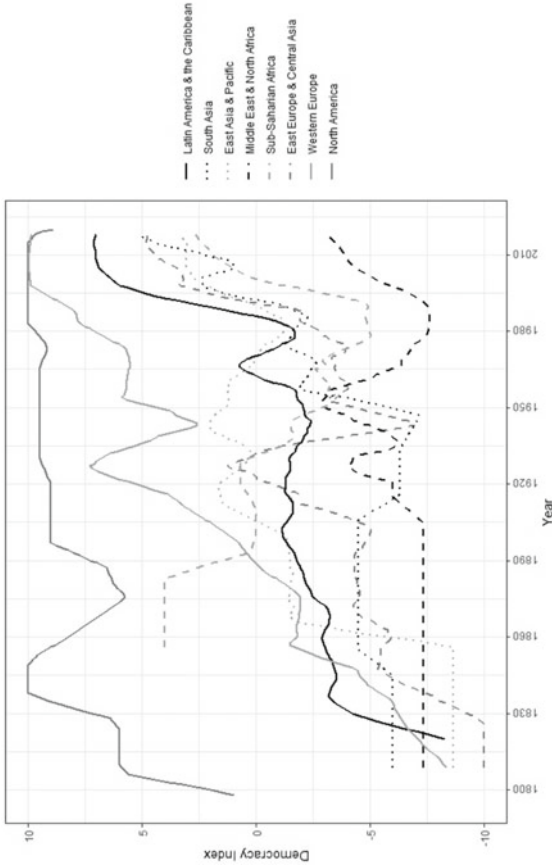
The evolution of internal violent conflict in LAC over the same period mirrors that of democracy. Except during the US Civil War in the 1860s, LAC was the world's most violent region until the 1930s. Based on the Correlates of War (COW) dataset, Fig. 2 reports the share of countries in each region that experienced intra-state war since 1820. Despite the ongoing Cold War, for most of the second half of the twentieth century and during the last 20 years, only Western Europe and North America experienced fewer internal conflicts than LAC.<sup>2</sup>

Within LAC, Colombia has almost always stood out as a democratic outlier and as one that is particularly conflict-prone. Colombia has been less democratic than the LAC average only twice (Fig. 3, panel A). First, during most of the period called *Hegemonía Conservadora* (1886–1930), when the Conservative party governed unchallenged after rewriting, in 1886, the Federal Constitution of 1863, thus re-centralizing power to the national State. Second, during the short period between 1955–1960, primarily shaped by the short-lived dictatorship of general Rojas-Pinilla (the only non-democratic regime since 1830), who rose to power after a partisan civil war called *La Violencia*.

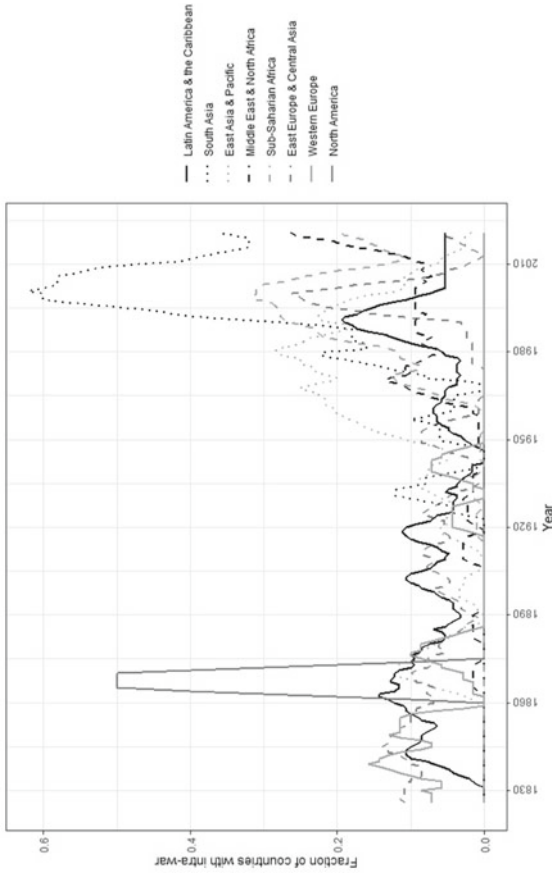
At the same time, Colombia has been plagued by internal conflicts since its independence in 1819. Despite its outstanding democratic record, during the nineteenth century, the country experienced nine national civil wars and scores of local political disputes that led to at least 250,000 casualties (Mazzuca and Robinson, 2009). Colombia's track of violent internal unrest was substantial, even relative to its (quite violent) LAC neighborhood (Fig. 3, panel B). After a four-decade-long peaceful interim in the first half of the twentieth century (which, incidentally, coincides with the *Hegemonía Conservadora*), Colombia once again experienced extensive periods of intra-state conflict, the last of which is still

<sup>1</sup> Note that the figure reports regional averages. Specifically, not all LAC countries were democratic by the 1980s and strong dictatorships were still in place in Chile, Cuba, and Paraguay.

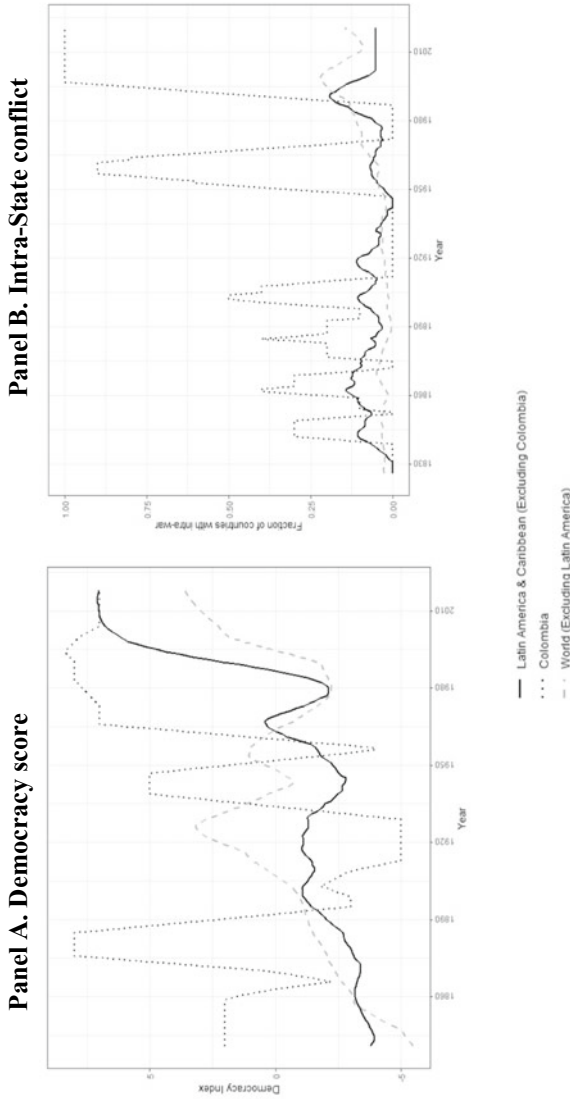
<sup>2</sup> Since the defeat of the Shining Path insurgency in Peru in 2000, the only intra-state conflict still ongoing in LAC is the Colombian Civil War. However, Latin America is today the most violent region of the world according to the homicide rate. 42 of the 50 most violent world cities are in LAC (see <https://www.bbc.com/mundo/noticias-america-latina-43318108>, last accessed 08/07/2021).



**Fig. 1** Evolution of the democracy score by world region (*Source* The democracy score comes from the Polity IV project (Marshall et al., 2016). It varies between -10 (full autocracy) and 10 (full democracy). The categorization of countries into regions follows the regional definition of the World Bank except for the separation of Western Europe from East Europe and Central Asia. The Figure reports 10-year moving averages of the democracy score)



**Fig. 2** Average incidence of intra-state conflict by world region (*Source* The average incidence of civil war comes from the Correlates of War (COW) Intra-State War Dataset V.5.1 (Sarkees and Wayman, 2010). The categorization of countries into regions follows the regional definition of the World Bank except for the separation of Western Europe from East Europe and Central Asia. The Figure reports 10-year moving averages of the average regional incidence of intra-state conflict)



**Fig. 3** Evolution of the democracy score and the average incidence of intra-state conflict in Colombia, the rest of Latin America, and the rest of the world (*Source* The democracy score comes from the Polity IV project (Marshall et al., 2016). It varies between -10 (full autocracy) and 10 (full democracy). The average incidence of civil war comes from the Correlates of War (COW) Intra-State War Dataset V.5.1 (Sarkees and Wayman, 2010). The categorization of countries into regions follows the regional definition of the World Bank. The Figure reports 10-year moving averages of the democracy score)



ongoing despite the peace agreement that the government signed with the FARC insurgency in 2016.

Colombia's coexistence, and especially its long-term co-evolution of democracy and violence, is puzzling. Prominent scholars emphasize how democracy and conflict are strategic substitutes and thus that democracy promotes stability. For instance, Przeworski (1991) argues that access to power through democratic elections and the alternation in office of different parties reduces the incentives of social groups to engage in violence, and thus the incidence of internal conflict. Democracy also allows for institutionalized channels of political dissent and therefore discourages social unrest (Davenport, 2007). Finally, granting political power to previously disenfranchised groups constitutes a credible commitment to future redistribution, which reduces the incentives to organize a revolution (Acemoglu and Robinson, 2006). Some influential policy-makers from the West seem to agree with the idea that democracy is an antidote for conflict: Founding Father Benjamin Franklin is attributed the aphorism "Democracy is two wolves and a lamb voting on what to have for lunch." More recently, during his 1994 State of the Union Address, President Clinton famously said that "the best strategy to ensure (...) security and to build a durable peace is to support the advance of democracy."

Precisely because Colombia looks so different to other Latin American countries—and to the world—and so puzzling when confronted with some of the most dominant political economy theories, studying it can shed lessons for the broader relationship between democracy and violence.<sup>3</sup>

<sup>3</sup> This paradox has been amply studied by prominent scholars from disciplines other than economics. For instance, sociologist Daniel Pecaú (2012) was one of the first to note the coexistence of a civil democracy and a persistent violence. Focusing on the twentieth century, political scientist Francisco Gutiérrez-Sanín (2014) also studied this "anomaly." Philosopher Fernán González (2014) studies the role of violence in the construction of the Colombian state from a historical perspective. Historian Marco Palacios (2003) overviews the historical struggles to modernize Colombia and consolidate a legitimate state amidst continued violence and disorder. More recently, political scientist Gustavo Duncan (2018) has also asked why Colombia's consolidated democracy has failed to curb the misbehavior of politically powerful groups. In this chapter, we build on the ideas and arguments of these and other authors, as well as on our own research, to offer a political economy perspective on the seemingly puzzling coexistence of democracy and violence in Colombia.

This chapter studies Colombia's long history of democracy and conflict from a political economy perspective. We highlight two important reasons why some of the most ambitious democratization reforms of the past 200 years have often failed to reduce conflict in the long run and have even exacerbated it in some instances. First, we argue that when the nature of social conflict is "horizontal" rather than "vertical," the democratic institutions need to ensure and emphasize credible power-sharing mechanisms instead of (or in addition to) a credible redistribution of the surplus. This is the case of partisan conflicts such as the one that shaped Colombian politics since independence and until the 1980s. Class conflict, on the other hand, can be appeased by democratic institutions that guarantee economic redistribution.<sup>4</sup>

As a corollary, we emphasize the importance of avoiding personalistic or particularistic power-sharing mechanisms. When societies evolve and become more prosperous and complex, the number of groups that must access political power to promote stability increases. North, Wallis, and Weingast (2009) call this the dominant coalition. But if power-sharing institutions are personalistic or particularistic—that is, they rely on the identity of the pre-existing parties—these new groups are automatically excluded, threatening stability. We show that this was the case in Colombia during most of the twentieth century when power-sharing reforms were a common strategy to avoid conflict, but with a short-lasting success.

Second, we argue that the appeasing power of democracy also depends on society's general institutional strength. When key institutions such as the judiciary or the military are weak, captured by special interests, or just inexistent, democracy falls short in its promise of promoting "fair" and peaceful power-sharing and political inclusion. The institutional weakness allows state capture by few political and economic elites who often offset institutional checks and balances to favor their private interests and not

<sup>4</sup> At the core of the distinction between horizontal and vertical political conflicts lies an underlying definition of who constitutes the "elite." Broadly speaking, elites are groups that can mobilize for a common political purpose. Under this definition, that encompasses peasant leaders, union leaders, guerrilla commanders, etc., even vertical (class) conflicts can be understood as within-elite conflicts. We thus take a narrower definition of the elite and emphasize the role of the traditional urban and rural oligarchy, with access to legal but exclusive forms of political power.

those of the broader society. Such ability comes particularly handy in the face of democratic reforms that seek to empower traditionally excluded groups, especially if the latter have policy stances that threaten the status quo.

Colombia's long-standing institutional fragility and the vast amount of power that both urban and landed traditional elites concentrate, together with the accumulation of power in the hands of one ruling party or a small coalition, have constantly managed to get in the way of these reforms. A long history of well-intended democratization reforms implemented in Colombia since its independence illustrates this point. This chapter discusses these historical junctures and how a broader institutional weakness has served the interests of those who, *ex-ante*, would be political and economic losers of the reforms.

Our analysis is guided by a simple underlying definition of a “democratizing” reform as any change in the political regime that grants increased access to power to otherwise excluded groups. This minimal (and therefore hopefully relatively uncontroversial) requirement encompasses different sets of reforms. These range from the increase in voting rights through Constitutional changes, to the implementation of agreements among political elites to avoid excluding electoral minorities, to introducing democratic elections for offices previously reserved for political appointment. All these changes have at least the potential of granting access to political power to broader cross-sections of the population and, in this sense, are “democratic.” This democratic potential, of course, is not always fully realized in practice. In fact, as we shall discuss, the struggle to avoid their full potential largely explains the implications for conflict.

The rest of the chapter is organized as follows. Section 2 discusses how democracy can exacerbate conflict and under what conditions democracy is conflict-reducing or conflict-enhancing. Section 3 studies the most thorough democratization reform that Colombia experienced in the nineteenth century, namely the enactment of universal male suffrage, and how it managed to reduce violent political conflict, but only during a short period until new franchise restrictions were enacted. Section 4 describes how Colombia became the most peaceful country in LAC during the first half of the twentieth century by establishing institutionalized (and hence credible) power-sharing mechanisms. It also highlights the particularistic nature of the power-sharing reforms and thus their incapacity to build a stability-promoting coalition over time. Section 5 discusses other limits to

power-sharing mechanisms, arguing that they fall short to avoid conflict if other underlying state institutions are weak. Section 6 develops that argument and shows that when traditional elites capture the State with enough *de facto* power to offset the potential changes that traditionally excluded groups bring to the political arena, then democracy may exacerbate conflict. Section 7 shows that these situations are hard to overcome because they directly create incentives to sustain conflict and institutional weakness. Finally, Sect. 8 concludes.

## 2 DEMOCRACY CAN BREED CONFLICT

The common wisdom that democracy averts conflict by giving voice to groups of society with heterogeneous preferences, providing the institutional ground for power-sharing, and appeasing marginalized groups by credibly promising redistribution has been challenged by several scholars. One strand of this literature argues that democratic transitions may result in power vacuums if the central authority is weakened as new groups dispute political power. Under such circumstances, internal conflict may arise (Sahin and Linz, 1995 and Casper and Taylor, 1996), especially in ethnically fragmented societies, as ethnic identity can encourage political mobilization (Huntington, 1991, Horowitz, 1993, and Snyder, 2000).

A second line of research argues that the inclusion of previously excluded groups in the political process threatens the monopoly of power of political elites. Indeed, by creating winners and losers, democratization may increase incentives for violent behaviors if the cost of exerting such violence is sufficiently low. The violent reaction of traditional elites to the arrival of outsiders is not uncommon. In LAC, the military coups of Argentina, Brazil, and Chile were, to a large extent, the response of the elite to electoral victories of the left (Fergusson et al., 2020). In the US South, the elite also responded violently to the enfranchisement of slaves at the end of the nineteenth century (Naidu, 2012).

The elite response to the threat of change posed by political newcomers also includes nonviolent means. In addition to lynching, US Southern elites also enacted literacy tests to *de facto* re-disenfranchise most slaves. After democratization in the 1980s, turnout patterns in Brazil revealed the manipulation of illiterate voters by elites aligned with the former dictatorship (Bruce and Rocha, 2015). Patron-client relations, common in unequal societies, also facilitate nonviolent electoral manipulation by

the elite, particularly through labor coercion (Baland and Robinson, 2008 and Anderson et al., 2015).

These examples reveal that the extent to which democracy or democratization curtails or exacerbates violent conflict depends on the underlying institutional equilibrium. A now-standard political economy argument, championed by Acemoglu and Robinson (2000, 2001, and 2006), argues that democracy (in the form of a broader franchise) is conflict-reducing as it provides a credible power-sharing and a commitment for future redistribution. This theory has a lot of predictive power. For instance, Acemoglu and Robinson substantiate their argument with a thorough historical account of several case studies, from Western Europe (Acemoglu and Robinson, 2000) to Argentina, Singapore, and South Africa (Acemoglu and Robinson, 2006).

In several other cases, however, the credibility of the commitment that the extension of the franchise can achieve critically depends on two key factors. The first is the nature of the social conflict. In the case studies analyzed by Acemoglu and Robinson, the source of the social strife that democracy seeks to appease is vertical. The power-holding elite is the oligarchy, and the disenfranchised mass is poor. In this setting, democracy constitutes a credible commitment to the future redistribution of the economic surplus, which fulfills the objective of the poor, and as a result, avoids conflict. In several other settings, however, the source of the social strife that democracy seeks to curb is horizontal and thus, what democracy needs to credibly guarantee is power-sharing. This implies that, unlike the environment studied by Acemoglu and Robinson, in cases of horizontal (e.g., partisan or ethnic) conflict, the extension of the franchise is insufficient to avoid violent confrontations. Other features of democracy are much more critical, notably its capacity to secure legitimate and non-personalistic or particularistic power-sharing mechanisms.<sup>5</sup>

<sup>5</sup> Esteban and Ray (2008) make a similar point in a theoretical model motivated by the observation that since the late twentieth century most conflicts were horizontal in nature, driven by antagonisms along non-economic markers. While their narrative focuses on the salience of ethnic conflicts in Africa, their argument may apply to partisan conflicts in Latin America. Their focus is on how economic inequality within ethnic groups makes ethnic conflict more salient, mainly because it allows members of the ethnic groups to specialize with some providing resources, and others labor, for conflict. It is possible that a similar mechanism arises along political-partisan lines (with rich members of a partisan coalition providing resources and poorer members labor) and that these tensions overshadow vertical conflict between economic classes.

The second is that, in democratic regimes, multiple institutional dimensions other than whether most people can vote are complements in the broader objective of reducing violent conflict and promoting a peaceful political debate. Put differently, the extent to which democracy, broadly defined (not only relative to the presence of election and the size of the franchise) favors or not the peaceful resolution of conflicts depends on the strength of the institutional environment. The institutional equilibrium makes democracy truly a credible commitment of future power-sharing, peaceful political transitions, and economic redistribution. As Przeworski (1995) puts it:

What makes democracies sustainable, given the context of exogenous conditions, are their institutions and performance. Democracy is sustainable when its institutional framework promotes normatively desirable and politically desired objectives, such as freedom from arbitrary violence, material security, equality, or justice, and when, in turn, these institutions are adept at handling crises that arise when such objectives are not being fulfilled.

Over the past 200 years, Colombia reflected what Acemoglu et al. (2004) describe as “weakly institutionalized,” in the sense that the institutional environment placed few constraints on the behavior of political and economic elites. Moreover, during the nineteenth century and part of the twentieth century, the primary source of violent conflict was the political disagreement between two elite parties, the Liberals and the Conservatives. More recently, after consolidating power-sharing among them, the main source of contention was the political exclusion of the left. The conflict, therefore, became more vertical, and the left remained *de facto* excluded until the late 1980s. When new political institutions offered a possibility of political inclusion, however, traditional elites reacted with the *facto* means to silence newcomers. In hindsight, and as this chapter argues, Colombia is a hallmark of the failed efforts to consolidate a conflict-reducing democracy.

### 3 DEMOCRACY AND CONFLICT IN NINETEENTH-CENTURY COLOMBIA

Most LAC countries became independent from their colonial ruler (the Spanish Empire in most cases, including Colombia) at the beginning of the nineteenth century. As reported in Fig. 2, after independence LAC became a particularly conflict-prone neighborhood and remained so for over a century. According to Centeno (1997), the weakness of LAC states and their propensity to engage in violent conflict was a natural result of their colonial history. In most LAC, colonization was shaped by plunder and resource extraction, which hindered their capacity to build strong states and taxation systems. Acemoglu and Robinson (2002) argue that the extractive colonial model was likely to be implemented in places rich in natural resources and had established hierarchical indigenous societies. LAC met these two criteria. Independent former colonies inherited such an extractive institutional environment, which facilitated the emergence of strong regional elites violently competing for rents.

This contrasts with the European experience. In most Western Europe, the conflict helped consolidate strong states (Tilly et al., 1992). According to Centeno (1997), this discrepancy reflects that LAC's colonial experience left the region without the necessary preconditions (such as a strong bureaucracy and the corresponding administrative capacity) to capitalize conflict for state consolidation. Also related, Genniaoli and Voth (2015) show that the standard prediction (mainly associated with Tilly) according to which war can foster state building largely depends on how initially fragmented a society is. Fragmentation of regional elites might have also been another obstacle to state building in LACs.

Over the nineteenth century, Colombia experienced constant political turmoil, with frequent revolts and mutinies and four coup d'états, nine full-scale civil wars, and several constitutional changes (Deas, 1996; Mazzuca & Robinson, 2009). Violence was the main strategy that opposing political factions had to compete for power rents. Indeed, during the entire nineteenth century, Colombia's democracy was shaped by a majoritarian rule that favored the monopolization of power by the incumbent party, completely excluding the opposition. For instance, incumbents in this sort of winner-takes-all equilibrium could appoint all provincial and municipal executive authorities. According to Bushnell (1984):

Political struggles in Colombia revolved around competition for control of the bureaucratic positions, that is, for the meager booty contained in the public treasury or simply for the social status that official positions conferred.

This motivated the opposition to organize insurrections and the government to engage in violent repression. The Liberal and Conservative parties were partly electoral and partly military organizations (Mazucca and Robinson, 2009). Violence shaped power transitions, and private armies flourished throughout the country's territory.

However, in the middle of the century, an unprecedentedly ambitious democratic reform disrupted the equilibrium of constant political turmoil. In 1853, Colombia enacted a new constitution (one of seven implemented since independence and until 1886). The Constitution of the New Granada abolished slavery as well as literacy and wealth requirements for voting, thus effectively transitioning from giving voting rights to a small minority of citizens to universal male suffrage.<sup>6</sup> For reference, universal suffrage among white men was not established in the United States before 1856, and in the United Kingdom, it came to be only in 1918. Thus, the 1853 Constitution made Colombia one of the world's forerunners in the extension of the franchise.

Notably, the large franchise extension allowed political factions to recruit voters instead of soldiers, thus gaining institutionalized power through a much more legitimate democratic process and making it harder for political losers to challenge the election results violently. Moreover, the ability of parties to amass a sizable number of voters made them attractive political allies, which encouraged a more balanced distribution of appointed executive positions. Finally, the 1853 Constitution also introduced direct elections, making the competition for votes more salient by eliminating the political middleman. In short, by giving political voice to a broader base of society and at the same time strengthening the legitimacy of electoral institutions, the 1853 Constitutions shifted political disputes away from the battlefield and onto the political arena.

We study the effect of the 1853 Constitution on violent political conflict in Fergusson and Vargas (2021). We coded a detailed dataset

<sup>6</sup> Colombia's previous constitution, the 1843 Political Constitution of the New Granada Republic, restricted the franchise to free men who were literate and owned real estate or had sufficient annual rents.



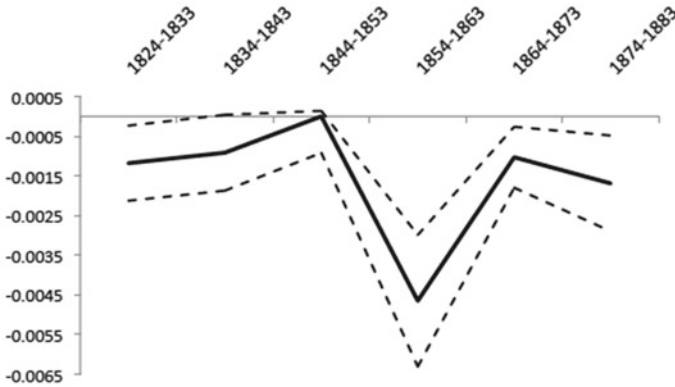
on the incidence of violent political confrontations at the municipality and year level during the entire nineteenth century up to the “War of the Thousand Days” civil war.<sup>7</sup> Moreover, we use information from the 1843 population census to build a proxy for the proportion of the newly enfranchised men in each municipality after enacting the 1853 Constitution. With temporal variation given by the period during which the 1853 Constitution was in place, this creates an ideal setting to assess whether the areas that experienced the enfranchisement of a more significant fraction of the population witnessed more or less conflict following the democratizing reform.

Figure 4 summarizes our findings. It divides our sample period into six decade-long time intervals: 1824 to 1833, 1834 to 1843, and so on up to 1874 to 1883. For each interval, the solid line shows the difference in the levels of violent conflict (as captured by the probability of experiencing political confrontations) between municipalities with more or less enfranchised voters in 1853.<sup>8</sup> The dotted lines reflect confidence bands around each estimate. The Figure suggests that the 1853 franchise extension reduced violent political conflict while the 1853 Constitution was in place, from 1854 to 1863. The magnitude of the enfranchisement-driven conflict reduction is considerable. The average municipal-level increase in the proportion of enfranchised population reduced the probability of experiencing conflict by almost eight percentage points. This is twice the sample mean. Crucially, municipalities that experienced a larger increase in their voting population did not have different trends in violence before the franchise extension. This helps attribute the decrease in conflict to the Constitution, not to differences in municipalities with varying levels of newly enfranchised men.

The 1863 Rionegro Constitution replaced the 1853 Constitution and renamed the country to the United States of Colombia. The new Constitution allowed each Colombian State to define its franchise in its pledge to promote federalism. Unfortunately, this was enough to partially offset the appeasing effect of the 1853 Constitution (this is also evident in Fig. 4).

<sup>7</sup> For its construction we rely on the comprehensive historical account of Riascos Grueso (1949), which records all the violent political confrontations that took place in each Colombian municipality.

<sup>8</sup> More precisely, we estimate, for each decade, a linear regression of the probability of a violent confrontation on the census-based measure of enfranchised voters and plot the point estimates together with a 95% confidence interval.



**Fig. 4** Effect of the 1853 franchise extension on the probability of violent confrontations in 10-year period windows (*Source* Fergusson and Vargas (2021). The Figure plots the evolution of point estimates and their 95% confidence intervals of six separate cross-sectional regressions of the probability of a violent confrontation on a proxy of the number of enfranchised voters in the 1853 Constitution. Period windows are one decade-long and cover the period 1824–1883)

Indeed, empowered by the federal impetus, local elites in several states reversed the universal male suffrage and re-established literacy or wealth requirements. This reduced the differences in conflict levels that had appeared between states with varying enfranchised voters. Interestingly, the State of Magdalena went in the opposite direction and extended the franchise by lowering the voting age from 21 to 18. There, the probability of experiencing a violent political confrontation decreased even further from the gain achieved with the 1853 Constitution.

The short-lived and conflict-reducing effect of the democratization reform of the mid-nineteenth century illustrates how well-intended reforms may not become absorbing equilibria if they fail to address the root cause of social problems. Civil wars and other frequent violent political confrontations in nineteenth-century Colombia were partisan. While the country was democratic, Congressional elections followed a majoritarian rule, with the winning party taking all seats without any substantive power-sharing. Unlike the case studies analyzed by Acemoglu and Robinson (primarily based in Western Europe), in cases of horizontal conflict, the extension of the franchise is insufficient to avoid violent

confrontations. Other features of democracy are more important, notably its capacity to secure power-sharing mechanisms.

Ultimately, when the political conditions were ripe, local elites exploited the *de jure* power that the federal Rionegro Constitution granted to restrict the franchise and obtain higher political rents.

#### 4 IS DEMOCRATIC POWER-SHARING CONFLICT-REDUCING?

Among constant revolts and insurrections, the Liberal party, responsible for the 1863 Constitution, retained power until 1885. That year there was another civil war, and as a result, the Conservative party took power. It then enacted a new constitution that re-centralized political power to the national State and engaged in policies that abolished many Liberal reforms since 1863, especially regarding free trade and the separation of the Church from the State. It also abolished the election of state governors, favoring presidential appointments until 1986.<sup>9</sup> The efforts of the new Conservative regime to undo the Liberal party's policies was called *La Regeneración* (The Regeneration), and its motto was "one nation, one goal, one god."

The extreme efforts to reverse 30 years of Liberal reforms caused widespread resistance and, ultimately, a new civil war in 1895 (Posada-Carbó, 1997). Further, after the nationalist faction of the Conservative party allegedly committed fraud in the 1898 presidential elections, and in the context of a widespread economic crisis triggered by the plummeting price of coffee (Colombia's main export), factions of the Liberal Party and the Historic Conservative Party—a group of moderate Conservatives—started yet another civil war. The "War of the Thousand Days" was the last civil war of the century and the longest and bloodiest. It lasted three years (hence its name) and resulted in almost 40,000 casualties (Meisel-Roca and Romero Prieto, 2017).

The aftermath of the War of the Thousand Days left a devastated country, destroyed and impoverished. Inflation was rampant, and the country was heavily indebted. The crisis worsened with the separation of Panama in 1903. Nevertheless, the end of the war also marked the start of

<sup>9</sup> Later in the chapter, we will return to the 1986 political reform that introduced competitive elections of both governors and mayors.

Colombia's most prolonged period of peace, which lasted for almost half a century. To be sure, during the first half of the twentieth century, Colombia was the most peaceful country in LAC (see Fig. 3, panel B). While the region was experiencing military interventions during the Great Depression, Colombia showcased stable competitive democracy, featuring periodic and peaceful power transitions.

Why did Colombia become a hallmark of political order after a century of civil war and constant violent political contestation? Mazzuca and Robinson (2009) argue that the reason was a significant transformation of its political institutions that ensued a large step toward democratic consolidation in the form of credible power-sharing.

Recall that in the nineteenth century, majoritarian rule led to political monopolization from the party in office and excluded most peaceful forms of political participation by the opposition. However, in 1905, the newly elected president Rafael Reyes, a moderate conservative who had not taken part in the War of the Thousand Days and was seen as a political conciliator, introduced the so-called incomplete vote system. He did so by dismantling the Conservative Congress and promoting a constitutional reform that gave two-thirds of Congress seats to the party that won the parliamentary elections and one-third to the runner-up, irrespective of the actual vote shares. This reform ended once and for all the winner-takes-all system that dominated the nineteenth-century political landscape and ensured that Liberals and Conservatives had some access to *de jure* political power, with shares roughly proportional to their electoral force.<sup>10</sup>

Mazzuca and Robinson (2009) argued that with the incomplete vote, the Conservatives purposefully traded power for political stability. They sacrificed a fraction of their seats in Congress (while retaining the majority) to dissuade further violent attempts to seize power, which had often led to full-scale civil war. Electoral coalitions slowly replaced partisan private armies. Indeed, the new system changed the incentives of the opposition to organize a rebellion and that of the incumbent to engage in repression and promoted a civilized interaction of the two parties in Congress.

<sup>10</sup> According to Gutiérrez-Sanín (2017) these reforms, that recognized the legitimacy of the Liberal party, paved the road for its eventual return to power in the Liberal Republic (1930–1946).

By the early 1920s, the liberals realized that the incomplete vote system was no longer indicative of their (growing) electoral support and started pushing for proportional representation. In 1922, senator Luis de Greiff argued that “The main defect of the incomplete vote is that it only recognizes two parties, one of which receives 66% of the seats and the other 33%, even if that proportion does not correspond to their electoral force.” (quoted in Mazzuca and Robinson, 2009). After various failed attempts by the Liberal minority, in 1929 a quotient rule-based proportional representation system replaced the incomplete vote and further consolidated their political voice. While stability was no longer at stake, the new concession arose due to divisions within the Conservative party. Two factions could not agree on the presidential candidate’s nomination and sought the support of the Liberal minority. In turn, over two decades after benefiting from incomplete voting and after having enlarged their constituency, the Liberals traded electoral support to one of the factions to introduce proportional representation.

In short, institutionalized power-sharing during the first half of the twentieth century strengthened democratic checks and balances and eliminated any form of violent political conflict for several decades. In terms of Acemoglu and Robinson’s (2001, 2001, and 2006) argument of why democracy reduces conflict, the incomplete vote system was a much more credible commitment than the 1853 franchise extension. This illustrates how a key reason why democracy can reduce conflict is the credibility of the commitment that those who hold power make to share it and eventually relinquish it peacefully. Under majoritarian rule, which dominated Colombia’s political landscape since independence, and for a century, even in the presence of elections with a broad franchise, political power was never credibly shared.

However, power-sharing, as implemented by the 1905 and 1929 reforms, was ill-fated. This is because it was particularistic, relying on the identity of the two established parties. But as Colombia became richer and new political forces emerged, by-partisan power-sharing institutions became obsolete. By the early 1920s, the Liberals had already hinted that excluding third parties was a mistake. This reinforced their demand to replace the incomplete votes system with proportional representation, which they thought would mainly benefit the excluded Socialist Party (Mazzuca and Robinson, 2009).

## 5 THE LIMITS OF POWER-SHARING IN WEAKLY INSTITUTIONALIZED ENVIRONMENTS

While the new, peaceful, political equilibrium stuck for almost five decades, ultimately *de jure* power-sharing in the form of incomplete voting and proportional representation became obsolete to avoid violent political conflict.

The challenges to the stability of the power-sharing solution appeared at least since the early 1920s. Urbanization and increasing industrialization meant increasing support for the Liberal Party. By 1922, Liberals believed to have a genuine chance at winning elections if only they were fair. The presidential contest between Ospina (Conservative) and Herrera (Liberal) was very competitive but obscured by fraud accusations. As Deas (1993) puts it, “In 1922 the Conservative divisions were exploited by an independent Liberal coalition, and the situation was saved by the use of force at the local level and a general reliance on fraud” (p. 218). Following the elections, a Liberal convention in the city of Ibagué debated what to do, and “the nation’s horizon was tragically obscured by the possibility of a Civil War” (Navarro, 1935, p. 46). The threat gradually disappeared, and Herrera’s motto at the time, “The Nation before the parties,” became famous.

The episode reflects the limits of institutionalized power-sharing agreements, even if they originally paved the way to a more democratic distribution of political power.<sup>11</sup> When political circumstances change, the original terms of a power-sharing agreement might become unsustainable and, in the extreme, result in violent conflict. At the root of this difficulty is the fact that a power-sharing agreement over how to distribute power is not “robust” to the changing political clout of participating partners in the agreement. Therefore, an ideal democratic power-sharing scheme should revolve around the *procedure* to allocate political power rather than the precise allocation of power between existing parties. But even then, when the weakness of the institutional structure enables corrupting the power-sharing procedure, the agreement remains fragile.

The growing popularity of the Liberal party, for instance, meant an increasing feeling of dissatisfaction with the original terms that almost

<sup>11</sup> The chapter by Kronick and Rodríguez (2021) in this volume also illustrates, for the case of neighboring Venezuela, the potential and limits of power-sharing agreements to avoid political conflict.

sent the country back to full-scale bipartisan violence in 1922. Moreover, the peaceful interim of the first half of the twentieth century was plagued by widespread electoral fraud, a Colombian tradition as antique as its democracy, and often involving violence and coercion. According to Guerra (1922):

[E]lections in Colombia are (...) terrible confrontations of the press, agitation, intrigue, letters, bribes, weapons, incentives for vengeance, politics, cholera, menace. (p. 608. Quoted in Chavez et al., 2015)

Chavez et al. (2015) study the 1922 presidential elections and the widespread pervasiveness of one form of electoral fraud: ballot stuffing. Stuffing ballot boxes with fraudulent ballots is more likely to occur in weakly institutionalized environments such as Colombia's, where the State has traditionally been absent from the periphery and the local branches of the judiciary and other law enforcing institutions are completely inexistent or easily captured. It is also cheaper than buying votes or mobilizing turnout and easier than coercing voters into voting for a specific party or candidate (which requires a minimum level of economic control over voters). The latter was the case of the Chilean hacendados before introducing the secret ballot in 1958 (Baland and Robinson, 2008).

Akin to Fergusson and Vargas's (2021) estimates of the proportion of enfranchised new voters by the 1853 Constitution, Chavez et al. (2015) compute the amount of likely municipal-level ballot stuffing by comparing the number of casted votes to the census-based maximum potential franchise. They found that two-thirds of the municipalities had suspected ballot-stuffing irregularities. The number of fraudulent ballots was 35% of the total votes, on average, sufficient to turn the election's outcome in favor of the Liberal runner-up, confirming the grounds for Liberal outrage.

The country might have avoided full-scale civil war in the 1920s, but bipartisan violence eventually reemerged. When the Liberal party won the 1930 presidential elections, it (re)introduced universal male suffrage (in 1936) as well as redistributive policies, both in the rural sector (through a land reform) and in the urban one (via progressive labor market policies). This increased Liberal support, but also political tensions and polarization. Two years after the Conservative Mariano Ospina won the presidency in 1946, a new partisan civil war broke out. The civil war was called "La

Violencia,” killing between 100,000 and 200,000 people until the early 1960s (Chacón et al., 2011) and was the first major conflict after the end of the War of the Thousand Days at the dawn of the century.

The 1922 elections and La Violencia illustrate an important point in the quest for peace-building: institutionalized power-sharing mechanisms are a useful but inherently unstable mechanism to consolidate democracy and peace because the original terms of the agreement might become unattractive for at least one of the parties. Chacón et al. (2011) propose a complementary interpretation of violence during La Violencia consistent with these ideas. They argue that in weakly institutionalized environments, a party’s electoral support—which determines its probability of winning the elections—is proportional to its support in the case of an armed conflict. This implies that political competition also makes fighting attractive. In contrast, and perhaps counterintuitively, peacefully accepting electoral results can be more stable if one party is dominant.<sup>12</sup> Under this line of reasoning, the increased electoral support that the Liberals amassed since the 1930s, by increasing competitiveness, could have spurred violent partisan conflict despite the power-sharing scheme in place.

More generally and as discussed in Sect. 2, while *de jure* power-sharing is an important institutional element to curb conflict in a democracy, it is not sufficient. Perhaps the most fundamental underlying condition for democracy to succeed is the strength of the broader institutional equilibrium. In the next section, we discuss how an ambitious reform that sought precisely to deepen Colombia’s power-sharing institutions by allowing parties other than the Liberal and the Conservative to dispute local elections largely backfired. Instead of reducing the intensity of the internal conflict, it made things worse due to the violent response of traditional elites to the political dispute of newcomers.

<sup>12</sup> Consistent with their theoretical argument, Chacón et al. (2011) found that, during La Violencia, conflict occurred in the places in which the electoral support of both parties in the 1946 elections was more balanced. Instead, in areas where one of the parties had a large electoral edge no fighting took place.



## 6 INSTITUTIONAL CAPTURE AND HOW DEMOCRATIZATION CAN BACKFIRE

In weakly institutionalized environments in which political and economic elites can capture key institutions such as the military or the judiciary, the political empowerment of traditionally excluded groups may push the menaced political elites to react violently, especially if the policy stance of the newcomers threatens the status quo. Precisely, this occurred in Colombia since the end of the 1980s. To see why, let us get back to the last partisan civil war that sieged Colombia: La Violencia.

Faced with economic devastation and many casualties on each side, the Liberal and Conservative parties ended La Violencia by establishing the National Front in 1958. The National Front was a power-sharing deal. The two parties committed to alternate the presidency every four years and divide all public posts equally, including the appointed state governors and municipal mayors. Even when facing widespread violence, the solution was not to allow for broader political participation but rather to regress to a stricter particularistic power-sharing arrangement between the two main parties. This strategy brought some short-term stability. For instance, Hartlyn (1988) argues that this “consociational” regime inhibited populist appeals to urban masses and promoted sound economic policies. Indeed, this is likely a key reason why Colombia largely avoided the debt crisis that most of the region experienced in 1982. However, this stability came at the cost of alienating organizations outside the dominant coalition. Ultimately, the National Front set the ground for a subsequent, more protracted, and much more costly civil war.

Indeed, the strict power-sharing agreement explicitly excluded all other political movements. Because the two colluding parties were both factions of the country’s economic elites, with blurred ideological differences, the groups that stood out as *de facto* the most affected by political exclusion were those ideologically aligned with the left. Alvarez (2013) finds decreased turnout and more political distrust in the long run (as late as 2011) in those municipalities where the National Front excluded a larger political and electoral mass, as measured by the vote share of non-traditional parties before the agreement. Indeed, as in the conventional wisdom where non-democratic features promote violence, this triggered the mobilization of different segments of society, both in urban and rural areas, and the subsequent formation of left-wing guerrilla movements starting in the mid-1960s. The Revolutionary Armed Forces of Colombia

(FARC from the Spanish acronym) and the National Liberation Army (ELN) were the largest ones.<sup>13</sup>

To finance their operation, guerrillas engaged in illegal activities such as extortion, ransom, and kidnapping. This precipitated the creation in the late 1960s of paramilitary self-defense militias funded by landowners and supported and trained, first with in the law and then illegally, by the military (Dudley, 2004; Acemoglu et al., 2013). In the mid-1990s, splintered paramilitary groups colluded under the umbrella organization of the United Self-Defense Groups of Colombia (AUC), and as a result, the conflict escalated substantially.

By the early 1980s, increasing violence in rural areas led the administration of President Belisario Betancourt to start peace talks with several insurgent groups. As part of the negotiation, FARC demanded mechanisms for political participation. Even when the National Front had formally ended in 1974, the *de facto* continuation of the bipartisan collusion was evident. As a result, the government undertook profound institutional changes to foster broader political participation. In particular, the electoral system was reformed in 1886 to allow, starting in 1988, the direct election of governors and mayors by simple plurality rule.

The 1991 Constitution further consolidated the opening of the political system by making the stakes of winning local elections higher (Steele and Schubiger, 2018). It did so by complementing political decentralization with fiscal autonomy for regional entities. Under the new system, municipalities received transfers from the central government and a large share of the revenue coming from the exploitation of their hosted natural resources. They were also granted the collection of specific local taxes and expenditure responsibilities to cover basic services at the local level.

Relinquishing the power to appoint local executive authorities directly constituted an unprecedented step toward opening the political system in Colombia. Traditionally excluded groups representing peasants, workers, ethnic groups, students, and other segments of society could now dispute local elections. While not all the newcomers were left-wing parties, the policy proposals of the left were particularly threatening to the interests of traditional elites. Fergusson et al. (2020) show that in places where left-wing challengers won mayoral elections, local elites reacted by colluding

<sup>13</sup> Karl (2017) provides a detailed historical account of the creation of FARC and the role played by the National Front and other contemporaneous political reforms.

with private paramilitary groups and exerted violence to influence the outcome of subsequent elections.

Specifically, and to statistically assess the causal effect on violence of the victory of local executive offices of previously excluded left-wing parties, the authors rely on a regression discontinuity design that compares municipalities in which a left-wing candidate narrowly won the mayoral race with municipalities in which a left-wing politician narrowly lost. They find that a narrow left-wing local victory multiplied by three the number of violent paramilitary attacks during the subsequent government term. Notably, the violent paramilitary reaction after the triumph of the left is concentrated toward the end of the government period, a result consistent with the idea that traditional elites incite violence to prevent left-wing groups from increasing their representation in local government and retaining power at the local level. In fact, the authors also document that left-wing parties in Colombia have a very large incumbency disadvantage.

Fergusson et al. (2020) report two additional relevant results. First, in sharp contrast with the dynamics of paramilitary violence, when a left-wing candidate wins the election by a small margin, there is no surge in violence perpetrated by guerrillas. Second, when a non-left-wing newcomer wins the election by a narrow margin, there is no violent reaction of any type. These results are crucial to understanding the kind of political openness that may increase political violence. The first finding illustrates how the use of violence—rather than other means such as electoral fraud—to counteract the private loss that democratization entails to political incumbents requires a comparative advantage in the access to violent means. This includes the control of private armies, the collusion with the military, and the complicity of other law enforcement institutions such as the judiciary. The second shows that traditional elites must feel sufficiently threatened in their interests by the policy platform of the newcomers.

Perhaps the most important new player in competitive politics after the political openness resulting from the 1986 reform was FARC's political branch, the Patriotic Union (UP from the Spanish acronym). As a case study of the broader patterns documented by Fergusson et al. (2020), Steele (2017) documents how after several victories in the first elections that UP contested, including nine congressional seats and 351 seats in municipal councils, paramilitary groups killed the party's candidates

systematically and targeted its sympathizers collectively through massacres that killed hundreds and made tens of thousands to flee.

Between 1986 and 1988, over 500 active UP members were killed, including four congressmen, 45 council members, and Jaime Pardo, who obtained an unprecedented 4.5% of votes in the 1986 presidential elections (Steele and Schubiger, 2018). Illustrative of the broader findings of Fergusson et al. (2020), this prevented UP from competitively contesting elections any further.

This episode of Colombia's political history portrays how well-intended and ambitious democratic reforms, and in fact purposefully designed to curb conflict, can instead set the ground for conflict escalation and the consolidation of new and powerful violent groups. This occurs because, in weakly institutionalized environments, traditional elites can capture democratic institutions to advance their private interests. Ultimately, institutionalized power-sharing does not work and may even backfire if the broader institutional equilibrium is in disarray.

## 7 POLITICAL RENTS FROM DISORDER

We have argued that democratic reforms, viewed as efforts to include otherwise excluded groups, may backfire and spur violent conflict in weakly institutionalized settings. This section notes that such a situation is hard to overcome because it directly creates incentives to sustain disorder. Indeed, groups exercising or benefitting from violence derive political rents from the institutional weakness that enables them to limit the benefits of reforms or even use them for their electoral advantage. Therefore, groups are interested in sustaining institutional weakness; violence becomes a side effect, at best, or even a direct source of rents (Fergusson, 2019).

Again, Colombia's history demonstrates these possibilities, where groups may oppose ending conflict for fear of losing an electoral advantage and political power. Acemoglu et al. (2013) show this in the case of "parapoliticians." These are politicians who agreed to conspire with illegal paramilitary militias to influence elections through violence and coercion. The authors show that where paramilitaries were present, parapoliticians thrived electorally. More importantly, senators who received more electoral support in areas with paramilitary influence were more likely to support policies benefiting the paramilitaries. Finally, paramilitary control was more persistent where they delivered votes to their preferred

(and ultimately winning) presidential candidate. In short, all this evidence is consistent with (some) political groups allowing violent, illegal armed groups to persist because they provide electoral advantages.<sup>14</sup>

Democratic institutions can also be instrumental for violence in more subtle ways. Fergusson et al. (2016) suggest that some politicians might prefer violence to persist when perceived as having an advantage in the military fight against insurgents. Consistent with this idea, after the most significant victories against FARC rebels in Colombia, the right-wing government of Alvaro Uribe (whose main electoral platform revolved around the fight against the FARC) reduced its counterinsurgency efforts, especially in municipalities that Uribe cared more about electorally. Related to this point, Morales (2021) shows that, when the incumbent government has a hardline policy position—such as that of Uribe—the popular support of incumbent-party legislators increased after rebel violent attacks. Put differently, violence triggers a *rally-round-the-flag* effect that empowers traditional right-wing political elites and contributes to the perverse political equilibrium that we describe in this chapter.

Politicians are not the only potential beneficiaries of violence and the resulting institutional disarray. Public functionaries may also benefit, as illustrated by Colombian “false positives,” an euphemism for civilians killed by the armed forces to misrepresent them as guerilla members killed in combat. Acemoglu, Fergusson et al. (2020) show that these assassinations responded to a policy that (formally and informally) rewarded army units for their anti-insurgency performance as measured by the “body count.” This was particularly the case for military units headed by colonels, who face more substantial promotion incentives than generals. False positives were also more common in areas with weak local judicial institutions for oversight. More relevant for explaining the persistence of weak institutions and conflict, the efficiency of judicial institutions further deteriorated where brigades were led by colonels, suggesting an incentive to sustain institutional weakness to protect the rents from violence.

<sup>14</sup> Gutiérrez-Sanín (2019) analyzes the symbiotic long-term relationship between paramilitary groups and the Colombian State and argues that, at its core, the latter’s highly clientelist nature and indirect rule shapes the nature of the central government and the country’s periphery.

## 8 CONCLUSION

This chapter argued that the relationship between democracy or democratization and violent political conflict is nuanced. At least two key factors shape the extent to which democratic reforms can either curb or exacerbate conflict. The first one is the extent to which reforms generate the right incentives to stop the fighting. Crucially, this depends on the nature of the underlying social conflict. In a now-classic theory of democratization, an oligarchy that holds power democratizes to provide credible future redistributive concessions, averting a rebellion from the disenfranchised poor. This is an example of a vertical political conflict that democratization discourages via material redistribution. It can explain several cases in which reforms set the ground for long periods of peace, notably the franchise extension in nineteenth-century Western Europe. However, in other instances, the underlying conflict could be more horizontal at its core, for example, when two political parties or other social groups that are heterogeneous on a dimension other than their socio-economic status fight for power. In such cases, democratization reforms can only sustainably reduce conflict if they include institutionalized and non-particularistic power-sharing mechanisms.

The second factor is the broader institutional equilibrium. When democratization entails power-sharing mechanisms, this implies that political and social groups that were (*de jure* or *de facto*) previously excluded from the political arena can now compete in elections and obtain positions of power. This necessarily makes some groups worse off, namely those who, before the reform, had the monopoly of power. In such cases, and precisely because it transitions to being more inclusive, democratization can exacerbate rather than attenuate political conflict. Critically, this depends on the degree to which traditional elites capture key institutions such as the judiciary or the military.

The chapter argues that these two factors explain why Colombia, perhaps surprisingly, has stood out within Latin America and most of the world as a puzzling case where a “strong” democracy (in the form of relatively free and fair elections) has persisted alongside with constant violent political conflict for the last 200 years.

In the mid-1800s, amidst frequent and recurring partisan violence, Colombia was one of the first countries in the world to introduce universal male suffrage. This reform managed to substantially reduce violent conflict for about a decade until local elites in various parts of

the territory took advantage of the move toward federalism to revert the franchise restrictions. Importantly, even if it gave political voice to a large majority of citizens, this enfranchisement took place under majoritarian rule. Thus, political exclusion persisted in a winner-takes-all type of system until the end of the century. In 1905, and explicitly to avoid yet another civil war, a second ambitious reform ended the majoritarian system and gave a third of the Congress seats to the minority party. This “incomplete vote” system later became a proper proportional representation setting with quotient rule (in 1929). Violence was thus avoided for half a century, a record for Colombia. However, when the political support of the two traditional parties grew to similar proportions, a new civil war erupted in the late 1940s, and it ended with a new power-sharing agreement that de facto excluded all non-traditional political voices from the political arena. This set the seed for yet a new civil war, which started in the 1960s. As a response, in the late 1980s and early 1990s, Colombia undertook several democratizing reforms seeking political inclusion, notably the introduction of local-level elections. This triggered the entry of traditionally excluded groups, particularly left-wing parties. But, yet again, these reforms exacerbated the internal conflict instead of reducing it. It did so by threatening the interests of traditional elites. Critically, the violent reaction of these elites can be explained by their extensive and unchecked access to both institutionalized and violent power, a consequence of Colombia’s weak institutional equilibrium.

This discussion implies that, for it to be conflict-reducing, democracy needs three key ingredients: a credible commitment for future redistribution of the surplus, institutionalized and non-particularistic power-sharing mechanisms, and, perhaps most importantly, several dimensions of institutions must effectively function together. In particular, some dimensions Colombia has traditionally lacked, such as the monopoly over violence in the hands of the legitimate State and checks and balances capable of preventing the disproportional accumulation of political power by a few individuals.

Our analysis of Colombia’s long history of democracy and conflict is relevant for the present. On the one hand, democratization reforms and political opening are still common in the developing world. On the other hand, Colombia’s recent peace agreement with FARC, the largest and oldest guerrilla of the country, constitutes both a huge opportunity and an immense challenge for the country’s consolidation of a resilient peace. One of the critical points of the agreement is that the conditions for

the political participation of former FARC leaders and combatants and other political groups should be guaranteed and protected. However, with prevailing insitutional weakness throughout the country, new and “recycled” armed groups emerged, while local social leaders and former FARC combatants have become increasingly targeted ever since the start of peace negotiations.

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# Political Conflict and Economic Growth in Post-independence Venezuela

*Dorothy Kronick and Francisco Rodríguez*

The Venezuelan economy has suffered three catastrophes since independence: a long stagnation in the mid-nineteenth century, a devastating recession in the late twentieth century, and, in the second decade of this century, a record-setting collapse. In each of these three periods, the Venezuelan economy performed far worse than other countries in Latin America and far worse than other countries with similar exports.

It is tempting to explain these episodes as the predictable outcome of natural-resource dependence. As the prices of Venezuelan exports rose and fell, so too did Venezuela's economy. And indeed, each of Venezuela's major growth collapses can be traced in part to negative terms-of-trade

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The original version of the chapter has been revised: Missing details in Figure 2 of the chapter have been updated. A correction to this chapter can be found at [https://doi.org/10.1007/978-3-031-38723-4\\_21](https://doi.org/10.1007/978-3-031-38723-4_21)

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shocks. But Venezuela is more than a simple case of the commodity lottery (Bulmer-Thomas 2003): its growth contractions are much deeper than those of many countries that faced similar external conditions.

Many scholars have argued that negative shocks do not inevitably trigger growth collapses; rather, negative shocks trigger growth collapses when domestic political institutions fail to mediate disagreements over who should bear the costs (e.g., Rodrik 1999). In bringing this potent argument to the Venezuelan case, much of the literature has focused on class conflict. Venezuela, the story goes, never adopted inclusive political institutions, even during the country's democratic period (e.g., Córdova 1963); as a result, Venezuela "languishes under extractive [economic] institutions" (Acemoglu and Robinson 2012, p. 460) that enable the rich to profit at the expense of the poor. Deterioration in the price of oil—Venezuela's principal export—exacerbates tension between the haves and the have-nots (Dunning 2008). In this view, the pathologies of natural-resource dependence (such as the failure to diversify [Hausmann and Rodríguez 2014] or the temptation to overspend during boom years [Karl 1997; Edwards and Dornbusch 1991]) ultimately stem from institutional arrangements designed to protect rent-seeking elites against competition and redistribution.

We argue that this focus on class conflict obscures the critical role of intra-class conflict in driving Venezuela's economic performance (Kronick et al. 2022; Rodríguez 2022b).<sup>1</sup> Venezuela's nineteenth-century stagnation stemmed not so much from a conflict between elites and the masses but from a war between landowners and financiers that impeded the establishment of effective property rights. Only the definitive sidelining of the landowners paved the way for the centralization of state finances in the 1870s and, thereby, a resumption of economic growth, as we argue in Sect. 1. Similarly, in the lost quarter century between 1977 and 1999, battles between new- and old-guard elites hamstrung the country's ability to adjust to tumbling oil prices (Sect. 2). And to the extent that Venezuela's twenty-first-century collapse stems from political conflict, we argue, it is not that of a revolutionary vanguard defending the poor against the rich but rather one of two elite factions engaged in an economically costly struggle for power (Sect. 3).

<sup>1</sup> Our discussion also relates to a much broader literature on the links between economic growth and conflict (e.g., Alesina and Rodrik 1994; Benhabib and Rustichini 1996; Collier 1999; Collier et al. 2003; Miguel et al. 2004).

Our objective is not to develop a fully specified theory of which political institutions successfully manage intra-elite conflict, or to outline the conditions under which those institutions arise. Nor do we mean to overstate the similarity of three clearly distinct episodes. Rather, we seek to provide an empirical discussion that highlights the role of intra-class conflict in Venezuela's political and economic development, and to suggest that intra-class conflict merits additional attention in the study of other cases.

## I THE LOST NINETEENTH CENTURY

In the sixteenth and early seventeenth centuries, Venezuela ranked among the poorest parts of the Americas, scraping by on cacao exports while other colonies grew rich on gold and silver mining. Even cacao wealth, such as it was, suffered a blow in the form of a devastating blight in the 1630s (Ferry 1981, p. 625). But Venezuela's fortunes changed by the beginning of the nineteenth century. The most reliable estimates of GDP per capita in 1800 suggest that Venezuela was richer than Brazil, Colombia, Chile, and even Peru (Bolt and Van Zanden 2020). Anecdotal evidence supports this conjecture. Alexander Humboldt, for example, who visited Caracas in 1799, claimed that he saw there (and in Havana) societies with "the most European physiognomy" making him feel "closest to Cádiz and the United States than anywhere else in the New World" (Von Humboldt and Bonpland 1814, p. 84). He also observed that "consumption of beef is immense in this country," estimating per capita consumption at more than seven times that of Paris. Another chronicler of the eighteenth century claimed that "all persons without distinction of age nor sex consume beef at least three times a day" (Lovera 1988, p. 76).

This prosperity stemmed from growth in the agricultural sector. Taking advantage of trade with the growing British Caribbean colonies, Venezuela became a diversified agricultural export economy earning significant income from cacao, indigo, coffee, and cattle hides (Ferrigni 1986, 1999). Outside of the Andes, large landholdings were concentrated in the hands of a small number of families.

Because Venezuela was not known to hold large mineable metal deposits or dense exploitable native populations, Spanish colonization efforts were concentrated elsewhere. Yet in contrast to other neglected colonies, Venezuela's location made it a prime site for contraband trade with non-Spanish Caribbean colonies, which surged toward the end of

the eighteenth century. This trade fostered an assertive colonial elite who spearheaded the struggle for independence in northern South America, making the territory central to Spanish efforts to retake the colonies.

The colonial institutions that guaranteed property rights for these landowners disintegrated during the prolonged war of independence. Between 1815 and 1819, the loyalist administration expropriated 312 haciendas (70% of those registered in 1810). As patriot forces recovered these lands, they were used to compensate the victorious armies. While original landholders recouped most of their holdings at the end of the 13-year war, an important share ended up in the hands of military leaders. José Antonio Páez, for example, the military general who would become Venezuela's first president after independence from Gran Colombia (1830), was said to personally hold a monopoly over beef sales in Caracas (Castillo Blomquist 1987). But instability of property rights did not end with independence.

The Conservative-Liberal contest that defined nineteenth-century politics in most of Spanish America was especially vicious in Venezuela. We argue that this fact is essential to understanding growth performance.

At the heart of the conflict, in the Venezuelan case, were rules governing access to credit. The Páez government liberalized credit in the 1930s, lifting interest-rate caps and instituting protections for creditors, to the benefit of the trading-house owners who provided most of the credit in the economy. This group became known as the Conservatives (confusingly, because they favored more liberal economic policies; the name arose simply because they sought to conserve the Páez status quo). Landowners and other debtors—collectively known as Liberals—soon grew to oppose these policies, pressing for debt relief and legislation protecting them against asset seizures. The Liberals also employed redistributive and anti-Caracas-elite rhetoric, such that their coalition eventually encompassed an incipient artisan class as well as some peasants.

Even before the destructive civil war of 1859–1863, which we address below, the Liberal-Conservative conflict hurt the agricultural sector. For one thing, instability in political leadership discouraged investment: every change in government implied risks for property owners who had sided with the prior dominant force. Such changes were frequent. Páez, for example, went from being head of state to leader of the main opposition faction at least three times in half a century. In this environment, it was difficult for hacendados to know whose good side they needed to be on (Brito Figueroa 1996).

For another thing, Liberal governments faced a quandary typical of the “game of bank bargains” (Calomiris and Haber 2014): their main constituents—indebted landowners—demanded debt relief whenever prices fell, but Liberal administrations could not afford to alienate either powerful international creditors or the local trading houses that underwrote public spending. Consider, for example, that a proposal to create an Institute of Territorial Credit that would financially assist distressed landholders was vetoed not only by Conservative governments but by a Liberal government as well. As a result, Liberal governments sometimes absorbed defaulted land debts, at significant cost to other public spending: in 1850, for example, Liberal President José Tadeo Monagas approved a debtor bailout that cost the equivalent of one year’s federal budget. In part as a result, the Monagas government could not control gangs of thieves who ran a contraband leather trade so active that it all but destroyed the cattle sector.

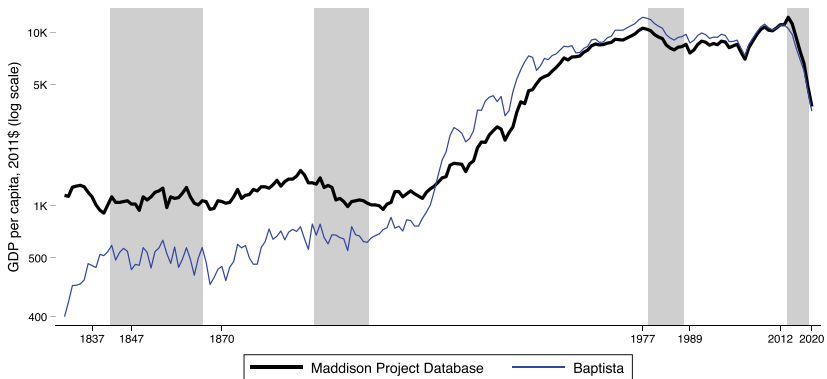
Conflict between the Conservatives and the Liberals grew more heated throughout the 1840s and 1850s. Historian Reuban Zahlar has argued that there was no such thing as loyal opposition during this period; rather, both sides viewed the contest in Manichean terms (Zahler 2013). Liberal intellectual Tomás Lander wrote of “two parties, Oligarchy [Conservatives] and Opposition [Liberals] . . . on one side wickedness and money, on the other side the boldness of [the Liberal newspaper], the justice that attends us and the innocence of the agriculturalists” (Zahler 2013, p. 196). One of the founders of the Liberal party admitted frankly that many policies were defined simply in opposition to the Conservative position: “Given that every revolt needs a rallying cry, and that the [Conservative] Constitutional Convention in Valencia rejected the label ‘federal’ for our constitution, let us take up that rallying cry ourselves—knowing, gentlemen, that had [the Conservatives] said ‘federal’ we would have rallied around centralism” (Gabaldón 1988).

This conflict soon devolved into war. Discontent with the “Liberal autocracy” (1847–1858) of José Tadeo Monagas and his brother José Gregorio drove a Liberal splinter faction to ally with Conservatives in overthrowing the government. The rivals fought intensely for five years (1858–1863). Certainly, the war derived in part from class conflict: the Liberal-Federal alliance was led by Ezequiel Zamora, who called for aggressive land reform and redistribution. “There will be neither rich nor poor, nor slaves nor owners, nor powerful nor discarded,” Zamora proclaimed, “but instead brothers who without lowering their brow



will speak to each other as equals” (Frankel 1976, p. 151). Ultimately, though, Zamora was assassinated and the conflict was settled between elite landholders and the financier class.

The Federal War was extremely costly. Estimates of deaths on the battlefield and from war-related illness range from 150 to 200 thousand people in a population of 1.8 million: that is, 8–11% of the population (Vallenilla 1997). The economy contracted, though the magnitude of the wartime contraction varies across sources (Fig. 1): Maddison (1995) estimates put the 1858–1870 contraction at a cumulative 4% (following a period of fast growth), while Baptista (1997) estimates a much deeper 23% contraction, about as much as the cumulative contraction of the U.S. economy during the Great Depression. Declining prices of Venezuelan exports (relative to imports) likely contributed to this recession (Fig. 2), but terms of trade actually increased 16.6% between 1857 and 1870 (Baptista 1997), even as GDP continued to fall. In short, the length of Venezuela’s nineteenth-century stagnation can only be explained by accounting for the destruction wrought by armed conflict.



**Fig. 1** Four great recessions (*Note* The black line plots an estimate of GDP per capita in Venezuela from Maddison [1995]; scaled so that the 2011 figure matches nominal 2011 GDP, according to the Venezuelan central bank [at the market exchange rate]. The gray line plots an estimate of GDP from Baptista [1997]. The gray shaded regions mark the long stagnation of 1837–1870, the recessions of 1890–1911 and 1978–1990, and the depression of 2012–2020. *Sources* Maddison [1995], Baptista [1997], BCV)



**Fig. 2** Terms of trade, 1830–1920. This figure plots the ratio of an index of Venezuela’s export prices to an index of its import prices, which began to improve in the late 1850s. The shaded regions correspond to the recessions marked in Fig. 1 (*Source* Baptista [1997])

Another way to understand the centrality of intra-elite conflict in driving growth is to consider what happened when the conflict abated. Between 1870 and 1887, Antonio Guzmán Blanco largely (but temporarily) solved the mid-nineteenth-century problems of endemic armed conflict and the consequent economic destruction, with the result that the economy grew quickly. In contrast, when Cipriano Castro (president from 1899 to 1908) antagonized financial elites toward the beginning of his presidency, another devastating civil war crippled the economy. Only the restoration of political stability positioned the economy to benefit from the beginning of oil production.

Antonio Guzmán Blanco’s pacifying innovation came after the Liberals—which is to say, the coalition of landowners that had traditionally opposed the Caracas-based financial class—won the Federal War. But when Liberal Guzmán Blanco took office, he did an about-face, ditching the support of (Liberal) landowners “by surprise” (Stokes 2001) to build an alliance with (Conservative) financiers. This move enabled a steady source of finance for the Venezuelan state. Moreover, Guzmán designed a revenue-sharing agreement that temporarily brought regional caudillos under control of the central government.

Customs collection was the key to centralization under Guzmán. Prior to his presidency, regional caudillos controlled their respective local

trading houses and took a share of customs revenue. Guzmán instead centralized customs collection, offering the regional caudillos a fiscal transfer in return. This process began with partial privatization: in 1870, the Guzmán government created the *Compañía de Crédito*, a privately owned firm with minority government participation. The principal shareholders were the trading houses themselves, who were also large owners of government debt. As the country's importers, trading houses were well placed to reduce customs corruption and contraband. In return for collecting customs, the *Compañía* could direct 85% of revenue to paying debt obligations that the government owed to *Compañía* owners; the remaining 15% went to the government. With the customs revenue as effective collateral, trading houses were then willing to issue new debt.

The regional caudillos accepted this arrangement because Guzmán offered them a constitutionally guaranteed fiscal transfer in return for ceding control of the customs houses. This transfer, which became known as the *Situado Constitucional* and survives to this day, provided the caudillos with a stable source of revenue. Faced with a new conflict, Guzmán would offer the caudillos a choice: accept a share in higher levels of customs collection, or risk a confrontation with the central government, loyal caudillos, and the commercial-financial sector.

The *Situado* was not the only element of Guzmán's coalition building. Guzmán, the son of an influential Liberal politician, was not a member of any of Venezuela's regional groups and was therefore able to mediate conflict among the caudillos. Rather than throwing the government's weight behind those loyal to his party, Guzmán formally recognized dominant caudillos as presidents of their respective states. He also granted them control over electoral results by imposing a system of public, signed balloting; this system clearly favored those who held local military control. Moreover, Guzmán implemented a massive public works program directed through local promotion boards (*Juntas de Fomento*) in which regional caudillos and financiers were given seats (Quintero 1994).

Taken together, these measures allowed Guzmán to consolidate public finances and strengthen the central government, improving political and economic stability. But because the regional caudillos retained military power, the *pax guzmánica* was fragile: it rested in part on Guzmán's web of personal alliances. Guzmán abandoned the presidency in 1887, apparently for health reasons, and moved to Paris, planning to run the presidency by proxy. But infighting erupted among rival Liberal factions and

regional conflict returned. Guzmán's abdication was followed by a twelve-year period of internecine wars during which Venezuela churned through seven presidents. The Situado survived, shoring up public finance, but in Guzmán's absence it did not provide sufficient basis for political stability.

Guzmán presided over a period of political stability and economic growth. Per capita incomes grew 43% between his accession in 1870 and 1891, the last year before the Liberals were ousted by an armed insurrection (Fig. 1). By contrast, the Venezuelan economy shrank by 18% between 1835 and 1870 and by 37% between 1891 and 1911, the two periods of political instability and armed conflict that preceded and followed the Long Guzmanato (the period between 1870 and the overthrow of the last of Guzmán's Liberal successors, Raimundo Andueza Palacios, in 1892).

While rising terms of trade (i.e., favorable prices for Venezuelan exports, relative to imports) certainly contributed to Guzmán's capacity to forge a rent-sharing agreement with caudillos (Fig. 2), the economy began shrinking as the Long Guzmanato came to an end—even while terms of trade continued rising. Remarkably, the descent into conflict after the collapse of the Long Guzmanato prevented Venezuela from participating in the region's "export age" (as Bertola and Ocampo characterize it in their introductory chapter to this volume), only rejoining the period of outward-oriented growth with the emergence of the oil sector in the 1920s.

These data support our thesis that Venezuela's economy experienced growth when Guzmán quelled intra-elite conflict through the centralization of state finances. When his architecture collapsed, intra-elite conflict and economic decline returned. The latter half of the nineteenth century might be viewed as a long civil war punctuated by two decades of stability under Guzmán's coalition among regional caudillos, the Liberal party, and the financial sector.

The presidency of Cipriano Castro (1899–1908) clearly illustrates the consequences of rekindling conflict with financial elites. When the powerful banker José Antonio Matos Tinoco (who, not incidentally, was Guzmán's brother-in-law) refused to lend more money to Castro's government, Castro responded not by negotiating but with a show of force: he publicly humiliated Matos and his associates, parading them through Caracas and throwing them in prison. Matos then granted the loan, but also marshaled troops for an attempt to overthrow Castro. The resulting civil war—the *Revolución Libertadora*, 1901–1903—took tens

of thousands of lives and came at tremendous cost to the economy. Castro also refused to pay international debts, leading to the 1902 blockade of Venezuelan ports by Great Britain and Germany.

Castro's successor, Juan Vicente Gómez, rebuilt the alliance between the government and financiers. Gómez appointed Matos himself as foreign minister. And Gómez met weekly with Vicente Lecuna, president of the Caracas Chamber of Commerce and director of Banco de Venezuela; Lecuna went on to draft a monetary reform, at Gómez's request. Financiers also supported the administrative reforms of Román Cárdenas, finance minister between 1913 and 1922. Cárdenas imposed unity of the treasury, which meant that all receipts and payments of the government would be centralized in the finance ministry. By 1930, Gómez proudly informed the country that Venezuela had paid all its external debt (Kornblith and Quintana 1981).

Gómez also consolidated military power, finishing the process of centralization that Guzmán had started. Among the crucial military reforms was the creation of four traditional military divisions—infantry, cavalry, artillery and engineering—and the founding of a Military Academy for officer training. Gómez's predecessor, Cipriano Castro, had created the position of Inspector General of the Army, which integrated the political and administrative activities of the armed forces. And critically, the Castro administration made a massive purchase of repeat rifles, giving the army a definitive firepower advantage over regional caudillos (Ziems 1993; Rangel 1974). The Andeans thereby created a modern national army with a centralized command system, packed with Andean loyalists. Andean military commanders then ran Venezuela for all but three of the sixty years following Castro's ascent in 1899.

By the second decade of the nineteenth century, then, Venezuela had a centralized state with a professionalized military and consolidated public finances. Regional caudillos had been sidelined; Gómez triumphantly claimed the title "Pacifier of Venezuela." This degree of state-building was by no means the norm in Latin America. Mexico's Porfirio Díaz, for example, had scrapped a project to professionalize the Mexican military and was unable to concentrate fiscal collection in the hands of the central government (Hamnett 2006; Diaz-Cayeros 2006)—with the result that regional caudillos still held considerable power when Díaz was overthrown in 1911.

This was the state that oversaw the advent and growth of the Venezuelan oil sector. Production began in 1914 and gained macroeconomic significance by the early 1920s. Growth was vertiginous. By 1929, Venezuela was the world's largest oil exporter, and oil prices generally increased for the next half century. As a result, the Venezuelan economy grew quickly: GDP per capita increased by a factor of more than ten between 1920 and 1975 (Fig. 1), outperforming all other economies in Latin America.

It is beyond the scope of this chapter to provide a comprehensive account of which policies fostered this growth and which policies hindered it. Instead, we focus on three decisions that are especially relevant for understanding the economic collapse of the 1980s.

First, Venezuelan governments did little to counter the effects of the exchange-rate appreciation that comes with growing oil revenues. By and large, Venezuela embraced a more appreciated real exchange rate rather than trying to offset or slow appreciation, effectively discouraging growth in export sectors other than oil. This policy emerged in Venezuela's response to the 1933 decision by U.S. President Franklin Delano Roosevelt to take the dollar off the gold standard. While most Latin American nations reacted by devaluing their currencies—Argentina and Brazil had in fact done so before the United States—Venezuela did not, instead accepting a significant real exchange-rate appreciation. This choice was not surprising given that the commercial-financier class had won the decades-long conflict with landowners: in other words, the sectors that would have advocated for a weaker exchange rate lacked political muscle.<sup>2</sup> This exchange-rate policy continued through democratization in 1958.

<sup>2</sup> Real appreciation is an increase in the real exchange rate, which is the price of domestic goods in terms of international goods, expressed in the same currency. Overvaluation is a positive difference between the real exchange rate and the equilibrium real exchange rate. Since finance is a non-tradable good, the financial sector (in contrast to the manufacturing or agricultural sector) experiences growth during periods of real appreciation. But financial institutions are also best positioned to take advantage of periods of overvaluation by shifting financial assets abroad into offshore accounts, something that domestic investors whose wealth is concentrated in non-financial assets are less likely to be able, willing, or accustomed to doing. It is therefore problematic for the financial sector to be able to control the nominal exchange rate, allowing it to produce periods of overvaluation during which it can purchase cheap foreign currency and move it offshore. Venezuela is atypical among developing countries in that its accumulations of public external liabilities are typically mirrored more than one-for-one in accumulation of private external assets.

Even during the heyday of import-substitution industrialization in Latin America, Venezuela's industrial policy largely subsidized producers of non-tradables (Fajardo 1984) and involved tariffs lower than the regional average (Rodríguez 2004). In short, the traditional problem of Dutch Disease—growth in the services sector and contraction of non-oil tradable production—was fostered rather than slowed by economic policy in Venezuela.<sup>3</sup>

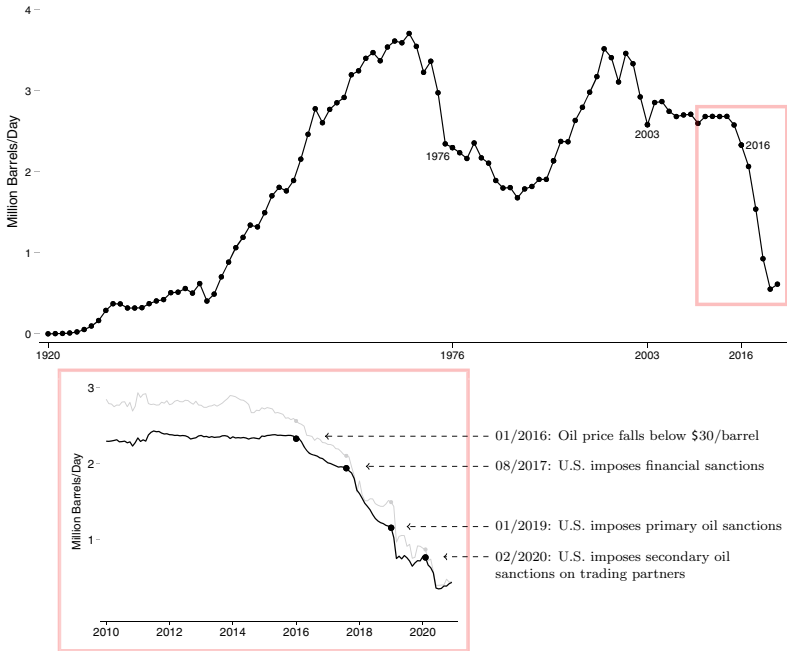
Second, the private sector dominated oil production until nationalization of the industry in 1976 (Manzano and Monaldi 2010). This private-sector dominance was in part the result of an external constraint: the United States sent a strong signal that, after oil nationalization in Bolivia (1937) and Mexico (1938), it would not tolerate another nationalization (Singh 1989; Tinker Salas 2005).<sup>4</sup> Instead of nationalizing, authoritarian governments honored transferable oil concessions granted mainly during the rule of Juan Vicente Gómez (1908–1935); these concessions allowed owners to produce oil and pay a concession-specific royalty rate. Successive military governments through Marcos Pérez Jiménez (1948–1958) maintained a working relationship with multinational oil companies while introducing tax reforms that progressively raised the government's take. After the transition to democracy in 1958, ruling party Acción Democrática simply raised the government's effective fiscal take to 50% of profits<sup>5</sup>—and made an explicit commitment not to grant or renew expiring concessions. Because most concessions were due to expire in the 1970s and 1980s, oil giants saw the writing on the wall and investment declined (see Fig. 3). Over the following fifteen years, successive democratic administrations progressively increased the tax take, raising oil taxes in 1958, 1966, and 1970 (Martínez 1997). The oil industry was finally nationalized in 1976. Avoiding nationalization during the first half century of oil production likely contributed both to economic growth during this period and to the subsequent successes of PDVSA, the state oil company.

Finally, Venezuela—like many other oil producers, and like many other Latin American countries—failed to save oil revenue during the 1970s and

<sup>3</sup> On Dutch Disease, see Neary and Van Wijnbergen (1986), Lederman et al. (2007), Lederman and Maloney (2012).

<sup>4</sup> Indeed, Washington engineered a coup in Iran in 1953 to revert nationalization there.

<sup>5</sup> Governments prior to 1958 also claimed that the fiscal take was 50%, but AD argued that the *effective* take was lower.



**Fig. 3** Venezuelan oil production, 1920–2020. This figure plots Venezuelan oil production from 1920 through 2020. Production fell in anticipation of nationalization (1976), increased in the 1990s with the *apertura*, dipped during the oil strike of 2002–2003, declined slowly under Chávez, and collapsed beginning in 2016. The inset shows the post-2016 period (*Note* The gray line in the inset marks Venezuelan oil production as reported by the government [to OPEC]; the black line plots production as reported by independent agencies to OPEC. We include both series because the government data show a decline in 2010–2015; even with this pretrend, however, the post-sanctions declines appear dramatic. *Sources* Baptista [1997], EIA)

accumulated too much debt. By 1989, Venezuela's debt had ballooned to 62% of GDP, from less than 7% of GDP twenty years prior. Contrary to popular wisdom, most of that accumulation occurred not in the 1970s but during the 1980s, when debt rose from 17% to 62% of GDP. Like much of the rest of the region, as Bertola and Ocampo discuss in the introduction to this volume, Venezuela found it increasingly difficult to service this debt after the Federal Reserve raised interest rates in the



early 1980s. What sets Venezuela apart is that it accumulated external debt *despite* benefitting from one of the strongest positive terms-of-trade shocks in the region. Venezuela's strongly procyclical spending makes it a canonical example of the "voracity effect" (Tornell and Lane 1999), in which terms-of-trade windfalls lead to a more-than-proportionate fiscal response.

By the end of 1982, Venezuela had fallen into arrears on its external debt and entered negotiations to reschedule debt service. This debt overhang contributed to slow growth throughout the 1980s. Yet even after restructuring its obligations under the Brady plan in 1989, Venezuela had a hard time reestablishing growth. Instead of the "lost decade" suffered by most of Latin America, Venezuela lost an entire quarter century.

## 2 THE LOST QUARTER-CENTURY

Between 1982 and 1999, Venezuela suffered the worst economic performance of any Latin American country except war-torn Nicaragua. Mismanagement of the oil boom in the 1970s had set Venezuela up for an inevitable recession when oil prices crashed. But the length and depth of the recession were by no means pre-ordained. Rather, Venezuela's political institutions hamstrung the government's response to the crash. In particular, the proliferation of veto players—instituted to constrain executive overreach—delayed and truncated adjustment that might have enabled economic recovery. This rigidity made it difficult to adjust to negative external shocks.

After nearly sixty years of authoritarian rule under Andean military dictators, Venezuela's 1958 transition to democracy marked the beginning of more than half a century of competitive presidential elections. The relative stability of this system stemmed in part from a pact—the Pact of Puntofijo—among what were then Venezuela's three largest political parties. The pact committed signatories to respect the outcome of elections, to share power, and to uphold certain common policy objectives. Venezuela's dominant political party, Acción Democrática (AD), abandoned the idea of a Marxist-style vanguard in order to pursue broad and multi-class membership (Collier and Collier 2002); other Venezuelan parties followed suit.

The formal power-sharing agreement of the Puntofijo Pact was short-lived, but the culture of consensus-building and non-aggression between political actors partially survived. The Puntofijo Pact is often likened to

the National Front in Colombia, but they were actually quite different (Meucci 2006). In Venezuela, there was no explicit commitment to alternation in power; moreover, the coalition government broke down in 1962, just four years in.<sup>6</sup> Divisions within AD created confusion about precisely which factions were parties to the pact. This flexibility may have made *Puntofijismo* more stable: as Fergusson and Vargas argue in this volume, the Colombian experience reveals that rigid power-sharing agreements can falter and spark violence when political clout shifts.

These political institutions worked reasonably well in the 1960s and 1970s, when oil prices were high and rising (Dunning 2008, though see Myers 1975; McCoy and Myers 2004; Dietz and Myers 2007). But they were ill-equipped to handle the double shock of the 1980s: the collapse of oil prices and the debt crisis (see, e.g., Coppedge 1997). These shocks affected other Latin American countries, too. But Venezuela's resultant recession was the worst in the region. Certainly, as the literature has documented extensively, part of this outcome was the result of policy decisions made during the oil boom of the 1970s. For one thing, Venezuela's only export was oil. Had there been other exports, the exchange-rate depreciation caused by falling oil prices could have fueled an expansion in those other sectors; in their absence, the newly depreciated exchange rate was insufficient to make Venezuela competitive in anything else (Rodríguez and Sachs 1999; Hausmann and Rodríguez 2011). Moreover, even sectors producing non-tradables were intensive in imported intermediate inputs and capital goods; therefore, a decline in oil revenues would also shrink non-oil output, amplifying the contractionary effect of an adverse terms-of-trade shock (Rodríguez 2022b, chap. 4).

Yet even from this weak starting point, Venezuela underperformed. Throughout the 1980s and 1990s, politicians initiated the necessary reforms—only to be blocked by one or more of the many veto players built into the country's democratic institutions.

<sup>6</sup> URD, one of the three parties to the original agreement, left the coalition government in 1962. When Raul Leoni (AD) assumed the presidency in 1963, he attempted to reassemble the coalition government (relabelled the Broad Base government), but he could not convince COPEI to join. URD left the Broad Base government in 1968, marking the end of coalition governments. See Pacto de Puntofijo and Amplia Base, Fundación Empresas Polar ([fundacionempresaspol.org](http://fundacionempresaspol.org)).

Consider, for example, the challenge of devaluation. When Luis Herrera Campins assumed the presidency in 1979, the Venezuelan economy was overheated and over indebted. Of special concern was the current account deficit, which reached 15% of GDP the previous year. The fiscal deficit, in contrast, was moderate—2.7% of GDP—thanks to significant spending cuts in the final year of the previous administration (Rodríguez 2012; López Obregón and Rodríguez 2001). To address the current account deficit, Herrera needed either to increase the price of imported goods or to decrease the price of domestic goods. He could have accomplished the former by devaluing the overvalued exchange rate. To accomplish the latter without devaluing the exchange rate, he would have had to slash government spending and commit to contractionary monetary policy. Instead, Herrera slashed government spending *without* credibly committing to contractionary monetary policy, thereby engineering a recession while maintaining an overvalued exchange rate. The result was massive capital flight: the private sector accumulated \$15bn in net external assets between 1980 and 1983, equivalent to nearly half of the country's outstanding external debt (\$33bn in 1984) (Mayobre 2019).

Why did an administration that had shown its willingness to engage in costly adjustment—even going so far as to engineer a recession in the midst of rising oil prices—so fervently resist devaluation, which would almost certainly have been less contractionary? Why did it go on accumulating massive external liabilities despite recognizing the need to curb spending? Why did it effectively use public borrowing to subsidize the private sector's accumulation of external assets? Worse still, why did Herrera later adopt a multi-tier exchange rate in which certain importers and certain private-sector holders of external debt could buy foreign currency at a preferential rate?

The answer to all of these questions lies in intra-elite conflict. The nineteenth-century accommodation between Liberals and the commercial-financial sector began a long tradition of appointing representatives of the banking sector to key economic policy positions. Herrera's finance minister was no exception. Arturo Sosa was a former banker with close ties to the Vollmer Group, a conglomerate with interests in banking and manufacturing; he had also served as finance minister for the civilian-military junta that took power after the fall of the dictatorship in 1958. And it was Sosa who pushed for a multi-tier exchange rate rather than devaluation with a unified rate, allowing cronies in the private sector to

use cheap dollars to repay dollar-denominated debt. Sosa later likened this policy to an act of justice, saying that failing to guarantee the preferential exchange rate for private-sector debt repayment would have constituted “a mere asset confiscation” (Beroes 1990; Vásquez 2021). This soft institutionalization of the power of the financial sector created a veto player that blocked exchange-rate adjustments over and over again. In just three weeks before the Herrera administration established the multi-tier exchange rate in 1983—a partial devaluation—the private sector moved \$890 million dollars out of the country: 1.3% of that year’s GDP (Henry 2003, p. 103).

The influence of the financial sector was felt far beyond exchange-rate policy. The banking lobby also defeated several attempts at banking reform. By the late 1980s, it was clear that the oligopolistic structure of the country’s financial sector was a problem: in 1989, seven banks held 63% of all deposits. Ownership of those banks was highly concentrated, typically in the hands of few families, which affected corporate governance. This allowed bankers to focus lending on affiliates and use that focus to exert political influence. Moreover, banking regulations at the time isolated the industry from the rest of the world, creating uncompetitive structures and extraordinary profits. When the administration of Carlos Andrés Pérez (1989–1993) tried to change the rules of the game with a new Banking Act, co-written with the World Bank, that formed part of his sweeping reform program, bankers managed to delay. They had bankrolled Pérez’s campaign and his political party at large, and they began to condition further support on the party’s opposition to reforms. In the end, the new act implied only minor changes for the banking industry (De Krivoy 2000).

The financial sector was not Venezuela’s only veto player. The powerful federation of labor unions, for example, blocked overdue labor-market liberalization until 1990. As the economy entered recession, labor-market restrictions became even more onerous, swelling the informal sector and dampening labor productivity. For the same reason, Venezuela’s fiscal adjustment in the 1980s was strongly biased against long-term investment in public goods such as infrastructure, generating additional adverse productivity effects (Pineda and Rodríguez 2014; Moreno and Shelton 2012). Political parties in Congress also blocked a critical tax reform by the Pérez administration that would have introduced a value-added tax (Naím 2013). The same congress then approved the reform after

Pérez was impeached—but not without extracting significant increases in transfers to regional governments in exchange (Rivero 2016; Pineda and Rodríguez 2014; Corrales 2010).

The intra-class nature of political conflict in Venezuela in the 1980s and 1990s is reflected in voting patterns. Kronick et al. (2022) show that, in line with a large body of qualitative work ([especially] Handlin 2017) but in contrast to influential theory papers, voting for Chávez in 1998 split *across* class lines, not *along* class lines. The elite factions that faced off in the mid-1990s banking crisis, for example, went on to support different candidates in 1998 (Gates 2010). Chávez came to power as a populist in the sense of Barr (2009): peddling an anti-system message that appealed to voters from across the income spectrum ([see also] Hawkins 2010); only later did he become a macroeconomic populist in the sense of Edwards and Dornbusch (1991); Acemoglu et al. (2013). This is not to deny the role of class conflict during this period—only to stress that intra-class conflict clearly contributed to Venezuela’s twentieth-century economic collapse and to the rise of Chavismo.

### 3 THE WORST RECESSION

Like the recession of the 1980s, Venezuela’s most recent recession (2012–2020) was due in part to the unraveling of a standard macroeconomic populist cycle (Edwards and Dornbusch 1991). Rather than saving or investing the oil windfall of 2003–2012, the government squandered it on a tremendous consumption boom, leaving Venezuela unprepared for a large drop in oil prices. But the magnitude of this most recent recession cannot be explained by the sins of previous administrations alone. In Venezuela’s third collapse, per capita GDP contracted by 71.8%—more than in any other recession in Venezuelan history, and more than any other recession in Latin America since the advent of comparable cross-national data in 1950. It is difficult to fully explain this collapse without considering the role of intra-elite conflict, which, once again, created incentives for policy that severely damaged the economy.

A large part of Venezuela’s 2012–2020 recession stemmed from economic policies enacted during the preceding oil boom. Hugo Chávez, elected president in 1998, eventually rolled back most of the market-oriented economic reforms of the 1990s (Corrales and Penfold-Becerra

2011). He re-instituted exchange controls; expanded and tightened price controls; nationalized hundreds of firms, including major companies in telecommunications, oil services, and banking; and even imposed a 19-year firing freeze.

Chávez's treatment of the oil sector resulted in underinvestment, mismanagement, and disappointing production (Monaldi 2018; Monaldi et al. 2021). He progressively raised taxes on oil companies, revising hydrocarbons legislation in 2001, 2004, 2006, and 2008. At the same time, he forced multinationals to convert their investments into joint ventures with the state-owned PDVSA. He stacked the PDVSA board with political loyalists and fired nearly half of company employees (Hsieh et al. 2011; Corrales and Penfold-Becerra 2011), replacing them with new hires who, in many cases, lacked expertise. The predictable result was that Venezuela's oil industry underperformed, relative to peers. Oil production actually declined between 1998 and 2008 (Fig. 3), despite the fact that Venezuela had the largest oil reserves in the world (296.5bn barrels, according to a 2010 PDVSA certification), and despite soaring oil prices. In the midst of this tremendous windfall—by far the largest positive terms-of-trade shock in Latin America during this period (Kronick 2014)—Chávez committed the classic macroeconomic populist mistakes of accumulating debt, failing to build up reserves, and running fiscal deficits. By 2012, the public-sector deficit hit 17% of GDP.

Some scholars view these destructive policies as the product of class conflict: Chávez sought to redirect oil revenues toward his constituents, while traditional elites fought to keep the money for themselves. There is of course some truth in this interpretation, but, in our view, intra-elite conflict deserves more emphasis. Chávez created two off-budget funds—the National Development Fund and the Chinese Fund—that were under discretionary control of the executive. Contrary to the government's claims, social spending (as a share of fiscal spending) did not systematically increase, the much-touted social programs or *missions* failed to deliver consistent results (Rodríguez 2008; Ortega and Rodríguez 2008), and the subsidized official exchange rate did at least as much to line the pockets of elites as it did to lower prices for poor consumers (Gulotty and Kronick 2022). Nor did Chávez deliver on his campaign promise of improving citizen security (Kronick 2020b). Meanwhile, government cronies racked up tens billions of dollars in private wealth (Itriago 2021). In that sense, this period is best modeled as a clash between two powerful groups.

How Chávez amassed the power to implement these policies has been well studied. Corrales (2018) shows how Chávez's wide margin of victory in the 1998 election paved the way for a new constitution that empowered the president; Brewer-Carías (2010) documents how Chávez pulled off subsequent power grabs, including, critically, attacks on the media (Knight and Tribin 2019, 2022). A newer literature, building on Corrales (2005), considers the role of the opposition (Jiménez 2021; Velasco 2022), finding that certain opposition tactics proved self-sabotaging, strengthening Chávez's hand (Gamboa 2017). For our purposes, what is critical is that Chávez-era economic policies left Venezuela ill-prepared to weather the next drop in oil prices, which began in 2014.

Chávez died of cancer in March, 2013, anointing Vice President Nicolás Maduro as his successor. One month later, the government held a snap election to determine who would complete Chávez's term. Maduro defeated the opposition candidate, former governor Henrique Capriles, by a margin of just 1.2% points. Upon taking office, Maduro faced an urgent economic-policy challenge. Prior to the 2012 presidential election—which Chávez won with a comfortable margin—the government had embarked on a spending spree, raising public spending by more than 10% of GDP (Rodríguez 2022b). The result was a hefty budget deficit. It fell to Maduro, then, to drastically cut spending.

This adjustment would have been painful no matter how Maduro carried it out. But the path he chose was much more destructive, in the medium term, than alternatives that the government explicitly considered. One standard approach would have been to devalue the currency and eliminate a lavish fuel subsidy, accepting significant short-term inflation in return for improved public finances and the potential for growth in non-oil export sectors (Toro and Kronick 2015). Instead, Maduro maintained a massively overvalued exchange rate, draconian price controls, and the fuel subsidy. He paid for all of this with a dramatic cut in imports, which fell 28% between 2012 and 2014. In short, Maduro chose to adjust via quantities rather than via prices—creating major shortages and distortions, exacerbating fiscal imbalances, and ultimately deepening Venezuela's economic contraction.

When oil prices crashed in 2014, creating the need for more spending cuts, Maduro doubled down on the previous year's policies: slashing imports in order to maintain expensive subsidies for foreign currency and domestic fuel. To these measures, he added inflationary financing. The

result was a 37% contraction in his first four years in office (March 2013–March 2017). Even with the oil-price crash, the recession would almost certainly have been milder if Maduro had corrected misalignments from the beginning.

Some argue that Maduro chose this destructive adjustment path because of corruption, incompetence, or ideology. These explanations are incomplete. Funneling money to cronies does not require destroying the economy (Coate and Morris 1995). And the fact that Maduro repeatedly announced the intention to devalue, to lift price controls, or to otherwise liberalize in ways that would get the economy back on track—as well as the fact that he ultimately did implement many of these reforms when he stopped facing electoral challenges after 2018—reveals that doing so was neither ideological anathema nor beyond the government’s competence. Rodríguez (2022b) argues instead that Maduro’s choices were motivated by Venezuela’s relentless electoral cycle. Nationwide elections were held in three of his first five years in office (2013, 2015, and 2017); in the other two years (2014 and 2016), he faced sustained nationwide protests, and (in 2016) the possibility of a recall referendum. In this environment of constant campaigning, shifting costs into the future was more desirable than accepting short-term costs in return for medium-term gains.

Of course, Venezuela is not the only country to experience a political business cycle in which policies grow more distortionary as elections approach (Rogoff and Sibert 1988; Alesina et al. 1997). But, as Rodríguez and Imam (2022) argue, the combination of high-frequency contested elections and high stakes of power in competitive authoritarian regimes makes this cycle especially pernicious. Both Zimbabwe and Venezuela—which experienced two of the largest peacetime growth collapses since 1950, and which suffered hyperinflation in the twenty-first century—adopted more distortionary policies immediately after significant opposition electoral victories. Contested elections for absolute power led both sides to adopt strategies with tremendous economic externalities.

Most of the distortionary policies were, of course, chosen by the government, as we have described. But the opposition also played a role. Under Maduro, lobbying for financial and trade sanctions became a crucial part of the opposition’s strategy. Indeed, Esberg and Siegel (2021) find that opposition activists who leave Venezuela tweet about sanctions (and even foreign military intervention) twice as often as their



peers who remain in the country. These sanctions damaged the country's oil sector. In this sense, Venezuela's post-2012 growth collapse is a combination of two distinct episodes: in 2012–2016, a “classic 80 s crisis” (Kronick 2020a) that stemmed from accumulated imbalances (i.e., prior overspending and undersaving), the oil-price shock, and Maduro's decision to maintain relative price imbalances; and, in 2017–2020, a crisis driven largely by the decline of oil production—which, in turn, stemmed in part from financial and trade sanctions imposed by the United States.

To see this, consider that oil production had remained relatively stable between 2008 and 2015, after the government had agreed on a *modus vivendi* with private sector partners (Fig. 3). It began to decline in early 2016, when oil prices dipped below \$30/barrel and then declined sharply in August 2017—when the United States imposed financial sanctions—and again in January 2019, when the United States imposed oil sanctions (see Fig. 3, inset) (Monaldi 2018). In 2020, when the U.S. imposed secondary sanctions on Russian and Mexican companies helping market Venezuelan oil, production declined sharply yet again (Rodríguez 2019, 2022b). And while any single time series admits multiple interpretations, there are clear mechanisms linking sanctions to oil production. For example, data from joint ventures between state-owned PDVSA and multinationals operating in the country's Orinoco Basin show that firms with access to foreign financing through their partners suffered a much stronger decline in production after financial sanctions than those that lacked such access (Rodríguez 2022a).

These costly sanctions are, of course, primarily a response to Venezuela's Maduro-led transition to autocracy. After losing control of the legislature in 2015, Maduro used his control of the judiciary to strip the National Assembly of its powers, invalidate the 2016 drive to hold a recall referendum (Eubank and Kronick 2021), and ban several competing parties and candidates from the 2018 presidential election. These abuses and others have been chronicled in detail elsewhere (Corrales 2020; Bahar et al. 2018). But the sanctions are also a result of advocacy by the political opposition, aimed at blocking the Maduro administration's access to resources. This effort intensified after 2017, when the opposition-controlled National Assembly publicly called on foreign financial institutions to abstain from approving financing to the Maduro government. The opposition strongly supported U.S. sanctions on the Venezuelan oil company, which factored into the U.S. decision to adopt them (Bolton 2020, p. 250).

Why were politicians willing to engage in modes of political conflict that were so costly for the economy? Part of the answer is that the stakes of political power were so high (Przeworski 1991; Monaldi et al. 2006). In his first year in office, Hugo Chávez had raised the stakes of power through a new Constitution (1999) that granted expansive new powers to the executive: running for immediate reelection, controlling promotions in the military, calling popular referenda, and even convening new constitutional conventions that could dissolve other powers of government (Corrales and Penfold-Becerra 2011; Trinkunas 2002). These new, higher stakes of power generated economically destructive political conflict even while Chávez was in office (Corrales 2005). Under Maduro, as Rodríguez (2022b) argues, high stakes of power combined with a negative economic shock to further increase the incentives for political strategies that destroyed the means of production.

#### 4 POLITICAL CONFLICT AND ECONOMIC GROWTH

The overarching fact about the Venezuelan economy since independence is that it dramatically underperformed during three periods: first in the nineteenth century, then in the late twentieth century, and most recently in the second decade of the twenty-first century. All three incidents dwarf typical recessions. In the nineteenth century, Venezuela failed to grow despite improving terms of trade. Towards the end of the twentieth century, the Venezuelan economy shrank by more than 25%. And in the most recent and most extreme incident, the economy shrank by more than 70%, making this the second-largest peacetime economic collapse in the world since 1950.

Certainly, dependence on natural-resource exports has made Venezuela especially vulnerable to these swings. And certainly, the latter two collapses are due in part to the unraveling of standard macroeconomic populist policy cycles (Edwards and Dornbusch 1991). But we argue that the surprising magnitude of these catastrophes can only be explained by understanding the structure of intra-elite conflict. In the nineteenth century, in the absence of a federal government, landowners and financiers engaged in fighting that physically destroyed plantations and cattle ranches. In the twentieth century, new- and old-guard elites faced off in pitched political battles that hampered adjustment to the negative oil-price shocks. And in the twenty-first century, high stakes of

power drew politicians into a destructive contest for international bank accounts and export receipts. These conflicts are critical to understanding growth performance.

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# The Plantation Economy of Suriname in the Eighteenth Century

*Abe de Jong, Tim Kooijmans, and Peter Koudijs*

## 1 INTRODUCTION

The current Republic of Suriname is situated on the northeast Atlantic coast of South America and bordered by Brazil, French Guiana, and Guyana. Its capital is Paramaribo. Arawaks, Caribs, and other indigenous peoples inhabited the region in the eighth millennium BC (Buddingh' 2012: 17–18). The first Europeans arrived in the sixteenth century. The

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English controlled the region until 1667, followed by Dutch rule until 1775. During most of these colonial times, Suriname was a plantation economy, its primary purpose to exploit enslaved people brought from the coasts of Africa to produce sugar, coffee, cacao, and cotton.

From the arrival of the Europeans until the first half of the twentieth century, Suriname's development has been dominated by the shifting tides of the plantation business. In the second half of the eighteenth century, the Suriname plantations were popular investments for European capitalists. Investors hoping for good returns, through the intermediation of bankers in Amsterdam and other Dutch cities, provided enormous amounts of credit to the colony. These funds were invested in plantations, expanded or newly built and enslaved people bought from the slave ships. We analyze the growth of the plantation business and its decline after the credit bubble burst and discuss the effects of the financing system in the eighteenth century and over an extended period.

In this chapter, we describe the Suriname plantation economy under Dutch colonization. From an historical perspective, colonization is an important period in Suriname's development, resembling the circumstances of neighboring countries. From a socio-economic point of view, the considerable economic interests and investments across the Atlantic connected consumers of plantation commodities and capitalists in Europe with the local population in South America. The multi-continental mix was augmented by the forced labor imported from Africa; the Africans were first enslaved and later emancipated. Suriname is an interesting study in the social and economic forces of the colonial system that shaped it.

The remainder of the chapter discusses the early development of Suriname through 1750 and the geography, economy, and governance of the colony in the second half of the eighteenth century. We describe, based on the archives of Amsterdam merchant bankers Harman van de Poll and Lever and De Bruine, a large set of plantations in which they were involved that exemplify the development of the plantation economy in Suriname and discuss the inevitable implosion of the financing system and its consequences for the nation's economy.

## 2 EARLY DEVELOPMENTS THROUGH 1750

The oldest traces of human presence in Suriname date to people who crossed, nine or ten millennia ago, the Bering Strait through Alaska to southern parts of the Americas. Archeological findings suggest that

these people did not settle permanently (Buddingh' 2012: 17). The first indigenous people to have a permanent presence in the region, around the year 500, were the Arawaks, who lived on elevated areas and grew cassava in the swampy lands in the river deltas. Around 1100, the Caribs invaded from the Amazon region and forced many Arawaks to leave. In the following centuries, the two groups co-existed, regularly exchanging hostilities (Buddingh' 2012: 18).

The first European to arrive in the coastal regions, then referred to as Guyana, was Alonso de Ojeda in the late fifteenth century. Portuguese cartographer Ribeiro, who produced in 1529 a map identifying the major rivers in Suriname, wrote that nothing of value was to be found there. Seafarers, except those seeking El Dorado, the illusionary city of gold described by Walter Raleigh in 1596 in *The discoverie of the large, rich and bevvtiful empire of Guviana*, were not interested in the so-called "Wild Coasts of Guyana." During the sixteenth and early seventeenth centuries, the English, French, and Dutch maintained trading posts at the estuaries of the main rivers to barter gold and precious types of wood with the indigenous people (Buddingh' 2012: 12–14).

In 1652, the English Governor of Barbados, Lord Willoughby, established a comprehensive settlement in Suriname that included a fortification on the Suriname River and approximately fifty plantations. The English colonists established sugar plantations, and the religious freedom in the colony attracted many Jewish settlers. In 1667, the roughly four thousand people, mostly African slaves, living on sugar plantations complemented the nearly ten thousand indigenous families, mainly Caribs (Buddingh' 2012: 17). The Caribs maintained good relations with the settlers by selling them enslaved Arawaks, some eight thousand Arawak families inhabiting the nearby regions of Berbice and Essequibo, to work the plantations and returning people who tried to escape slavery. The English colony was ended abruptly in 1667 by a Dutch invasion.

The English challenged the Dutch Republic's domination of world trade in the Second Anglo-Dutch War (1665–1667). The Dutch, although they lost the first major battle at Lowestoft in 1665, were capable of overpowering the English, even staging surprise attacks on ships on the Thames and Medway rivers. In February 1667, Dutch commander Abraham Crijnsen invaded the English colony of Suriname with a fleet of seven ships and occupied the Wild Coast. Peace negotiations, already begun, resulted in the Treaty of Breda (July 1667) by

which the English kept New Netherland including current New York and the Dutch regained Suriname.

Because news of the treaty had not yet reached Suriname, a new English fleet attacked in October 1667 and, most of the Dutch troops having already left, retook the colony. The English raided the coast and plantations along the Suriname River destroying many houses and sugar fields and mills. A fleet under the command of Hendricksen subsequently arrived from the Dutch Republic to enforce the Breda treaty. Most English planters, having suffered from the raids and concerned about their future under Dutch rule, left for Jamaica with their enslaved laborers. Two decades of devastating unrest ensued before the Dutch colonists were able, in 1686, to establish pacts with indigenous leaders.

Following the foundation of the Dutch East India Company (VOC) in 1602, the Estates-General of the Dutch Republic approved a monopoly on the Atlantic trade granting the Dutch West Indies Company (*West-Indische Compagnie*, WIC), founded in 1621, ownership, by charter, of all trading posts and lands in the colonies. At the time, activities in Guyana encompassed only the barter trade with indigenous tribes. Lacking the capital to develop the region and put a concession system in place to convince new colonists to start plantations (Den Heijer 2002: 88–91), the WIC, in stark contrast to the significant returns of its East Indian peer the VOC, failed.

Dissolved in 1674, the WIC was relaunched as the Second WIC governed by the *Heren X*, ten directors divided into five chambers, Amsterdam and Zeeland being the largest. Two of the activities of this body were important for Suriname, the African slave trade and control of the West-Indian colonies. In 1682, major losses forced the States of Zeeland to hand over administration of Suriname to the WIC, which, while conducting the slave trade, levied a tax of 2.5% on exports in exchange for military defense (Den Heijer 2002: 137). In 1683, control of Suriname was put in the hands of the Society of Suriname, one-third owned by three parties, the WIC, the City of Amsterdam, and wealthy governor Cornelis van Aerssen van Sommeldijck.<sup>1</sup> In this constellation, the number of plantations grew from fifty in 1683 to 200 in 1713 (Den Heijer 2002: 140). Suriname developed into an active plantation economy during the eighteenth century, its chief product initially sugar,

<sup>1</sup> In 1770, the family Van Sommeldijck passed their shares to the city of Amsterdam (Van Lier 1971: 19).

with coffee and cacao subsequently assuming increasing, and cotton, indigo, and timber, lesser importance.

### 3 SURINAME IN THE SECOND HALF OF THE EIGHTEENTH CENTURY

An overview map of Suriname made by De Lavaux dated between 1737 and 1757 shows the Atlantic coastline with rivers, the main ones the Coppename, Saramacca, Suriname, Comewijne, Nickerie, Cottica, and Marowijne, running inland toward a patchwork of large and small plantations each bordering a river or creek.<sup>2</sup> Most of the country, however, was impenetrable jungle, the only settlements villages of indigenous and enslaved people escaped from plantations.

A fortification called Fort Zeelandia and the town of Paramaribo, with 500 houses in 1718 and more than 1,100 by 1787, were situated at the mouth of the Suriname River. Most houses were wooden because of the climate, among the few brick buildings being the town hall and residences of the governor and fort commander (Van Lier 1971: 28–29). Approximately ten thousand people, roughly one-fifth of the population of the colony, lived in Paramaribo around 1787.

In the eighteenth century, the colony of Suriname was a private enterprise of the WIC and Society of Suriname under oversight of the government of the Dutch Republic, in particular, Amsterdam and Zeeland. All key positions in the government were held by members of the local elite, who were the richest plantation owners and administrators (Schalkwijk 2011: 158, 268–269). The governor, appointed by the WIC with approval of the Estates-General, was the highest local authority in political and military affairs. Important matters, however, were handled in consultation with the Court of Police, or *Hof van Politie*, which rendered decisions by majority vote and was also involved in criminal justice. Colonists proposed members, ten of whom were appointed to the Court by the governor (Buddingh' 2012: 25–30). The WIC retained responsibility for the colony's defense, with all other matters under the control of the Society of Suriname (Fatah-Black 2020). Senior officials

<sup>2</sup> The map is available at the following website: [https://commons.wikimedia.org/wiki/File:Algemene\\_kaart\\_van\\_Suriname,\\_Alexander\\_de\\_Lavaux,\\_Hendrik\\_de\\_Leth,\\_Dirceuteurs\\_van\\_de\\_sociëteit\\_van\\_Suriname,\\_1737\\_-\\_1757\\_-\\_Rijksmuseum.jpg](https://commons.wikimedia.org/wiki/File:Algemene_kaart_van_Suriname,_Alexander_de_Lavaux,_Hendrik_de_Leth,_Dirceuteurs_van_de_sociëteit_van_Suriname,_1737_-_1757_-_Rijksmuseum.jpg)

in addition to the court members and governor included two attorneys general, two court secretaries, the comptroller of finance, and a handful of military officers (Van Lier 1971: 31). These officials comprised the elite, the remainder of the colony composed of a small middle class of less wealthy planters and merchants as well as soldiers, craftsman workers, and large numbers of enslaved laborers.

Although its government was Dutch, the majority of Suriname's inhabitants were non-Dutch mostly enslaved people brought from West Africa. The Atlantic slave trade by companies like the Middelburgse Commercie Compagnie (MCC) forcefully transported many thousands of people who were sold on the slave markets to plantations in Suriname (Postma 1990; Den Heijer 2002). Although the horrible conditions and hard labor, particularly on the sugar plantations, induced a mortality rate of approximately 5% among the enslaved people (Van Stipriaan 1993: 316), they remained, through their descendants, the largest group of people in Suriname in the eighteenth century, numbering about 50,000 around 1791 (Van Stipriaan 1997: 75).

Of an estimated 3,790 white and 1,760 non-white free population, the largest groups in Suriname were Europeans, mainly of Huguenot extraction, and Portuguese Jews, of which there were approximately 1,330 living in Suriname around 1791. The first Jewish settlements, near the Saramacca River, date to 1626. A larger colony of Jewish planters was established with the arrival of Lord Willoughby in 1652, and a third contingent of Jewish colonists arrived in 1666 (Ipenburg 2015: 52–53). In 1788, 60% of the Jewish people were of Portuguese and 34% of German descent, the other 6% being so-called colored Jews (Van Stipriaan 1997: 75–76). Many Sephardim (Portuguese Jews), because they were permitted by the Dutch to freely practice their religion according to Jewish law including as pertains to marriage, had fled Brazil in the mid-seventeenth century when it was conquered by Portugal. The religious freedom in Suriname was unusual compared to other colonies and Europe (Israel 2012; Van Stipriaan 1997: 76–77). The Jewish planters were, with a few English settlers, the first to start plantations after David Nassy obtained the first rights in 1669 (Ipenburg 2015: 55). The tolerance of the Jewish settlers created tensions with other planters because the Jewish planters were loyal to the governor who protected their privileges (Van Stipriaan 1997: 77). Strong sentiments against the Jews were reflected,

in 1767, in a denied petition to the Court of Police to make a ghetto in Paramaribo. Many of the Jewish-owned plantations were older and faced exhausted soil. They were in the *Jodensavanne*, closer to jungles from which maroons would attack. This added to the difficulty of remaining in business over the course of the eighteenth century (Nassy 1788, 1974: 172).

Although most of the many enslaved laborers who fled the plantations returned either voluntarily or forced, groups of escaped enslaved people established settlements in the jungle from which the plantations were attacked. Well-known freedom fighter Boni operated from the Boekoe fortification, where the wetlands provided a good defense against military expeditions organized by the Dutch government and planters.

#### 4 THE PLANTATIONS

The economy of Suriname had a single purpose: to produce commodities, in particular sugar and coffee, for European markets. The plantations that produced these goods were much alike: a rectangular block of land surrounded by dams intersected by channels for drainage (Oostindie 1989; Van Stipriaan 1993). The investments required to buy land, build houses and mills, and purchase enslaved laborers were large and faced enormous information and incentive problems, which were resolved differently in various colonies.

Before discussing the Dutch approach to financing, we describe the financial system in the British Caribbean colonies, which appears to have been comparatively underdeveloped. Adam Smith (1776, Vol II: 116) argued that the growth of the British colonies depended on capital surpluses “overflowing” from England. Nuancing this view, Pares (1960) concludes that profits generated in the plantation economies were the main source of financing. Retained earnings were complemented by debt, but in Pares’ so-called ontogeny thesis were largely short-term credits that piled up, only later being converted to mortgages. A pivotal role in English financing was played by bills of exchange extended by bankers and later discounted in the market and eventually held by investors. Owing to relatively long maturities of around twelve months, they provided medium-term financing (Radburn 2015: 668). This was vital in the Glasgow tobacco trade in the eighteenth century, bills of exchange being “the lifeblood of Atlantic commerce” (Devine 1974: 116), even though the credit terms were erratic and generated instability (Radburn 2015).



Short-term debt was a problematic method of trade finance because of the significant maturity mismatch between planters' short-term debt and long-term assets (Goodspeed 2016: 14).

Price (1980), who provides case evidence of relatively capital-intensive British tobacco trade companies in Virginia and Maryland, documents the dominance of funding through short-term commercial credit (provided through bills of exchange). Of the estimated £4 million of outside funding to Chesapeake houses, £1.4 million was equity, £460,000 borrowed through bonds and another £100,000 through banks, and £2 million financed with commercial debt. An important reason for the critical role of short-term debt was its flexibility (Radburn 2015). In later work, Price (1991) argues that funding through bonds and bank loans was employed primarily to purchase enslaved labor, with other plantation funding provided through retained earnings and commercial credit. Mortgages, that is, the conversion of unpaid short debts into de facto long-term claims secured by the specific collateral of plantations (Price 1991: 324–330), were only the last stage in the ontogeny of debt. Smith's (2002, 2006) study of Henry Lascelles over the 1723–1753 period builds on Pares (1960) to test the debt-ontogeny hypothesis. Although his case reveals some long-term debt and no confirmation of ontogeny, finding that, save for a handful of merchants, too little is known about the British setting, he is careful not to draw any definitive conclusions.

The above evidence suggests that British planters relied primarily on short-term debt from merchants with a maturity of around twelve months. Long-term mortgage financing was virtually absent until the last quarter of the eighteenth century. The Dutch approach was different. Although some plantations were fully funded with the owners' equity, most were bought with long-term mortgaged loans (De Jong et al. 2022, 2023). An important financial innovation for plantation financing was the introduction of mortgage-backed securities in 1754 by Willem Gideon Deutz, who provided mortgages to Suriname planters with four million guilders raised from investors (Van de Voort 1973). This innovation, copied by many other bankers in the Dutch Republic, resulted in many millions of guilders being invested in plantations until the 1770s.

The typical structure, investors buying 1,000-guilder bonds with a 5% to 6% interest rate, well above the 2.5% paid on government debt, left investors feeling secure because mortgage loans were provided up to 62.5% (5/8th) of appraised values. Collateral included land, buildings, and all enslaved people (Martin 2010). Bankers in the Dutch Republic,

most of whom lived in Amsterdam, acted as intermediaries between the planters and wealthy investors, engaging local agents (*agendarissen*) in Suriname. Although some of the agents were part of local elites, others were excluded from these circles. The agents who represented the bankers in the colony relied on appraisers to value the plantations in order to determine maximum loans. Planters supplied all produce to bankers to arrange sales in the Dutch Republic, with payment via bills of exchange and the bankers keeping accounts to settle revenues, expenses, and loan payments with each planter.<sup>3</sup>

De Jong, Kooijmans, and Koudijs (2023) document the business of Rotterdam banker F.W. Hudig (see also, Hudig 1933), his records being unique in providing a complete overview of the functioning of the intermediary in the plantation economy. Hudig initiated nine *negotiaties* for a total of twelve plantations, most securities being issued for single plantations. We introduce two Amsterdam banking houses—Harman van de Poll and Lever and De Bruine—to illustrate the *negotiatie* structure when larger numbers of plantations were packaged and sold to investors. These bankers were chosen because we have access to archival documents that provide a complete overview of their funds. The *negotiaties* are an interesting financial innovation, similar forms securitization having been a root cause of the Great Financial Crisis in 2007 and 2008 (Rouwenhorst 2005; Gorton and Metrick 2013).

A *negotiatie* issued by the firm Harman van de Poll and Co in March 1766, in Amsterdam, was referred to as *Letter A* because subsequent issues were to be named alphabetically. By 1775, the total inlay amounted to 2.4 million guilders. The terms of the mortgages held by this fund followed industry standards: mortgage sums were limited to 5/8th of the appraised value of the plantation, the interest rate was 6%, and the repayment scheme involved ten years interest-only followed by a period of redemptions of 10% per year. Twenty-one plantations were brought into this vehicle (Van de Voort 1973). The Van de Poll family had a long-standing reputation in Amsterdam, Jan van de Poll having been elected one of four of the city's burgomasters in 1653, a position he held for six one-year terms. In 1660, van de Poll began to build the *Herengracht*, one of the most prominent canals in Amsterdam. The

<sup>3</sup> Involvement of the financial sector in the plantation business and slave trade extended beyond the roles of investors and bankers to insurance companies (Lurvink 2020; Pearson and Richardson 2017).

*regent* family maintained their prominence and wealth, another Jan van de Poll being appointed burgomaster as many as 17 times between 1718 and 1744. Two of his children, Pieter and Harman Hendrik, were also elected to this key position. After 1748, when the newly appointed *stadhouder* Willem IV removed the Van de Poll brothers following the *pachter* (tenant) revolt, the van de Poll family lost many positions in government to which other merchants were subsequently appointed. During these years, a number of *regent* families engaged in merchant activities (Van Haaren 1997: 17–24).

Jan van de Poll, the son of Harman, who had to step down as burgomaster, initiated the plantation *negotiatie*. A brother also named Harman engaged in merchant banking transactions including loans for the King of Denmark and Norway. When Harman died, Jan took over the business, then housed in a stately building along the *Herengracht*, one of Amsterdam's two most prestigious canals (Elias 1905). The house, which projected an appearance of wealth and security, was located next to the Mennonites church. Records with the Amsterdam Wisselbank show that in 1769 the firm transacted 673,000 guilders (the median size of a plantation loan in 1769–1770 was 100,086 guilders; De Jong et al. 2023).

Table 1 provides an overview, made well after the boom years of 1769–1770, of the plantations in Van de Poll's fund in 1777. Montpellier and Montaban, also in the fund originally, were raided and ravaged by maroons in 1774 (Kesler 1926). The table shows original appraised values, maximum loans according to the 5/8th rule, and the 1777 balance. We discuss the latter in detail below.

Lever and De Bruine, run by Cornelis Lever and Johannes de Bruine, was a different type of banking house and clearly less esteemed in Amsterdam. In 1742, Cornelis Lever lived with two servants on the *Prinsengracht*, not a prime location. The firm later established an office on the *IJgracht* or *Singel*. The firm provided funds for the Danish and American Islands as well as for planters in Suriname. A Wisselbank account for this smaller, less reputable firm could not be found.

The records of Lever and De Bruine nevertheless provide a helpful perspective on the eagerness of less reputable bankers to increase the scale of the plantation business. In October 1769, the *generaale negotiatie* was started, raising 410,000 guilders and paying 6% interest to investors. On May 8, 1771, notary Isaac Pool reviewed the documents for plantation *La Felicité* in Suriname. A year and a half earlier, the bankers Lever and

**Table 1** Negotiatie overview Van de Poll, 1777

<i>Plantation</i>	<i>Appraised value</i>	<i>5/8 of Appraised value</i>	<i>Balance in 1777</i>
Bleyendaal	271,204	169,500	145,654
Hoopwijk	126,193	85,125	116,513
Purmerend	250,315	156,250	171,288
Sporksgift	271,672	169,795	212,488
Mariendaal	111,811	69,895	73,972
Maria's Lust	252,677	158,000	175,389
Mijn Hoop	95,693	59,807	47,003
Zorg en Hoop	271,521	169,700	198,024
Hanover, Indigoosveld & Johanna's Hoop (or: Zoon)	430,951	269,455	307,019
Nieuw Klarenbeek	109,570	68,481	75,047
La Patientie, Argent Court, Overtoom & Vreeland	665,029	415,640	417,274
Naaldwijk	330,000	206,360	236,562
Beekvliet	541,121	338,200	392,727
Anna's Rust (or: Lust)	200,174	125,110	196,420
Total	3,937,931	2,461,318	2,765,387

*Note* source is International Institute of Social History (IISH), Collectie Jan Elias Huydecoper van Maarsseveen (Amsterdam), 216

De Bruine had set up a *negotiatie* of a million guilders to be invested in plantation mortgages in Suriname. In May 1771, Lever and De Bruine, unable to lend the fully authorized amount, wanted to provide a mortgage to *La Felicité*. The plantation had been bought in early November 1770 for 149,000 guilders. Lever and De Bruine were willing to provide a mortgage of 119,500 guilders, well in excess of the 5/8th value of the plantation usually provided as mortgage (93,000 guilders in this case). To motivate this amount, they had provided notary Pool with an official assessment signed on October 23, 1770, just weeks before the actual purchase of the plantation at a far lower price, valuing it at 191,000 guilders. Pool's message was unambiguously negative, but his objections were not taken seriously and the mortgage was approved and absorbed into the *negotiatie* fund. Another anecdote is provided in Hoonhout (2013). In July 1768, Lever and De Bruine, although lacking access to the contract and appraisals, agreed to provide a loan of 400,000 guilders to Robert Steward and James Johnson for the plantations Bettyshoop,

French, and De Glynn. The credit was thus initially a personal loan, and the borrowers were asked to provide all paperwork. By 1771, the documents had been delivered and the loan added to the fund. This procedure did not work in January 1772 for the plantation Hofwijk because the mortgage could not be justified even though the funds had already been provided to the plantation owners. Lever and De Bruine had to hold the mortgage in private.

Table 2 provides an overview of the six remaining mortgages in 1774. Two plantations, Berseba and Felicite, were later transferred to the funds, respectively, of the merchant-banks Schouten and Valentz and Bouwens and Van Hanswijk.

Van der Voort (1973) estimated investment through *negotiaties* in Suriname and other Dutch Atlantic colonies between 1753 and 1794 at 69 million guilders. Most of these funds were channeled by bankers from the Dutch investors to planters during the boom years of 1768–1770 (see Fig. 3 in De Jong et al. 2023). Whereas reputable bankers like Van de Poll who had participated in the *negotiatie* business had tried to engage as much as possible with high quality planters and agents, bankers with less reputation at stake, such as Lever and De Bruine, seeing enormous potential to benefit from the demand for more *negotiaties*, were less fastidious in selecting agents and borrowers. As the anecdotes indicate, generating business was more important than carefully screening planters and valuing plantations. This situation would not last.

**Table 2** Negotiatie overview Lever & De Bruine, 1774

<i>Plantation</i>	<i>Mortgage year</i>	<i>Mortgage</i>	<i>Relative to appraised value</i>
Welbedagt	1769	52,000	5/8
De Saphier	1769	52,000	5/8
	1770	64,000	
Welgelegen	1770	30,000	1/2
	1770	27,000	
Watervlied	1770	38,000	5/8
St Saphorin	1770	85,000	5/8
Crawassibo	1770	100,000	5/8
Total		488,000	

*Note* City Archives Amsterdam, Collection of the Amsterdam Notaries 1578–1915 (5075), 12739–99

## 5 CRISIS

In the second half of 1770, Amsterdam banks refused to honor a large volume of plantation-related bills of exchange (De Jong et al. 2023). Notary archives reveal in excess of two million guilders worth of protested bills, which was quite expensive owing to a 25% fine. This shock was the first sign that the colony had been oversupplied with credit, inducing inflated plantation appraisals and transaction prices. In subsequent years, many planters defaulted on their mortgages. De Jong, Kooijmans, and Koudijs (2022, 2023) describe a sequence of events that brought down the mortgage funding system. Following attacks on plantations (Van de Meulen 1904) by maroons in 1771, the price of coffee declined and French coffee producers simultaneously increased their market share. On top of these effects, which put pressure on plantation revenues, a financial crisis hit London and Amsterdam in 1772/1773. The Amsterdam merchant-banks Clifford and Sons and Pels and Sons failed, further reducing access to credit in the early 1770s.

With planters unable to make interest payments due to declining revenues, Van de Poll had to increase credit to them, shown in Table 1 as the balance in 1777. It is clear from the table that the total balance of 2.8 million guilders is well below 2.5 million, which is 5/8th of the appraised values. The situation was especially bad for some plantations, Hoopwijk, for example, having a deficit exceeding 30,000 guilders (37% of its value). Despite the disappointing performance, the banking house enjoyed the trust of other merchants, Jan van de Poll, for example, being asked in 1773 to assist in the liquidation of failed merchants Clifford and Sons (Kesler 1926).

The fund of Lever and De Bruine suffered severe losses as well. Although we have no detailed overview of the plantations, the funds were regularly auctioned in Amsterdam. We use published auction prices of the funds of Van de Poll and Lever and De Bruine to illustrate the implosion of the *negotiatie* system. Figure 1 shows prices to have been around nominal values until 1773.<sup>4</sup>

The prices of Lever and De Bruine, which had been most aggressive in terms of its lending standards, plummeted to below 20% in 1776 and 1777, and remained low. The Van de Poll fund also declined steadily in

<sup>4</sup> Data on security prices was kindly shared by Joost Jonker and Christiaan van Bochove.

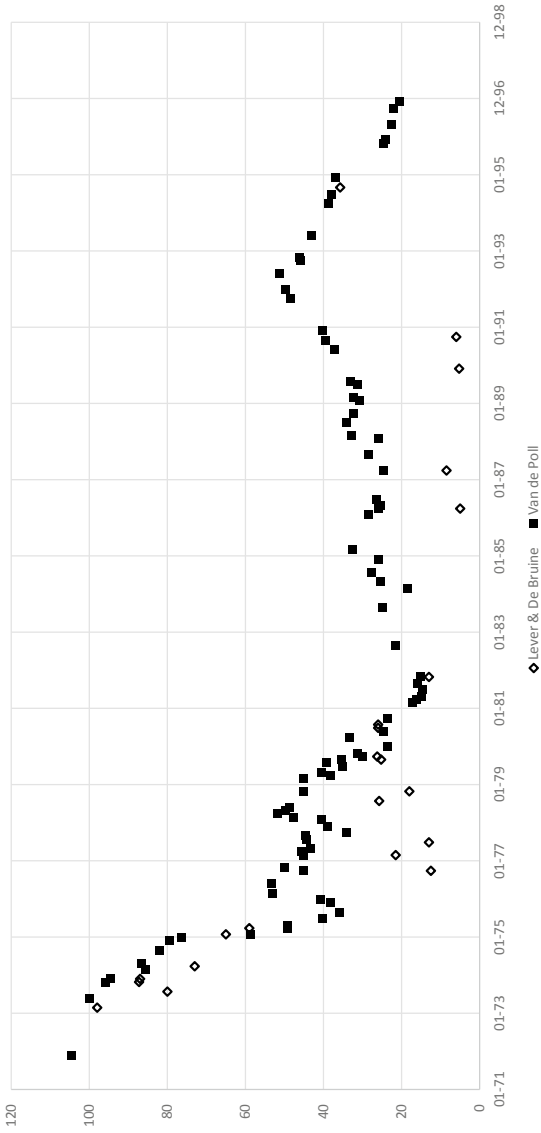


Fig. 1 Auction prices of Van de Poll and Lever & De Bruine funds (*Note* Auction prices from monthly publications of the *Maandelykse Nederlandse Mercurius* [1768-1796])

value, reaching a low in 1781, by which time investors in both funds had lost more than 80% of their inlays.

We further measure for a larger sample of Amsterdam banks the extent to which reputation drove lending policies and might explain the performance of the *negotiatie* funds (De Jong et al. 2022). Differences between Van de Poll and Lever and De Bruine indicate that bank reputation does affect the quality and timing of mortgages in the funds, just as poor revenues and debt overhang affected plantation operations (see also, De Jong et al. 2023). Many plantations were abandoned; those owned by Jewish planters being disproportionately disadvantaged according to Nassy (1788/1974).<sup>5</sup> Enslaved people on the plantations also bore the consequences. Table 3 shows the number of slaves on plantations in the funds of Van de Poll and Lever and De Bruine.<sup>6</sup>

The large declines in slave numbers for Lever and De Bruine seen in Table 3 are striking. Crawassibo, for example, had 134 enslaved people in 1770 and only 86 in 1775, and never recovered from this decrease. De Saphier, a smaller plantation with more than 40 enslaved laborers until 1785, had only 20 in 1795. Data for later years are not available for Watervloed and St Saphorin, and Van de Poll's plantations, although also reduced in size, experienced a more gradual decline. That the plantations in the portfolios of more reputable bankers performed better is an interesting area for further research.

## 6 SLAVERY FROM CRISIS TO ABOLISHMENT

The growth of the plantation system in Suriname in the eighteenth century was due to the unprecedented influx of capital from Europe. Following the crisis in the 1770s and slow recovery, many plantations

<sup>5</sup> Nassy (1788/1974: 154 and 163): “*Onder de Christen Planters waren er wel eenigen, die, op deeze en geene wyze, den slag wisten af te keeren; doch die het daar toe aan middelen ontbrak, zagen zich van hunne goederen beroofd. Men zal ligtelyk begrypen, dat de Jooden, in deeze ongelukken, niet het meeste gespaard wierden*” and “*Het wantrouwen, door de opschieters van geld op rente tegen de Jooden opgevat (ongelukkig uitwerkfel van 't onderscheid van Godsdienst!); de vooringenomenheid van eenige Agenten der Kolonie, die, zelve hunne eigene misslagen ontdekkende, kwaade berichten wegens de Jooden gaven, deed hen het krediet verliezen, datze noodig hadden, om slaaven te koopen, en zich van andere noodwendigheden te voorzien.*”

<sup>6</sup> National Archives The Hague, Archief van het Hof van Politie en Criminele Justitie en voorgangers, in Suriname, 1669–1828, 581–600.



**Table 3** Number of enslaved people on plantations

	1770	1775	1780	1785	1790	1795
<b>Van de Poll</b>						
Bleyendaal	123	136	96	85	72	62
Hoopwijk	28	50	41	30	28	26
Purmerend	80	94	90	77	69	64
Sporksgift	89	131	94	83	72	60
Mariendaal	–	–	17	34	46	–
Maria's Lust	78	67	44	42	37	34
Mijn Hoop	50	48	42	38	28	–
Zorg en Hoop	86	99	93	82	76	74
Hanover	70	72	55	76	60	21
Indigoosveld	32	34	28	33	38	–
Johanna's Hoop	92	84	82	74	50	68
Nieuw Klarenbeek	94	80	70	73	64	65
La Patientie	70	51	35	–	–	–
Argent Court	–	–	62	–	–	–
Overtoom	82	124	82	95	63	–
Vreeland	83	152	101	94	89	106
Naaldwijk	95	88	54	75	67	72
Beekvliet	146	144	112	112	100	110
Anna's Rust	45	137	48	45	40	39
<b>Lever &amp; De Bruine</b>						
Welbedagt	–	37	29	31	1	5
De Saphier	40	46	53	43	30	20
Welgelegen	–	–	–	–	–	–
Watervlied	16	26	36	5	–	–
St Saphorin	44	63	46	–	–	–
Crawassibo	134	86	96	88	77	55

*Note* City Archives Amsterdam

experienced a continued lack of funding. Enslaved laborers were the first to suffer from poor living conditions and increased pressure to maximize production. We discuss research on slavery until its late abolishment in 1863.

Everaert (2011), calculating fertility and mortality rates around the abolition of slavery using data from four sugar plantations (Breukelerwaard, Fairfield, Cannewapibo, and La Jalousie), finds increased mortality among children indicative of deteriorated living conditions. The life expectancy of a boy born in 1851 was 35 years and by 1864 only 24 years.

This striking decline is attributable mainly to the mortality of young children after the abolition of slavery in 1863. Everaert finds fertility rates to have increased after 1863, likely reflecting hopes for a better future. Everaert's work complements earlier work by Lamur (1987, 1989) that found the difficult working conditions on sugar plantations to negatively affect fertility rates relative to plantations with other crops.

A later study by Everaert (2013) uses historical archival material from the Moravian Brethren and slave registers for four sugar plantations (Breukelerwaard, Fairfield, Cannewapibo, and La Jalousie), all located on the Boven-Commewijne during the period 1838–1873, to estimate the percentage of women having children fathered by different men in order to describe family structures among enslaved people in Suriname. The Moravians began around 1830 to convert the Surinamese slaves to Christianity, visiting plantations every other month and recording interactions among the people they met, in particular, because they stimulated stable relationships, relationships between male and female slaves, in *Specialien*. From these notebooks and other sources (largely slave registers), and using simulation analysis, Everaert estimates that between 1838 and 1863 about 45% of enslaved women (with at least two children) had children fathered by different men. The number of women with children fathered by different men seems to have increased between 1863 and 1873, when the *Tienjarig Staatstoezicht* was established to force workers to remain on plantations against low wages (Emmer 1993).

Neslo (2016) describes enslaved people freed from slavery before 1863 and their ascendants. This group of manumitted over the first half of the nineteenth century became the largest group of free people in Paramaribo. By 1863, nearly 65% of the non-white population of Paramaribo was already free. Using various sources to investigate the role and status of 162 individuals selected from a Pool of elite non-white people, Neslo concludes that the social-economic status of these formerly enslaved people was better than generally assumed. Many were skilled craftsmen and had received relatively good schooling, enabling them to pursue a career in Paramaribo. Fatah-Black (2018) studies the emancipation of the Afro-Surinamese population and describes the people's adjustment to the colonizing powers. Fatah-Black presents a careful reconstruction of the enslaved people's long road to freedom, starting with their lives on the plantation.

Finally, several recent initiatives relate the era of slavery in Suriname (and other Dutch colonies) to current days. There has been a series of

investigations into the role of cities in slavery and its post-abolition consequences. Brandon, Jones, Van Rossum, and Jouwe (2020) present an edited volume with forty essays on the relation between Amsterdam and slavery. Van Stipriaan (2020) and Oostindie (2020) discuss the historical relation between the city of Rotterdam and colonialism, while Jouwe, Kuipers, and Raben (2020) do this for Utrecht and Captain, Oostindie, and Smeulders (2022) for The Hague. Den Heijer (2021) presents a readable overview of the current debates in the Netherlands about its past involvement in slavery.

## 7 CONCLUSIONS

This chapter briefly recounts the history of Suriname, with particular attention to the growth of plantations following the influx of capital from the Dutch Republic. *Negotiaties*, a financial innovation in Amsterdam that had a profound effect on Suriname, made many millions of guilders of credit available to plantation-owners, leading to two main outcomes. The first was unprecedented growth of the colony in terms of newly established and extension of existing plantations. The large number of enslaved people brought from Africa resulted in the presence of a majority of inhabitants with African roots. The second outcome, the “overhang” of debt long after the credit bubble burst, was a result of the growth of the colony having been largely funded by unsustainable loans.

The plantation economy in the second half of the eighteenth century was an unbalanced, unequal system entirely dependent on slave labor. Plantation work was done by enslaved people overseen by European owners and managers. Abuse of power on Suriname’s plantations has been widely documented (Oostindie 1989; Van Stipriaan 1993). Among plantation owners and their employees, the differences between Jewish and Christian were striking. Although the religious freedom of the Jewish people was unique in Suriname, they were perceived and treated poorly by the Christian majority in the colony. In fact, irreconcilable differences were observed even between Portuguese and German Jews. The inflow of excess credit in the 1760s and early 1770s, moreover, put bankers in a difficult position. Although the debt gave them a powerful position with respect to plantation owners, they could not withdraw due to the low liquidation values of the plantations.

Although in many respects the Dutch colonial activities in the Caribbean resemble those of the English, French, and other powers,

financing arrangements set the Dutch apart. Most English-owned plantations, for example, being financed with equity, long-term loans, and short-term debt (Pares 1960; Smith 2006), did not experience the Dutch credit boom and bust.

Although the plantation economy was maintained in the early nineteenth century, albeit with low investment and poor returns, the sector never recovered. In 1863 the Dutch government abolished slavery, and the emancipation of the enslaved people led to a period of ten years, termed the *Staatstoezicht*, during which former slaves often continued to work on the plantations, but for low salaries. New contract workers found Asia subsequently enhanced Suriname's cultural diversity.

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# The Legacy of the Pinochet Regime in Chile

*Felipe González and Mounu Prem*

## 1 INTRODUCTION

Many countries have a democracy functioning at the shadow of a recent dictatorship (O'Donnell and Schmitter 1986). The authoritarian legacies can be easy to ignore, perhaps difficult to observe, and sometimes require tremendous efforts to eradicate. Examples abound all over the globe,

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from the political shadow of Suharto in Indonesia (Martínez Bravo et al. 2018), the drastic military dictatorship in Brazil (Martínez-Bravo et al. 2020), the infamous Adolf Hitler in Nazi Germany (Voth and Voigtländer 2015), and the Francoist dictatorship in Spain (Valencia and Tur-Prats 2020), among many others. Chile is also one of these countries, with nowadays more than 30 years of democracy at the shadow of the Pinochet dictatorship (1973–1990).

This chapter reviews the Chilean experience from an economic history perspective. We divide our analysis into four parts. The first part provides an overview of the rise and fall of the Pinochet dictatorship from September 1973 to March 1990. We cover the installation of the military regime after the 1973 coup with an emphasis on the arrival of the main political and economic collaborators who guided the economic and institutional reforms. We then summarize the origins and rationale behind the implementation of market-oriented policies, the creation of a new constitution, and the use of state repression. We end with a description of the democratization by election after the 1988 referendum and with details about the fate of Augusto Pinochet during democratic years.

The second part describes the economic persistence after the transition to democracy. We start by describing macroeconomic patterns related to economic growth, inequality, and poverty rates. Although the remarkable growth of the Chilean economy from 1985 until the late 1990s is well documented, there is little consensus about the contribution of the dictatorship's reforms. The reasons are the multitude of simultaneous events—e.g. democratization, favorable external conditions—and our lack of knowledge about a counterfactual economy where some reforms could have also been introduced. Patterns of inequality are perhaps less popularly known, and we describe some of the discussions in light of the most recent literature studying top incomes in historical perspective. We describe the most prominent economic policies implemented by the Pinochet regime and the emergence of business elites after the economic crisis of the early 1980s. The common theme is an increasing role of the private sector at the expense of a deteriorating public sector, trends which have continued at a constant pace in the decades after democratization.

The third part discusses economic research related to the political persistence after the Pinochet years and reflects on related avenues for future research. We begin by a discussion of the role of firms, usually overlooked and recently emphasized as politically influential and as vehicles of political power across turbulent times. We also review recent



research documenting the functioning of local governments in the period 1973–1990, which provides important and more general lessons about the persistence of dictatorship elites. In particular, we emphasize that appointed politicians during dictatorial times obtained an incumbency advantage presumably related to the added political experience and the fact they became more recognizable among the public. This advantage can trigger political careers and create persistent political elites. Overall, the evidence points toward a drastic change in the distribution of political power during the Pinochet regime and a subsequent persistence that inevitably affected the functioning of the new democratic times.

The fourth and last part offers a description of several protest movements using a simple political economy framework (Acemoglu and Robinson 2006). Early waves of discontent were led by high school and college students in the form of massive demonstrations in 2006 and 2011. In both occasions, the incumbent government responded with partial reforms that failed to permanently change the prevailing institutions. As a consequence, new and stronger waves of discontent appeared in the mid- and late 2010s. Politicians attempted once again to respond with partial reforms, but the public kept demanding structural and permanent changes to political and economic institutions. The discontent exploded in October 2019 and a new political class offered for the first time the possibility of permanent reform. Chile is currently on a path to replace the constitution, interpreted by many as the end of Pinochet’s legacy. We end this chapter with a brief description of the country’s constitutional endeavor and emphasizing some of challenges of the near future.

## 2 THE RISE AND FALL OF THE PINOCHET REGIME

This section provides an overview of the installation of the Pinochet regime in 1973, the main policies implemented, and the transition to democracy. Our focus is in relation to the legacy of the regime and provide details with this goal in mind. We refer the reader to Huneus (2000) and Cavallo et al. (2011) for a more detailed description of the Pinochet regime.

### 2.1 *The Installation*

The Pinochet dictatorship began after a coup in September 11, 1973. That day, President Salvador Allende was overthrown by the Navy, the

Air Force, the National Police, and the Army. All political activities were suppressed, the Congress was closed, the constitution was suspended, and the leaders of the armed forces and the National Police became rulers in a junta.<sup>1</sup> The Commander-in-Chief of the Army, Augusto Pinochet, was designated head and, after consolidating his power, became head of the state in December 1974. In the beginning, “there were no plans, no names, just the agreement of assigning government departments to the armed forces and, hopefully, some civilians” (Cavallo et al. 2011, p. 25). The ministers of the first cabinets were appointed in the weeks after the coup with the objective of having a “functioning government as quickly as possible” (Spooner 1999, p. 85). The first wave of appointed ministers came mostly from the armed forces, but there was significant turnover in the months that followed.

During this installation period, the right-wing coalition persuaded Pinochet to implement market-based policies and to change the institutional framework. Collaborators in this early stage came from two groups (Huneus 2000). The first are popularly known as “Chicago Boys,” highly educated individuals trained mostly at the University of Chicago. Most of these economists studied business and economics at leading Chilean universities, had close connections to the business world, and were in charge of the design and implementation of economic policies (Silva 1996a). The second group were politically oriented individuals from the “Gremialism” group at the Catholic University in the late 1960s. The Gremialists were responsible for the design and implementation of the legal framework. The majority of these advisors were formally or informally associated with the right-wing coalition. The most well-known collaborator in this group was Jaime Guzmán, a leading intellectual behind the 1980 Constitution and the founder of the Independent Democratic Union in 1983, today one of the largest political parties.

## 2.2 *Repression and Market-Based Policies*

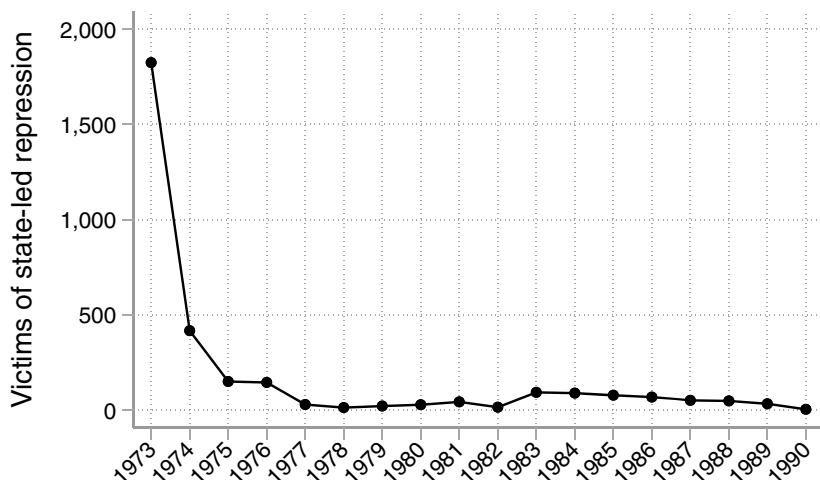
Market-oriented policies, the creation of a new constitution, and state-led repression are perhaps the most well-known policies of the Pinochet

<sup>1</sup> The causes behind the 1973 coup are a matter of debate among scholars. Previous research has emphasized the role of the extreme left to radicalize Salvador Allende’s economic agenda (González and Vial 2021). Other explanations include the role of the US invisible blockade (Sigmund 1974; Aldunate et al. 2021).

regime. The right-wing coalition saw in the turbulent times after the coup an opportunity to implement their policy platform, described in a lengthy document known as “The Brick” and first drafted as an economic plan for the right-wing candidate in the 1970 presidential election (Centro de Estudios Públicos 1992). The implementation of many of these policies started in 1975 and became more moderate after the 1982 economic crisis. In contrast, state-led repression began the same day of the coup.

The military junta rapidly declared to “struggle against Marxism and extirpate it to the last consequences” (Constable and Valenzuela 1991, p. 36). More than 3200 people were killed and more than 38,000 people were imprisoned, 94% of whom were tortured (Comisión Rettig 1996; Comisión Valech 2004). Repression was implemented in three periods. The first (1973) was characterized by mass raids and infamous military campaigns such as the “Caravan of Death” (Verdugo 2001). The National Intelligence Directorate (DINA) was the lead actor in the second period (1974–1976), “elite” military who selectively repressed members of the left-wing, including socialists and communists. Internal disputes and the killing of General Orlando Letelier in the US in 1976 increased foreign pressure on human rights abuses. The National Center of Information (CNI) and an elite unit known as Comando Conjunto became the repression leaders in 1977. The intensity of state-led repression decreased substantially in the late 1980s. Figure 1 presents the number of victims per year between 1973 and 1990 as documented by Comisión Rettig (1996).

The consequences of the human rights violations committed by the Pinochet regime are many and have been the focus of extensive research across many different disciplines. From the economics and political science literature, however, the attention has been remarkably limited. An exception is Bautista et al. (2021), who reconstruct the geographic history of military bases throughout the country to show that the regime relied on these facilities to implement the early repression. Using this information, the authors are able to empirically show that state-led repression strengthened (rather than weakened) opposition forces and thus contributed to the transition to democracy.



**Fig. 1** Victims of state-led repression during the Pinochet regime (1973–1990) (Notes The number of victims includes killings and forced disappearances. Data processed by Bautista et al. [2021] and originally constructed by Comisión Rettig [1996])

Together with repression, a large package of economic reforms was implemented, motivated primarily by a technocratic belief in the efficiency of markets and private ownership.<sup>2</sup> The most well-known policies are a massive privatization program and a trade liberalization which introduced uniform 10% tariffs (González et al. 2020; Cuesta et al. 2015).<sup>3</sup> As part of these reforms, the regime implemented a crawling peg exchange rate regime, eliminated import licenses and prohibitions, promoted exports, pushed back on the agrarian reform, and designed a plan to control a persistent inflation (Edwards and Lederman 1998; González and Vial 2021). These policies brought some prosperity during

<sup>2</sup> In contrast, television stations and newspapers were controlled by the dictatorship almost during the entire period. This media control incentivized citizens to produce and consume relatively more unbiased information from radio stations and magazines, particularly after the protest wave of 1983–1984 (Leon-Dermota 2003).

<sup>3</sup> Before the Pinochet years, tariffs and non-trade barriers were used to favor certain sectors of the economy, but this was eliminated to increase market competition and promote specialization (Lederman 2005).

the late 1970s, but in 1982 the country experienced an economic crisis derived from some of these market-oriented policies. The crisis triggered an increase in tariffs to 35%—later reduced to 11% in 1991—and the privatization process was interrupted to return with intensity in the late 1980s. After the crisis, the existing business elite was shattered, allowing a new business elite to emerge (Lefort 2010; Rojas 2015). By the end of the dictatorship, the economy had again experienced some years of sustained economic growth after the crisis, but 40% of the population was in poverty and inequality had reach an all-time high.

In addition to the market-oriented policies, the Pinochet regime was also able to consolidate their legal vision of political institutions by writing a new constitution in 1980 (Barros 2002). This text made the junta the legislative body and Pinochet president for the period 1981–1989 and then Commander-in-Chief of the Armed Forces from 1990 to 1998. Although the constitution was approved by little more than two-thirds of citizens, scholars of the period have casted doubt on the legitimacy of the process due to a number of electoral irregularities (Fuentes 2013). Some reforms to the constitution were introduced in 1989, and a more significant package of reforms with more inclusive political institutions was only implemented in 2005.

### 2.3 *The Transition to Democracy*

As mandated in the 1980 Constitution drafted by Pinochet’s allies, a referendum in 1988 was to decide the future of the regime. The “YES or NO” election known as the “1988 plebiscite” was held on October 5, 1988, and a “YES” victory would validate Pinochet in power for eight more years (Barros 2002; Boas 2015). In contrast, a “NO” win would trigger a presidential election with candidates from all political parties. The 1982 crisis, the 1983–1984 protest wave, and the actions from social organizations all contributed to the strength of the opposition and thus played a crucial role in making the plebiscite possible and the election free and fair. Why did the regime allowed the election to take place? The regime aimed to get international validation, hoped to transform Pinochet into a democratic leader, and presumably miscalculated their chances of victory (Treisman 2020). Before the plebiscite political parties were made legal again and 7.5 million people registered to vote, an estimated 90% of the voting-age population (Bautista et al. 2021).

During the month before the 1988 plebiscite, the opposition—a coalition organized under the name of *Concertación de Partidos por la Democracia*—got the opportunity to use television for political advertising. The advertisements were presented by the regime as a signal of competitive elections and “had one of Chile’s largest TV audience [and] became the most discussed program on television and ‘the’ subject of conversation for the month it was broadcast” (Piñuel Raigada 1990; Hirmas 1993). The opposition’s side of the campaign consisted of a news show hosted by a popular anchorman that discussed important (and usually ignored) subjects such as human rights violations (Boas 2015). The regime emphasized the economic success of the second half of the 1980s and associated a potential opposition victory with the arrival of communism and the end of economic prosperity. These campaigns favored the opposition (González and Prem 2018).

More than 55% of people voted against Pinochet in the 1988 plebiscite and bolstered the democratic transition. After negotiations between the regime and the opposition, 91% of people voted for the “Approve” option in July 1989 to reform the constitution. Then, in December 1989, a presidential election with candidates from all parties took place and, as expected, the opposition candidate Patricio Aylwin won and took office in March 1990. The regime’s defeat at the 1988 plebiscite was unexpected because there was no legal institution in charge of regulating the election, which had allowed the regime to enjoy victories in the 1978 and 1980 plebiscites (Fuentes 2013). International scrutiny and internal organizations increased the legitimacy of the 1988 process (Engel and Venetoulis 1992; Tagle 1995; Santa-Cruz 2005). Moreover, previous surveys did not give a clear prediction (Cauce 1988), and most people thought Pinochet was not going to acknowledge a negative result (Huneeus 2006). On election day, most preliminary results showed that Pinochet was winning, and the opposition’s victory was only recognized on the next day at around 2 a.m. (Méndez et al. 1988). In previous research, we confirm the unexpectedness of the result by looking at abnormal returns in the stock market (González and Prem 2020).

After the transition to democracy in March 1990, Augusto Pinochet remained as Commander-in-Chief of the Army for eight more years and, as mandated in the 1980 Constitution, held a lifetime seat in Congress. However, in one of the most well-known political events of the late 1990s, Pinochet went to London for medical treatment, was indicted by a Spanish magistrate, and was charged with several crimes including human

rights violations and corruption. After potentially being extradited to Spain, a judge authorized Pinochet to return to Chile after medical exams determined he was unable to face trial. Shortly after his return to Chile, Pinochet resigned to his seat in Congress to face judicial prosecution. He died under house arrest in December 2006.

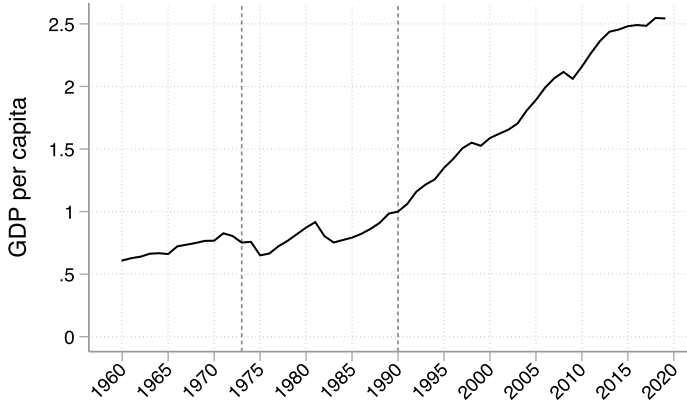
### 3 THE PERSISTENT ECONOMY

This section begins with a discussion of macroeconomic trends, then focuses on prominent economic policies, and ends discussing recent research on privatization and business groups.

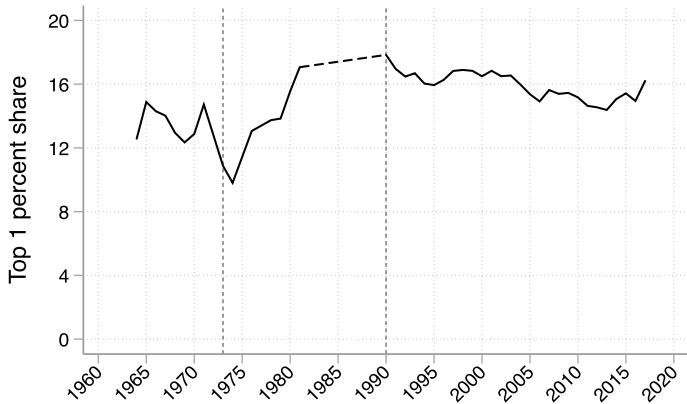
#### 3.1 *Growth and Inequality*

Panel (a) in Fig. 2 presents the GDP per capita in the period 1960–2019. Economic growth during the Pinochet regime was below average when compared to the 1990s and 2000s (Ffrench-Davis 2018). However, the country’s growth between 1985 and 1998—which included the recovery after the 1982 crisis—was one of the highest worldwide (Gallego and Loayza 2002), leading many to claim that it was the consequence of the market-oriented reforms implemented in the 1980s (e.g. Bosworth et al. 1994). The early literature in economics used time-series and cross-country regressions together with growth accounting and pointed to an important role of total factor productivity (TFP), favorable terms of trade, and increasing availability of foreign capital. Some scholars have claimed that the Pinochet reforms increased TFP and because of that made the financial sector stronger. The empirical evidence is far from conclusive and the period of sustained growth could have been the consequence of favorable external conditions, economic policies that would have been implemented in the absence of the Pinochet regime (e.g. uniform tariffs), or the combination of post-crisis recovery with policies implemented in democracy.

Patterns of inequality have also sparked significant debate. Nowadays, Chile exhibits high-income inequality—as measured by the Gini index and top incomes—within Latin America and among OECD countries (OECD 2015; Alvaredo et al. 2018). Survey data and tax records reveal that inequality reached an all-time high toward the end of the 1980s (Sanhueza and Mayer 2011; Flores et al. 2020). The most common



(a) GDP per capita



(b) Top 1 percent share

**Fig. 2** GDP per capita and inequality (*Notes* Panel (a) uses real GDP per capita data from the World Bank. We have normalized these numbers relative to GDP per capita in 1990 to facilitate comparisons over time. Panel (b) uses fiscal incomes data from Flores et al. [2020]. The vertical lines denote the beginning and the end of the Pinochet regime [1973–1990])



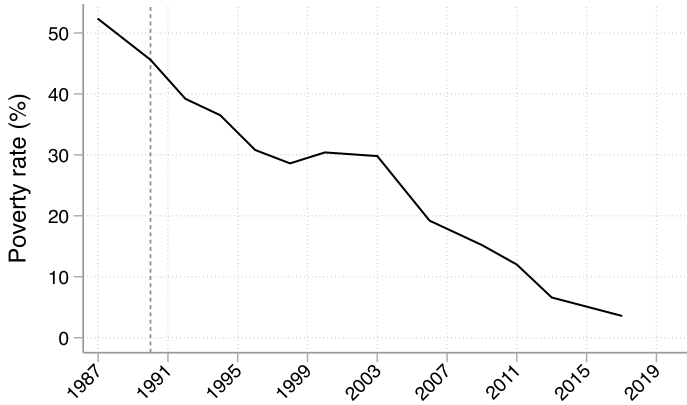
explanation is that policies implemented by Pinochet favored the elite, depressed the real wages of workers, and inequality increased as a consequence (Rodríguez 2014; PNUD 2017). Income inequality seems to have decreased slightly after the transition to democracy. The most recent literature uses tax data to measure income concentration because surveys underrepresent high incomes (Atkinson et al. 2011). These estimates show that the top 1% share increased rapidly and almost doubled during the Pinochet dictatorship, decreased slightly in the first two decades after the transition, and has begun to increase again in recent years (Flores et al. 2020).<sup>4</sup> Panel (b) in Fig. 2 presents the most recent estimates. A striking pattern is the persistently high-income concentration after the transition in 1990, which some scholars attribute to structural changes arising during the Pinochet years (Rodríguez 2017).

The decades after the Pinochet regime also exhibited a remarkable reduction in poverty rates from 50% toward the end of the 1980s to less than 10% in the late 2010s. Panel (a) in Fig. 3 plots this rate as the percentage of people living with less than \$5.50 a day. Scholars have found that economic growth was a key factor behind the decreasing poverty rates (Contreras 2003), and thus, there is again an inconclusive debate about the contribution of the Pinochet reforms. The persistent high-income inequality and the decreasing poverty suggest that a sizable share of the population is only slightly above poverty levels and that the size of middle class has been increasing markedly. Panel (b) in the same figure plots the distribution of monthly wages of full-time workers aged 18–65 in 2017—omitting the 10% with the highest wage—which reveals that half of the workers have a monthly wage lower than US\$580. These patterns suggest that an expanding middle class is facing new economic challenges in a market-oriented system that we now partially describe.

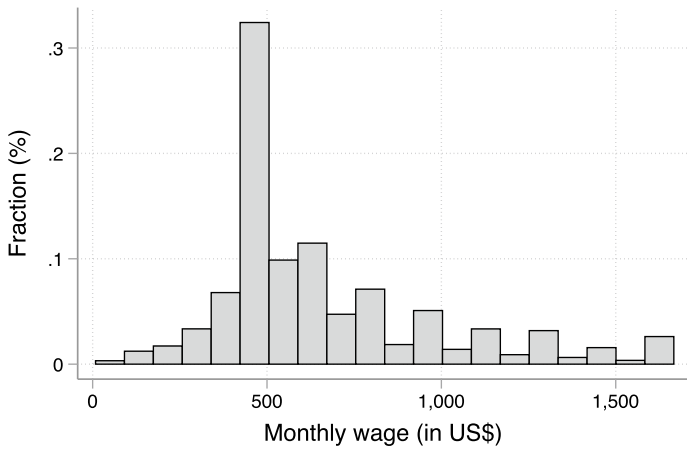
### 3.2 *Prominent Economic Policies*

*Education.* The 1981 reform introduced a market-oriented educational system with the goal of increasing the efficiency of spending in education (Bautista et al. 2021a). The introduction of a nation-wide voucher system to promote freedom to choose and competition to increase the

<sup>4</sup> The exact level of the top 1%  $t$  share depends on adjustments related to undistributed profits, capital gains, and tax evasion. See Fairfield and Jorratt De Luis (2016) and López et al. (2016) for details.



(a) Poverty rate



(b) Wage distribution in 2017

**Fig. 3** Poverty rates and wage distribution (*Notes* Panel (a) uses poverty rates defined as the percentage of the population living with less than \$5.50 a day [2011 PPP] from the World Bank. Panel (b) plots the wage distribution among full-time workers between 18 and 65 years old from the 2017 CASEN survey omitting the 10% workers with the highest wages [more than US\$1667])

quality of education was the most salient policy (Friedman 1955; Gallego 2006). The management of public schools was decentralized from the central to local governments.<sup>5</sup> Higher education was also liberalized, with private universities replacing mostly free public universities. This reform was implemented after a substantial reduction in public spending in 1974, which decreased enrollment significantly and affected cohorts for a lifetime (Bautista et al. 2021a). Overall, after the reform, the system became one of the most market oriented in the world (Figlio and Loeb 2011). The public sector has been shrinking steadily, from 80 to less than 40% after 30 years (Hsieh and Urquiola 2006). Left-wing governments kept the structure of the system after democratization with changes to the curriculum, the allocation and salaries of teachers, and the introduction of remedial programs (Schiefelbein and Schiefelbein 2000). One of the most controversial policies in higher education has been the introduction of a state-guaranteed loan in 2005 to be used for fees in private institutions and to be paid while earning a wage in the formal labor market.

Critics of the reform to primary and secondary education stress that the system has become increasingly segregated, with children from low-income households attending low-quality public schools and high-income ones attending private schools. The critique to the higher education system points to high fees, the low quality of institutions, and the financial burden associated with state-guaranteed loans. Supporters of the system emphasize that the market-oriented reforms have allowed many to access education and have therefore being the pillar behind the high enrollment rates in the last decades (Delannoy 2000; Patrinos and Sakellariou 2011; Solis 2017).

*Health.* The health insurance system was installed in 1979–1981 as a mixture of private and public providers. The public option is publicly financed by a 7% payroll tax, and private providers are insurance companies that compete by offering risk-priced products in a regulated market. Insurance companies charge payments and receive contributions from payroll taxes. The public option served 66% of the population in the 1990s and almost 80% today, a trend explained by the rising costs of

<sup>5</sup> Funding still came from the central government, but local governments now received per-student payments based on enrollment and school attendance. Local governments were also now in charge of human resources and investments. The system has remained the same with small changes such as increases in the size of the voucher.

private insurers (Galetovic and Sanhueza 2013; MDS 2018). Cream skimming in this market is well documented with the public sector serving lower-income and riskier people and the private sector serving richer and healthier people (Parente and Silva 2012). Public hospitals are more crowded and have 1.2 physicians per 1000 beneficiaries, while in the private sector this number is 5.3. Similarly, spending per capita is almost \$3000 in the private sector and less than \$1000 in the public option (Bautista et al. 2021b). Overall, access to health has increased, but there is a larger share of the population that is being served by a relatively low-quality public option.

*Pensions.* The 1980 pension reform replaced the pay-as-you-go system by a fully funded capitalization one run by private investment funds known as Pension Fund Administrators (PFA).<sup>6</sup> The system can be simply described as follows. When a citizen works in the formal labor market, she is mandated to give 10% of their earnings (up to a cap) to a pension fund of their choice, firm which then grows the money using investment strategies, and by the time the worker is 65 years old, she can retire her funds. The pension payment depends on the worker's total savings, life expectancy, and the chosen option of retirement (fixed or not). Informal workers contribute voluntarily and those who fail to reach a minimum pension are given a solidarity pension equal to half of a minimum wage. Although some reforms have been introduced, the system remains virtually unchanged.<sup>7</sup> We hypothesize that structural changes have not taken place because the system ranks above average internationally (ACFS 2017), the first fully-exposed cohort will retire in 2025, existing power relations between PFAs and the political world (Bril-Mascarenhas and Maillet 2019), and because PFAs have contributed to economic growth through higher savings rate and the development of capital markets (Corbo and Schmidt-Hebbel 2003).

There have been four critiques to the current pension system. First, the founder famously claimed that workers will have a pension equal

<sup>6</sup> The new system aimed to solve increasing fiscal problems derived from aging population and decreasing contribution rates (Vial and Castro 1998). Citizens in the old system were given the option to remain there, but they had economic incentives to switch. Therefore, in practice, almost all workers switched to the new system.

<sup>7</sup> For example, new policies guarantee a minimum pension for those without sufficient funds in their individual accounts, increase competition among PFAs, and decrease the fees paid by contributors.

to 70% of their wage (Piñera 1991). However, half of the people who will retire in 2025 will get a pension equal or lower than 15% of their wage (Presidential Commission 2015). A median monthly wage of 700 US dollars implies that pensions will be lower than \$100, and thus, the general discontent with the system has spread. Second, wages are low, the informal sector is large, and long periods of unemployment common, all which cause that most citizens are unable to finance meaningful pensions. Third, the amount of resources managed by PFAs is more than half of the country's gross domestic product, which has been used to fuel the supply side of the economy (Edwards 1996), create large profits for PFAs, and pay high wages to board members.<sup>8</sup> Fourth, the armed forces have their own pension system financed by taxpayers, and they get an average payment more than ten times larger (Arellano 2017).

*Housing and subsidies.* The use of targeted subsidies to fight poverty was yet another characteristic of the regime's economic policies during this period. Perhaps one of the most prominent examples is related to housing policies between 1979 and 1985 (Murphy 2015). In an effort to eradicate urban poverty, the regime relocated two-thirds of people living in slums in the capital city—5% of the total population—to new housing projects in the periphery (Morales and Rojas 1986). Recent research in economics shows that this policy decreased the educational attainment and earnings of children from relocated families not evicted (Carrera and Rojas-Ampuero 2021).

### 3.3 *Business Elites*

Firms can be instrumental to build economic power. Some of our research has studied the impact of policies implemented during the Pinochet dictatorship on the dynamics of economic power as measured by business groups before and after the country's democratization (Aldunate et al. 2020). The data we employ comes from annual firm-level data collected by a regulatory agency (SVS, now CMF) and historical administrative records of groups. The largest firms in the country were mandated to

<sup>8</sup> Their 25% return over equity in 2006–2015 is five times larger than the predicted return derived from market risk (López 2016). According to audited annual reports submitted to Chile's regulatory agency, in 2015 the average wage of board members in PFAs was \$7500 monthly, with some members earning more than \$15,000 monthly.

submit yearly reports of their financial activities, which provides an opportunity for researchers to study balance sheets, debt with banks, income statements, and the identities of owners and board members during the dictatorship, transition, and democracy periods.

One of the most important policies implemented by the Pinochet regime was the sale of state-owned firms. This privatization process was primarily chosen due to the belief in the efficiency of private property. To gain support from the public, Pinochet framed the process as “popular capitalism” and “diffusion of property to make Chile a country of owners” (Huneus 2006, p. 314). The first sales were organized by the Production Development Corporation in the 1970s and the second round began after the 1982 crisis. A research commission called by the Congress after the return to democracy succinctly summarizes three key aspects of the policy implementation (CEME 2004): (i) scarcity of information about firms being sold and their price, (ii) a variety of methods of sale with unclear rules for the ones chosen (e.g. public auctions, prequalifications, use of credit), and (iii) a flexible and unclear legal framework to regulate the process.

What were the economic consequences of the privatization reform for the following decades of the democracy? The sale of previously state-controlled firms contributed to the replacement of traditional business by new business groups and thus facilitated the renovation of elites. This evidence is important because groups are by far the key organizational structure in the country (Rojas 2015).<sup>9</sup> Before the Pinochet years, approximately 20% of listed firms were part of a business group (Salvaj and Couyoumdjian 2016), but after the transition to democracy in 1990 this number jumped to 70%. The empirical evidence is clear to show that *new* business groups were built around privatized firms, and particularly so when firms were sold after the 1982 economic crisis. Traditional business groups suffered from the crisis and new agents use the opportunity to acquire state-owned firms (Silva 1996b). More precisely, firms sold before the crisis ended up as part of traditional groups, while firms sold afterward became the pillars of new business groups, which can be explained

<sup>9</sup> The contribution of government policies to the formation of new business groups is a relatively old hypothesis proposed by academics in Chile and other parts of the world such as China, Japan, Malaysia, and Russia (e.g. Morck and Nakamura 2007; Khanna and Yafeh 2007; Lefort 2010; Kandel et al. 2019).

by the fact that prevailing business groups were mostly bank based and were severely affected by the 1982 devaluation (Silva 1996b).

## 4 THE POLITICAL PERSISTENCE

The distribution of political power also changed drastically during the Pinochet years. Many of the newly empowered individuals successfully maneuvered their interests during the transition to democracy. This section reviews some of the mechanics behind this political persistence. We do not attempt to be exhaustive, and we mostly focus on the empirical evidence from our work on firms, politicians, and the related economics literature.<sup>10</sup> We do not cover the consequences associated with state repression and the lack of persistence in terms of political preferences at the local level (Bautista et al. 2021) and the persistent political participation of people who registered to vote for the crucial 1988 plebiscite that bolstered the transition (Kaplan et al. 2020).

### 4.1 *Firms as Political Vehicles*

Modern economic research recognizes the influence of firms in the political sphere both in democracies and in dictatorships (Zingales 2017). Political corporations affect both the design and implementation of policies and contribute to resource misallocation and inefficiency (Faccio et al. 2006; Colonelli et al. 2021). Yet it is surprisingly less clear how firms become political and how they contribute to the persistence of political structures. The case of the Pinochet dictatorship is important because it provides critical lessons both about the origins of political firms and the role of firms as vehicles to preserve political power after a transition to democracy.<sup>11</sup>

Political transitions create enormous economic changes (Acemoglu et al. 2019), and thus, they have the potential to affect firms. It is thus

<sup>10</sup> We do not cover the persistence of political institutions such as the 1980 Constitution, among others. Albertus and Menaldo (2012, 2018) provide an excellent coverage of constitutional persistence from the political science literature.

<sup>11</sup> Previous research has shown that corrupt privatizations have a negative effect on firm performance (Fisman and Wang 2014), that political reasons are usually behind the origins of these reforms (Boycko et al. 1994; López-de-Silanes et al. 1997), and that privatizations might be used as a tool to gain political support (Bel 2010).

reasonable to expect firms to make decisions to survive and perhaps even thrive after transitions. The privatization reform enabled many individuals to acquire control of important firms. For example, one of the largest mining companies in the world was sold underpriced to Pinochet's son-in-law, and this type of link between firms and the state is at the heart of well-studied economic inefficiency (Fisman 2001; Khwaja and Mian 2005; Cingano and Pinotti 2013). The anticipation of losing these links after a transition could lead firms to prepare for the future. In previous research, we have shown that firms successfully prepared their business operations for the upcoming democratic years and, as a consequence, they transferred economic inefficiencies across political regimes and possibly limited the benefits of democratization (González and Prem 2020). Many firms were managed and controlled by Pinochet's allies, were relatively unproductive, and benefited from resource misallocation. The day after the 1988 plebiscite, firms learned that the dictatorship was going to be replaced by a left-wing democratic government, and they responded by increasing their productive capacity, experienced higher profits, obtained more loans from the state-owned bank, and then after 1990 removed board members related to the dictatorship (González and Prem 2018b). These firms were attempting to shield their market position and were able to successfully transit across the country's democratization.

Why is it important that firms from the dictatorship preserved their economic power? As mentioned, firms have the ability to influence the design and implementation of policies. In related research, we show that firms sold underpriced to Pinochet's allies formed connections with the new democratic governments, financed political campaigns, and were more likely to elude taxes and appeared in the Panama Papers (González et al. 2020).<sup>12</sup> These firms appointed politicians and *substituted* them from the *old* to the *new* government after democratization. These links again increased resource misallocation and produced rents for owners and board members (Blanes i Vidal et al. 2012). The results reveal one way in which authoritarian regimes can influence young democracies using firms as vehicles to transfer their political power across regimes. The privatization reform contributed to the politicization of firms and constitutes a

<sup>12</sup> A data collection effort enabled us to confirm the relative underpricing of the sales when the buyers were closely related to the Pinochet regime. Some of these controversial privatizations have been studied by Mönckeberg (2015).



clear example against the idea of private firms as apolitical entities (Boycko et al. 1996, 1997).

Privatized firms were also used by buyers with political links to the regime to build indirect ownership through pyramidal ownership structures in order to exploit them as providers of capital within their respective business groups.<sup>13</sup> The state firms which were sold to buyers connected to the Pinochet regime during the privatization process were much more likely to be part of a pyramidal ownership, to be placed at the bottom of these, and became providers of credit within the group. We detected these capital markets within business groups by studying the ownership of firms through many layers. In all, privatized firms were used as sources of capital by individuals who presumably lost privileged access to bank loans after the transition.

#### 4.2 *The Persistence of Dictatorship Politicians*

An important but understudied dimension of authoritarian regimes is the functioning of local governments. Some dictators appoint individuals as local leaders and some use elections. After transitioning to democracy, local leaders are unlikely to lose their power and to be forgotten by the public. Moreover, they can prepare for the democratic times and invest in de facto power before the transition unfolds. This was the case in Chile (González et al. 2021). We reconstructed the history of local governments from 1973 until the first local election in 1992 to study these issues. Although we know a lot about the Pinochet regime (Huneus 2006; Cavallo et al. 2011), we know relative little about appointed mayors. Weeks after the 1973 coup, the *junta* removed all mayors democratically elected in 1971 and appointed trusted individuals until Pinochet left power in March 1990. The appointments were discretionary and we show they were unresponsive to important events which revealed mayors' abilities (e.g. protests and natural disasters).

Pinochet-appointed mayors were far from retirement after the transition in 1990. The analysis of candidates and voting preferences in the 1992 local election reveals that many of them decided to run for office and obtained a vote premium of nine percentage points. The ones who

<sup>13</sup> Pyramids allow indirect control (Bertrand and Mullainathan 2003), they are relatively common (La Porta et al. 1999), and they are associated with tunneling and expropriation of minority shareholders (Johnson et al. 2000).

were mayors more recently, particularly sitting incumbents, were the most politically rewarded. Interestingly, an increase in local spending right before Pinochet left power can explain some of these additional votes they obtained, which is consistent with evidence from other parts of the world (Voigtländer and Voth 2021). Why should we care about the fate of appointed mayors? We followed them in all local elections in democracy and discovered that they were enjoying a well-known incumbency privilege (Lee 2008). All those years in office during the dictatorship gave them an advantage over their competitors, and this can explain their additional votes in democratic elections.

Was the persistence of dictatorship mayors important? To answer this question, we exploited some of the transitory electoral rules in the first local election, which allowed us to approximate a natural experiment in which dictatorship mayors persisted as local leaders in some but not all parts of the country. The findings reveal that dictatorship mayors brought significantly more votes for right-wing candidates in local and presidential elections and facilitated the election of right-wing councilors. However, their economic performance was similar to other mayors. Other researchers have also hypothesized important links between authoritarian regimes and subsequent democracies (O'Donnell and Schmitter 1986; Huntington 1991; Linz and Stepan 1996), but empirical studies are only recent. Before our study, the evidence came mostly from Indonesia's transition (Martínez Bravo 2014; Martínez Bravo et al. 2018), which differs from the Chilean case because it was more relatively more abrupt. In all, local politicians were also able to maintain their power and thus contributed to elite persistence (Acemoglu and Robinson 2008).

The persistence of politicians goes beyond appointed mayors. In some cases, the incumbency advantage was sufficiently large to be translated into decades-long political careers. The most prominent examples include appointed mayors who are current members (or even leaders) of right-wing parties, democratically earned seats in the Congress, or have been recently appointed as leaders of critical government departments (e.g. labor and social security). Remarkably, some of them continue to represent the same local areas they governed as appointed mayors. In addition to the persistence of appointed mayors, the Pinochet dictatorship was also able to include in the 1980 Constitution that nine out of 47 seats in the senate were to be appointed by the National Security Council, the Supreme Court, and the President. The constitution also installed a binominal system to elect members of the Congress, which supported

a persistent balance of power among the two largest coalitions and was almost impossible to break for outsiders. Overall, the appointments and the constitution contributed to the persistence of dictatorship politicians.

## 5 THE QUEST FOR INSTITUTIONAL CHANGE

A simple theory of social change is useful to understand the dynamics of discontent in Chile (Acemoglu and Robinson 2006). At the beginning of the 2000s, the left-wing coalition had been in power for a decade. Their capacity to change the status quo, however, was constrained by the opposition coalition. The opposition was politically aligned with the former Pinochet regime, at least in their preference for a market-oriented systems and existing political institutions. After years of successfully managing the existing institutional framework, organized groups of citizens decided to exert pressure on the incumbent with the goal of reforming the existing rules of the game. When these early waves of discontent arrived, the options for the incumbent were either to repress the movement, to offer temporary reforms, or to completely reform the status quo. We argue that the strategy of the incumbents has predominantly been to offer temporary reforms, which led to a major discontent and a potential path of permanent structural reforms.

### 5.1 *Early Waves of Discontent*

The first large wave protests after the return to democracy were led by high school students in 2006 and gathered hundreds of thousands of people to reform the persistent educational system implemented in dictatorship. In particular, the objective was to modify constitutional laws which framed the system as market oriented. After months of demonstrations, the conflict came to an end when the incumbent President Michelle Bachelet offered increasing benefits for low-income students and created a formal transitory institution to develop a reform plan. The lack of a permanent reform triggered another student movement in 2011 (Simonsen 2012; González 2020). Protests were now joined by environmental groups who opposed the construction of hydroelectric plants due to concerns about their impact on the local ecosystem. The environmental discontent began in 2006 after the announcement to build five plants but increased their visibility during this time. In terms of education, the goals of protesters were now related to higher education and included

more spending, more equal access, and reforms to state-guaranteed loans, used by most students to enroll in higher education. Students continuously rejected offers of partial reforms from the government. Months of conflict ended after the beginning of institutionalized negotiations, increasing protest violence, and concerns about grade retention. Overall, the 2011 protests made education and the environment top priorities and trigger important reforms to state-guaranteed loans.

Another wave of demonstrations took place in mid-2016 to protest against the pension fund system installed by the Pinochet dictatorship. Illegitimate origins, low pensions, and the high profitability of PFAs were key to explain the low satisfaction of the public (Presidential Commission 2015; Matus 2017). The organizers of the discontent aimed at establishing a new one based on principles of benefits and solidarity. The origins of the movement can be found as early as 2012, when citizens and labor unions gathered for the first time to discuss the pension system (Rozas and Maillet 2019). Protests began in 2013, but the ones in 2016 were the largest. A combination of grassroots organization and a trigger event related to the high pensions of gendarmerie workers seem to be the key explanation behind the massive rallies. These events had some short-run effects in the stock market, generated reductions in fees paid by contributors, and were successful in bringing this subject to the public debate, including the creation of a potential state-owned PFA (López and Nuñez 2017). However, large reforms to the system remain to be seen.

When citizens are able to organize demonstrations, what could be the response of an incumbent government? The government may decide to repress a movement or offer temporary reforms. The latter ranges from a transitory change in the speech of incumbent politicians, to the proposal of partial reforms that serve as “patches” to the system, or to the start of uncertain legislative paths. The incumbent government rarely offers radical or permanent reforms that completely satisfy the demands of the movement, especially at times in which partial reforms are enough to dismantle demonstrations. What can citizens do if the government is unwilling to reform? Leaders of the early waves of discontent have entered the political arena with the goal of implementing structural reforms. Some founded political parties with varying degrees of success, and some became mayors or earned a seat in the Congress. Although permanent reforms have certainly attempted to make their way in the political sphere, most of them could not be implemented. Perhaps the most prominent example is a failed attempt to create a new constitution in the mid-2010s.

## 5.2 *Explosion and Institutional Response*

Early waves of discontent were followed by massive protests in late 2019. The first events were organized by students after an increase in subway tickets and political scandals from early October. Students from the largest public schools organized collective fare evasions in subway stations starting on October 7. Day after day, fare evasions increased markedly and incorporated social organizations, pushing the government to make use of the police to control protests. On Friday 18th, the confrontation between protesters and the police reached a tipping point: dozens of subway stations stopped their operations and some were burned under currently unknown circumstances. That day, the Ministry of the Interior appealed to a state security law and filed complaints for criminal behavior against those engaged in violent events. As a consequence, protests and barricades spread throughout the country, leading the president to decree a state of emergency.

These rallies became the largest manifestation of discontent after the return to democracy. Protesters were complaining about increasing living expenses, illegitimate institutions, and incumbent politicians. Their demands could be summarized as more social rights, which most interpreted as reforms to the market-oriented system (e.g. education, pensions, health) and a new constitution to create a more egalitarian society where everyone was treated equally; “dignity” was the word most used by protesters. The initial response of the government was to offer partial reforms on October 22 (“Nueva Agenda Social”). Protesters rejected these and a massive demonstration took place on October 25 with more than 1 million people in the city capital. Protests in certain weekdays became the norm and a violent conflict emerged between the police and protesters. Accusations of human rights violations became common after hundreds of individuals were heavily repressed by the police. Dozens of people died, thousands were hospitalized, and hundreds received rubber bullets from the police directly in their eyes (see Human Rights Watch 2019).

After being unable to solve the escalating conflict, the incumbent president made a call to the leaders of political parties to propose a solution for the discontent. After days of negotiations, a political agreement was reached on November 15 which consisted of a potentially permanent reform: a plebiscite would take place on April 2020 to ask citizens (1) if they would like to replace the existing constitution and (2) if they

would like the new constitution to be written by a fully elected convention or by one composed half by congresspeople and half by elected citizens. Due to the global health crisis, the 2020 plebiscite was moved to October 25, 2020, day in which 78% of 7.5 million people voted in favor of a new constitution and 79% for a fully elected constitutional convention. Many scholars have interpreted this election as the end of Pinochet's legacy (e.g. Charney et al. 2021). In the following months, the Congress agreed that the convention would have 50% reserved seats for women and 10% for representatives of indigenous people. In the following months, protests declined and then came the outbreak of the pandemic in March 2020.

## 6 MOVING FORWARD

One hundred and fifty-five members of the constitutional convention were elected, half are women (77) and 17 represent indigenous populations. Many of the newly elected constituents became politically active during the waves of discontent, and many political or social organizations originated in protest movements from the past twenty years. In contrast, existing political parties obtained significantly fewer seats than expected, with independent candidates and their vote shares experiencing a turn to the left of the political spectrum: the left-wing coalitions obtained 34% of seats, while the incumbent right-wing coalition obtained 24%. Moreover, the arguably most important party in the last 60 years (Christian Democrats) obtained only one seat. Crucially, the right-wing coalition—which main parties provided support to the Pinochet regime—was unable to secure more than one-third of seats, which would have given them a veto power. The group with the most seats has fewer than two-thirds, which means agreements across coalitions will be key.

There are still many unknowns about the constitutional future. One of the most important is the functioning of the convention. The transit from a market-oriented constitution to one that guarantees social rights and environmental regulations appears to have the necessary quorum. Whether the composition of the Congress will be modified or the power of the executive will be diminished remains unclear, among many other critical matters of the political system. Perhaps the last big unknown in this path of institutional change is the “Exit Plebiscite.” The political agreement of November 2019 determined that after the convention drafts the constitution there will be a plebiscite to approve (or reject) the drafted

constitution. Participation will be mandatory, which means that millions of people who have never voted will have to do it for the first time. The legacy of the Pinochet regime could finally come to an end, but only time and democracy will tell.

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# Missionaries and Soldiers in the Forging of Modern Paraguay

*Felipe Valencia Caicedo and Moisés Pedrozo*

## 1 INTRODUCTION

Certain historical events can have outsized impact in the making of countries and national identities. In the case of Paraguay, we examine two such events: the early missionary conquest of the territory (1609–1767) and the shock of the Triple Alliance War (1864–1870). We argue that these historical episodes left a significant socioeconomic and cultural imprint in the shaping of Paraguay. Missions constituted a large social experiment and were studied by prominent observers such as Voltaire. The Triple Alliance War comprises the largest interstate conflict in Latin America. In

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a way, the war can be considered a “critical juncture” that determined the destiny of modern Paraguay.

In this chapter, we summarize the main findings and present extensions of two articles: Valencia Caicedo (2019) on the role of Jesuit missions in fostering human capital in the Guaraní region and Alix-Garcia et al. (2022) on the multifaceted impacts of the War of the Triple Alliance. In terms of extensions, we stress previously overlooked *cultural* mechanisms of transmissions for Valencia Caicedo (2019) and we present a novel analysis based on marriage records for Alix-Garcia et al. (2022). Both articles have in common a focus on the cross-border region of Argentina, Brazil, and Paraguay. In Valencia Caicedo (2019), the area corresponds to the old Paraguay or the Jesuit Republic of Paraguay; and in Alix-Garcia et al. (2022), to the border areas that this country claimed alongside Argentina and Brazil, which in large part led to the war. Both articles analyze one-off historical shocks: in Valencia Caicedo (2019) a religious missionary intervention that ended in 1767 and, in Alix-Garcia et al. (2022), a devastating war that lasted six years, almost one century later. As such, they can be understood as natural historical experiments, in the language of Diamond and Robinson (2011). Both papers stress the cultural dimension, as a mechanism of persistence. In the Jesuit missionary case, we focus on occupational persistence, knowledge transmission and indigenous assimilation and, in the Triple Alliance War, on more equal gender norms.

## 2 GUARANÍ JESUIT MISSIONS

Valencia Caicedo (2019) demonstrates the important long-term economic benefits of Catholic missionary activity in South America.<sup>1</sup> The author focuses on missions founded by the Society of Jesus (Jesuits) during the seventeenth century among the Guaraní in modern-day Argentina, Brazil, and Paraguay. While these Catholic missions officially aimed to achieve religious conversion of indigenous inhabitants, they also fostered human capital formation by schooling children and training adults in various crafts. The setup is unique in that Jesuits were expelled from the Americas in 1767 and never returned to the Guaraní

<sup>1</sup> For the history of the Guaraní and the Missions, see Ganson (2003) and Sarreal (2014). Waldinger (2017) studies Catholic missions in Mexico and Okada da Silva (2022) focuses on Jesuit missions in the Brazilian Amazon.

area, thus precluding any direct continuation effect.<sup>2</sup> Valencia Caicedo (2019) exploits Franciscan and abandoned Jesuit missions to econometrically identify the effects of Jesuit Guaraní missions and human capital investments.<sup>3</sup>

To disentangle the national, cultural, and institutional effects from the human capital shock provided by Jesuit missions, the author uses *within* country variation of missionary activity. He employs municipal level data for five states (Corrientes and Misiones in Argentina, Rio Grande do Sul in Brazil, and Itapúa and Misiones in Paraguay). As the area under consideration was populated by a single semi-nomadic indigenous tribe, it is possible to abstract from the direct effect of different pre-colonial ethnicities. The early stage of development of the indigenous inhabitants at the time of contact also makes the setting unique.<sup>4</sup> Finally, the Guaraní area possesses similar geographic and weather characteristics across municipalities and states, resulting in an ideal empirical setting. For robustness, the author incorporates geography and weather into account in the empirical analysis. Here we look at alternative identification strategies as well.

Valencia Caicedo (2019) finds substantial positive effects of Jesuit missions on modern-day human capital and income measures, 250 years after the missionaries were expelled. In municipalities where Jesuits carried out their apostolic and educational efforts, median years of schooling and literacy levels remain higher by 10–15%. These differences in attainment have also translated into higher modern *per capita* incomes (or lower poverty rates) of nearly 10%. In order to rationalize these enduring educational and income differences, the author examines later occupational, cultural, and behavioral channels of transmission, which we expand upon later.

Figure 1 depicts the historical population of the Jesuit and Franciscan Guaraní Missions from 1640 to 1760. Though the series is spotty, it gives us an indication of the general population trends of these entities,

<sup>2</sup> Some of this material has appeared previously in column format at VOXEU at <https://cepr.org/voxeu/columns/missionaries-human-capital-transmission-and-economic-persistence-south-america>.

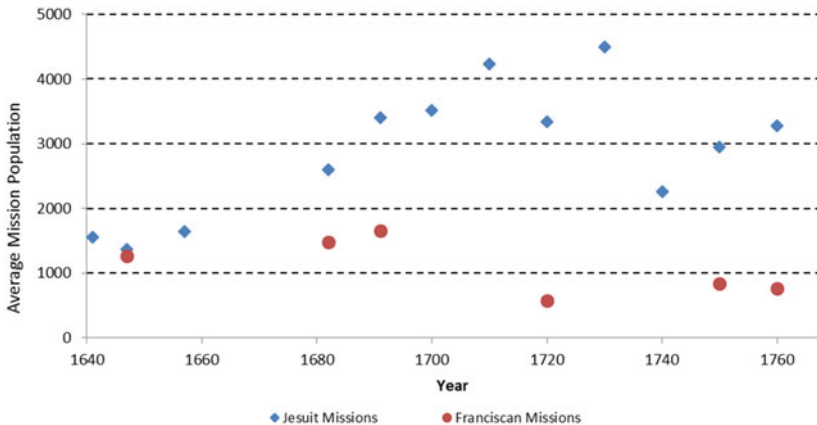
<sup>3</sup> The author compares Jesuit and Franciscan missions, both orders with the same goal: convert indigenous people to Christianity. However, Jesuits focus on education and technical training in the conversion process, relative to the Franciscans.

<sup>4</sup> The author, following Ganson (2003), mentions that indigenous people did not have iron weapons or tools, scenario that provides evidence of their stage of development.



including the epidemics of the 1730s, as well as their divergence over time. We can see that both series start at about 1,000 (mean number of) inhabitants, in the earliest periods. Over time, we can then see a divergence between the Jesuit missions, that reach more than 4,000 inhabitants, and the Franciscan missions, which hover around a thousand people. This early divergence in population, at a period that is well before the demographic transition, also indicates an early divergence in income (Galor 2011). These early differences are still palpable in the long run. Missions with more inhabitants and number of families tend to have higher incomes in modern times. Similarly, recognizing that the intensity of the treatment might vary depending on the number of years that orders were active, the author finds that missions founded earlier (that were active for a longer time), exhibit higher levels of literacy in modern times.

Jesuit missionaries could have founded their missions in better places, making their location non-random. To address this potential endogeneity issue, the author works with abandoned Jesuit missions and (non-abandoned) Franciscan missions to capture the causal effect of Jesuit orders. In particular, the author focuses on missions founded by Jesuits but abandoned before 1659: if these missions were initially founded by Jesuits, but abandoned later on, they were not fully “treated” compared



**Fig. 1** Historical population of Jesuit and Franciscan missions (*Source* Valencia Caicedo [2019], author calculations, Appendix material)

to the missions that continue until 1767. However, it might be that these missions were abandoned endogenously. In order to address this, the author focuses on religious that arrived earlier to the region and had similar goals as those to Jesuits: the Franciscan order. Next, we dive deeper into both identification strategies.

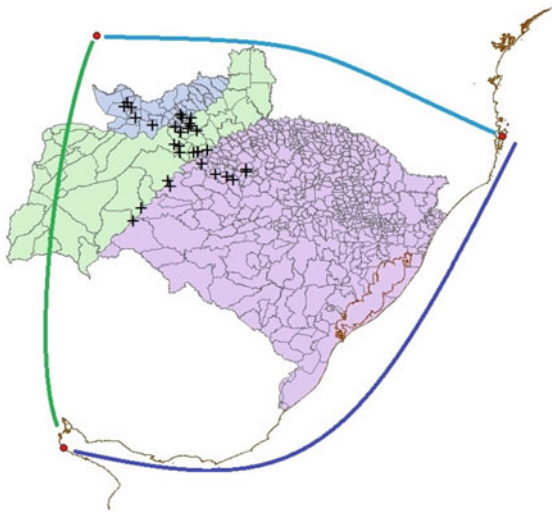
Valencia Caicedo (2019) uses abandoned missions in a placebo-type test. The idea, similar to the intensity of treatment results described above, is to see if in areas where missionaries ended their activities abruptly—due to epidemics, the sudden death of priests, or slave raiders attacks—there is also long-term persistence of income and human capital. The author does not find this to be the case in the Jesuit missionary nuclei of Guayra, Alto Parana and Itatin, when estimated individually or jointly. Conversely, the effect of Guaraní Jesuit missions is robust to controlling for these abandoned missions. This exercise suggests that Jesuit missionaries were not simply picking better places, but that their actual activities and investments mattered in the long run.

One remaining concern is that missions could have been abandoned (rather than founded) endogenously. To address this concern, the author analyzes successful Franciscan missions and their differences with Jesuit missions. Everything that is endogenous to establishing a Catholic mission in the Guaraní area—the presence of indigenous people, European priests, suitable climatic and geographic conditions—would be common to both orders. If anything, he shows in the paper that Franciscan missions were located in better places, consistent with the fact that Jesuits got last pick and ended up in more peripheral areas. Crucially, the Jesuits emphasized human capital transmission and training, relative to the Franciscans, who favored tending for the poor and the sick, given its inception as a Mendicant order. This key difference allows one to identify the long-term impact of human capital investments.

As an alternative, to solve the potential endogeneity of mission's location, the Appendix of the paper presents another identification strategy based on instrumental variables. In this alternative econometric strategy, the idea is to find variables or instruments that affect the establishment of missions, but that do not impact directly the outcomes of interest. To this end, the author uses early exploration routes and distance to Asunción, for the Brazilian sub-sample of the data. Early exploration routes, from before missionary times, help to proxy for early settlements and have been used in the urban economics literature. Hence, distance from these routes are a measure of isolation, and align well with Jesuit missions, which

were often established in peripheral areas of the Spanish and Portuguese empires (Fig. 2).

Distance to Asunción, in turn, highly correlates with the historical foundation of Jesuit missions, as many expeditions departed from this “mother of cities.” This measure would be correlated with development outcomes for the Paraguayan, and even the Argentinean subsamples, as this country was part of the Spanish Empire. However, Rio Grande do Sul, Brazil changed hands from the Spanish to the Portuguese after the Treaty of Madrid in 1750 redrew the boundaries of the Tordesillas Line of 1494. Hence, for this southern state, distance to the capital of Paraguay was important historically, especially for the early foundation of missions, but decreased in relevance as Rio Grande do Sul became part of Brazil, following the centers of power of Rio, Sao Paulo and Brasilia.



**Fig. 2** Map of the Guarani Jesuit missions with exploration routes (*Notes* The map shows the Guarani Jesuit missions with municipal level boundaries for the states of Misiones and Itapúa in Paraguay, Misiones and Corrientes in Argentina, and Rio Grande do Soul in Brazil. The lines depict the expeditions carried out by Pedro de Mendoza, Alvar Núñez Cabeza de Vaca, Juan de Ayolas, and Domingo de Irala. The red points correspond to Asuncion, Buenos Aires, and Santa Catarina. *Source* Valencia Caicedo [2019], author calculations, Appendix material from Valencia Caicedo [2019])

Thus, in sum, distance to Asuncion affected the establishment of missions, but did not impact the outcomes of interest. The first stage relationship between Jesuit missions and distance to Asunción is strong. Using these instruments, individually or in combination, the author finds again that the farther away municipalities are from historical Jesuit missions, the more illiterate and the poorer they are today.

Using historical censuses, the author is able to trace the human capital effect through the intervening period between the missionary era and today. He uses data from the 1895 Census of Argentina, the 1920 Census of Brazil, and the 1950 Census of Paraguay. He finds that Jesuit missions had an even larger effect on human capital during intermediate historical periods and that these effects are larger for females and concentrated on local inhabitants rather than foreigners, as expected. There is also a very strong persistence, between intermediate historical human capital outcomes and modern ones.

### 3 CULTURAL MECHANISMS

An important question in persistence papers is the mechanism of transmission of the main effect. How is it that we can observe higher human capital or income measures, even centuries after the original treatment? In this chapter, we want to stress the cultural mechanisms that could allow for this persistence. We take here a more Weberian stance, relative to the main text of Valencia Caicedo (2019). Cultural explanations of economic performance date back to Max Weber's 1905 Protestant work ethic hypothesis (Weber 2011). According to Weber, this same ethic was found among the Catholic orders, "as early as St. Benedict [480–547], more so for the Cistercians [1098], and, finally, most decisively, for the Jesuits [1534]" (Weber 2011, p. 130).<sup>5</sup> He goes on to say that, "The gradual rationalization of asceticism into an exclusively disciplinary method reached its apex in the Jesuit order" (Weber 1978, p. 1172). In the Guaraní area, French naturalist Alcide D'Orbigny in his 1827 visit to the former mission of Loreto, Argentina, reported how indigenous inhabitants still lived "following the old missionary customs" (cited in Gálvez

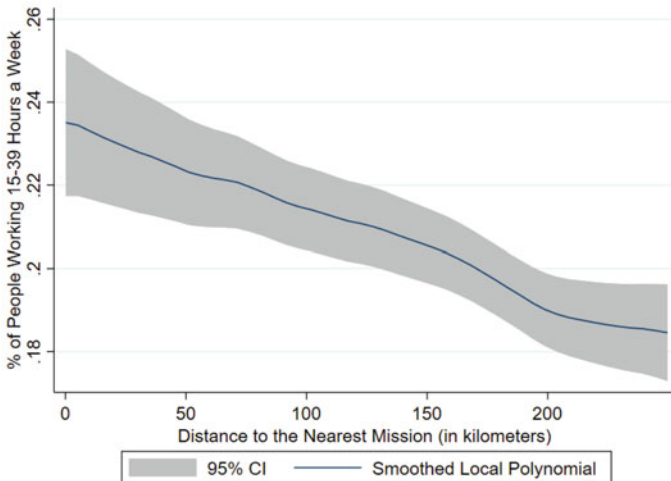
<sup>5</sup> For recent evidence comparing the thrift of these Catholic orders, see Andersen et al. (2017) for the Cistercian order in England and Akçomak et al. (2016) for the Brethren of the Common life in the Netherlands.

1995, p. 392). We focus here on occupational persistence, knowledge transmission, and indigenous assimilation.

### 3.1 Occupational Persistence

Figure 3 provides an empirical test of Weber's hypothesis for the Jesuits in the Guarani lands. We see there a smoothed local polynomial plot of the percentage of people working 15–39 hours a week versus distance to the nearest historical mission. The relationship is striking; more people report working more hours in places closest to missions and less hours the farther away from them, up until 225 kilometers. The relationship is significant at the standard confidence level. Data in this case is for Brazil, due to data availability. Further statistical tests reveal that more people participate in the labor force in general and that this effect is concentrated among females relative to males.

Valencia Caicedo (2019) delves deeper into the specific occupations, beyond the broader participation patterns just described. The author finds that in missionary areas; people have turned away from agriculture into manufacturing and services. The paper then expands the occupational



**Fig. 3** Hours worked vs distance to the nearest mission in Rio Grande do Sul, Brazil (Source Valencia Caicedo [2019], author calculations, Appendix material)

analysis by looking at skill-intensive manufacturing industries following the categorization of Ciccone and Papaioannou (2009). Moreover, the author finds that in areas closer to missions; people are in more skill-intensive manufacturing industries. This evidence on the human capital externalities of religion is consistent with Becker and Woessmann (2009) for Protestants in Prussia and Botticini and Eckstein (2005, 2007, 2012) for the Jewish population.

Additional data from Brazil and Argentina helps us to put these results into context here and examine more specific professions beyond broad occupational aggregates. Historically, in missions “full-time craftsmen included blacksmiths, carpenters, statuary artisans, gilders, silversmiths, tailors, hat makers, and bronze fabricators such as bell makers” (Crocitti 2002, p. 9). Embroidery was one craft in which the Jesuit missionaries trained the Guaraní.<sup>6</sup> Father Antonio Sepp, S.J., (1655–1773) describes in his letters how he instructed the indigenous people to copy Dutch lace and embroidery in the workshops (Amable 1996, p. 58). Surprisingly, hundreds of years after the Jesuit expulsion, former missionary areas report more prevalence of this activity. More generally, using individual-level data, we also find a larger number of professionals and “market-oriented” skilled agricultural workers in the area, perhaps reflecting the cultivation of *yerba mate*. In terms of specific occupations, the author finds more teachers and blacksmiths, consistent with the historical descriptions. Lastly, he looks at accounting, which was introduced by the Jesuits and taught in the missions (Crocitti 2002; Blumers 1992). This practice is more prevalent in missionary areas. Results for specific occupations are consistent with the broader employment results.<sup>7</sup>

### 3.2 *Intergenerational Knowledge Transmission*

Intergenerational knowledge transmission can be another cultural mechanism that can explain the persistence of positive economic outcomes. This goes at the core of the persistence of human capital across generations.

<sup>6</sup> This type of embroidery is known locally as *nanduti*.

<sup>7</sup> Valencia Caicedo (2019) also looks at the case of technology adoption in agriculture, using the case of the introduction of genetically engineered soy seeds in Brazil. The author finds that these seeds were introduced to a larger extent closer to former missionary areas. The paper also rules out other mechanisms of transmission such as population density, investments in infrastructure, health, and tourism.

Data is from the Paraguayan Cultural Module of 2011, which contains specific information about traditional knowledge of skills, medicine and folktales, as well as diary usage and library visits. First, we find that people closer to missionary areas report having acquired from their parents more knowledge about skills (such as mechanical or agricultural skills, carpentry, sewing and embroidery), in Column 1 of Table 1. They also report more knowledge of traditional medicine and folktales, in Columns 2 and 3. Moreover, in areas closer to historical missions, people report more transmission of these same skills and knowledge to others (Columns 4–6). Thus, the empirical evidence suggests that intergenerational knowledge transmission could be a cultural mechanism behind the persistent outcomes observed, in this case reflecting more traditional knowledge.

We also examine other cultural practices that are more related to the Jesuit (Western) interventions. Just as with embroidery and accounting before, we now observe significant results for outcomes directly related to literacy and education, such as keeping a diary and visiting a library or a museum, in Columns 7–9. Overall, it appears that areas closer to missions have higher levels both of transmitted indigenous knowledge as well as imported skills. The long-lasting prevalence of these portable skills is consistent with theoretical models of intergenerational transmission (Cavalli-Sforza and Feldman 1981; Boyd and Richerson 1985; Bisin and Verdier 2000, 2001). After the “oblique” transmission of skills from the part of the Jesuits, some of these traits may well have been transmitted “vertically,” from generation to generation.<sup>8</sup> Valencia Caicedo and Voth (2018) further explore these topics. In that experimental companion piece, the authors dig deeper into the formation of non-cognitive skills and prosocial behavior. They find that Jesuit missions, but not Franciscan ones, significantly improved these important economic and social characteristics in the long-term.

### 3.3 *Indigenous Assimilation*

As a final way to analyze long-term cultural behavior we look at indigenous assimilation (Diaz-Cayeros and Jha 2012), in Table 2. Presumably,

<sup>8</sup> Oblique transmission refers to the “transmission from individuals other than the parents but who belong to the same generation as the parents” (Cavalli-Sforza and Feldman 1981, p. 130). The author does not find significant effects for horizontal transmission.

**Table 1** Knowledge transmission in Paraguay

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Parents Transmitted			Transmits			Uses	Visits	
	Skills	Medicine	Tales	Skills	Medicine	Tales	Diary	Library	Museum
Mission Distance	-0.015*** (0.005)	-0.011** (0.005)	-0.014*** (0.005)	-0.0069* (0.004)	-0.012*** (0.003)	-0.0098*** (0.004)	-0.0023*** (0.001)	-0.00062* (0.000)	-0.0036*** (0.001)
GEO Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES
Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	890	890	890	890	890	890	890	890	878
R-Squared	0.059	0.015	0.025	0.037	0.035	0.014	0.043	0.030	0.028

Note: Estimations for probit or OLS model. Clustered standard errors at the district level in parentheses: \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .



indigenous inhabitants that attended religious missions had an easier time assimilating into colonial society when the Jesuits left, due to the skilled training they had already acquired. An early indication of this mechanism can be observed in the 1890 Brazilian Census.<sup>9</sup> In this census, we can see that people reported more mixed marriages (general mixed and *caboclo*: European and indigenous) in places closer to religious missions. Interestingly, they also declare being more Catholic, albeit from a very high base of 93%. The prevalence of indigenous people in the missionary area can also be observed up until recent times. In 2010, slightly more people report being indigenous the closer they are to a mission. This is interesting, since in Latin America areas with higher modern indigenous population density have been associated with lower levels of income (Easterly and Levine 2016).

A similar pattern can be found for Paraguay, when focusing on language. Guaraní is one of the two official languages of Paraguay, along with Spanish, and in it of itself a remarkable testament to the survival of the indigenous tribes.<sup>10</sup> In fact, linguists point directly to the religious missions for the survival of Guaraní (Engelbrecht and Ortiz 1983). Guaraní, modified by four and a half centuries of intimate contact with Spanish, was almost universally spoken by Paraguayans. This language was considered to have been the agent for diffusion of the common culture (Warren 1985). Results using this Paraguayan language data can be seen in Columns 5–7. It appears that there are less people speaking only Guaraní in the missionary areas and more people speaking Spanish. Notably, there are more people who report speaking both languages in these areas, again suggesting a differential process of assimilation. These results also hold using data from the 1950 Census (not shown). From early records of mixed marriages to contemporary data on indigenous population and indigenous languages, it appears that indigenous people in the Guaraní area assimilated better in the missionary areas from colonial times up until the present day.

However, missionaries were not the only population that would go to affect Paraguay historically. Soldiers were also important, especially because of the Triple Alliance War, which we analyze next.

<sup>9</sup> Technically this is the first Republic Census of Brazil, which declared independence from Portugal on November 15, 1889.

<sup>10</sup> The colloquial combination of Spanish and Guaraní is termed *Yopará*.

**Table 2** Indigenous assimilation in Brazil and Paraguay

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Brazil 1890		Brazil 2010		Paraguay 2010		
	Marriage		%		Language		
	Caboclo		Catholic		Indigenas		
	Mixed		%		Guarani		GUA & SPA
Mission Distance	-0.0911*** (0.018)	-0.0401*** (0.010)	-0.0353* (0.019)	-0.302** (0.136)	0.0218*** (0.007)	-0.0172*** (0.006)	-0.00778** (0.004)
GEO Controls	{0.016}	{0.012}	{0.021}	{0.136}	YES	YES	YES
Fixed Effects	NO	NO	NO	NO	YES	YES	YES
Observations	63	63	63	467	1,928	1,928	1,928
R-squared	0.582	0.661	0.229	0.006	0.127	0.145	0.029

Note: Estimation by OLS. Robust and clustered standard errors at the district level in parentheses; bootstrapped and Conley standard errors in curly brackets. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## 4 TRIPLE ALLIANCE WAR

Imbalances in sex ratios often emerge in the aftermath of wars and civil conflicts. Men go to war and are more likely to die. As a consequence, there is a scarcity of males during and after the conflict. This shortage impacts economic variables through different channels. Several papers have evaluated these effects on developed countries—specifically, exploiting World War I and World War II and focusing on labor participation, marriage market and out-of-wedlock birth. In this chapter, following Alix-Garcia et al. (2022), we focus instead on a conflict that took place in a developing country: The War of the Triple Alliance (1864–1870), which generated one of the largest sex imbalances in history. The struggle confronted Paraguay against an alliance composed of Brazil, Argentina, and Uruguay and is considered one of the most destructive conflict in modern times (Pinker 2011). It is estimated that approximately 60% of Paraguay’s population died in the conflict (Whigham and Potthast 1999) and, as Alix-Garcia et al. (2022) note, some historians argue that up to 90% of Paraguayan men passed away. This generated an extreme sex ratio (men per woman) of 0.3—that is nearly four women per man. For comparison, the sex ratios resulting after World War I was 0.7 and, post-World War II, 0.9 (Alix-Garcia et al. 2022).<sup>11</sup>

Alix-Garcia et al. (2022) contribute to the historical conflict literature on three dimensions. First, they study a war that took place a longer time ago than other conflicts, thus they can analyze short, medium, and long-term effects. Second, the authors study a conflict that led to an extreme number of women per men, which had not been seen in other conflicts studied. Their along Boggiano (2021), is the first in examine empirically the effects of the largest sex ratio shock in history. And, finally, Alix-Garcia et al. (2022) focus on a developing country, complementing the evidence for more developed nations. In addition, they assess quantitatively the long-run impact of the largest interstate war in Latin America. Although causes and consequences of this conflict received considerable attention and relevant qualitative discussions in the historical literature, there has not been a quantitative evaluation of the war’s long-standing effects. Biased sex ratios will likely continue due to interstate wars and

<sup>11</sup> Some of this material has appeared previously in column format at VOXEU at <https://cepr.org/voxeu/columns/sex-ratios-and-conflict-evidence-paraguay>.

civil conflicts; therefore, it is relevant to evaluate the short- and long-run effects of these imbalances in order to learn from history.

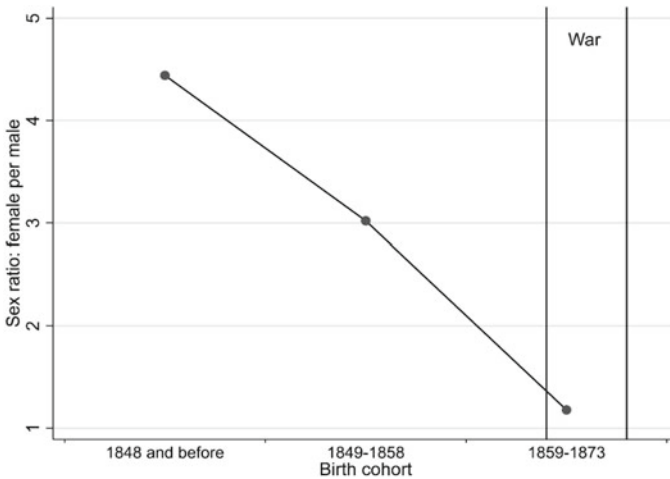
The Triple Alliance War, which is also known as The Paraguayan War, lasted from 1864 to 1870. It is considered the bloodiest and most damaging interstate conflict in Latin America and, possibly, in the modern era (Bethell 1996; Pinker 2011). The conflict emerged as a consequence of clashing economic interests, evolving power structures, and misjudgment (Alix-Garcia et al. 2022). Paraguay invaded Uruguay as a response to Brazil's invasion of Uruguay. Then, Paraguay declared war on Brazil. Argentina denied permission to Paraguay to cross through its territory to go to Uruguay—consequently, Paraguay declared war on Argentina. Uruguay, after a change of government to a political party aligned with Brazil and Argentina, joined in an alliance with these countries against Paraguay (Bethell 1996), consolidating the Triple Alliance. The battles took place in Paraguay, Argentina, and Brazil, but mostly affected Paraguay.

The short-term devastation was evident: the allies conducted a census when the war finished and found 221,079 people remaining: 28,746 men, 86,079 children, and 106,254 women (Potthast-Jutkeit 1991). Historians diverge on the sex ratios after the war: Washburn (1871) says they were of seven women for man, Potthast (2005) states four to one, and Ganson (1990) three to one. Even taking the lowest ratio, there is no previous record of sex disparities at that level. However, this imbalance converged to unity relatively quickly. According to the 1886 census, the woman per man ratio was 1.39. Moreover, the 1899 census reported a sex ratio of 1.16. In Argentina and Brazil, the effect on sex imbalances was comparatively small. Unlike Paraguay's army, allies' soldiers accounted for a smaller share of their populations. For instance, Brazilian soldiers were brought from all across the nation to the inhabited border areas (Bethell 1996; Whigham 2002). Hence, comparisons across the borders help to identify the effects of biased sex ratios from the effect of the war.

Figure 4 shows the sex ratios (females over male) by cohort, using the 1873 Census. This is the earliest census that allows us to look at the impact of the war.<sup>12</sup> The data is used retrospectively, a few years after the war ended in 1870. We see, from left to right, that the generation of 1848 and before, who were sixteen years and older at the time of the

<sup>12</sup> The paper uses the 1886 Census, which is more detailed and complete, and allows us to compare Paraguay to neighboring regions in Argentina (Corrientes).

war, have unprecedented sex ratios of more than four females per male. For context, similar papers that have studied the impact of the World Wars in Europe and the United States, display sex ratios that do not even reach 1.5 females per male nationally. To reach these extreme imbalances one has to go to very unique scenarios such as the California Gold Rush and the penal colonies in Australia (see Aguilar-Gomez and Benschaul-Tolonen 2018; Baranov et al. 2020; Brodeur and Haddad 2021; Grosjean and Khattar 2019). The 1849–1858 cohort appears less affected, but still shows a staggering three to one female to male ratio. This imbalance is consistent with the history of mass recruitment in Paraguay, which affected all of the adult male population at the beginning of the war, but then also impacted younger children of 16, 15, and even 10 years of age. Finally, for the 1859–1873 cohort, with kids that were at most five years old, we see how the sex ratios essentially return to unity, as expected given the random distribution of gender at birth. Overall, even this aggregated national census reveals the extreme demographic impact of the Triple Alliance War.



**Fig. 4** Sex ratios by cohort (*Source* Alix-Garcia et al. [2022], authors calculations)

#### 4.1 *Identification Strategy*

To evaluate the effect of imbalances in sex ratios, Alix-Garcia et al. (2022) exploit two sources of variation. First, they use the discontinuity in the perimeter between Paraguay and bordering municipalities in Brazil and Argentina. Second, the authors work on a *within* Paraguay analysis and evaluate the intensity of the conflict using distance to battles or march lines as intensity measures. They use both strategies and apply them to examine the immediate, medium-, and long-term effects of the war. The advantage of the within Paraguay analysis is that institutions are constant, but external validity is sacrificed. Asunción, the capital city of Paraguay, is very different for the rest of the country—hence, they drop the city for the main analysis.<sup>13</sup> The authors also drop the Paraguayan Chaco region because it was a disputed territory until 1930s, and it was (still is) a sparsely populated, hostile, semi-arid region. Similarly, they exclude the Argentinean Chaco. On the other hand, the cross-border analysis exploits very large differences in sex ratios. Besides, the border municipalities share cultural characteristics with Paraguayan society given the historical presence of the Guaraní indigenous tribes. In fact, some of these were disputed areas lost by Paraguay after the conflict. Moreover, the frontier area between Paraguay and Argentina was not delimited until 1876. The disadvantage is that, when crossing an international border, various institutions change. To address this, the authors use subsamples comparing bordering provinces and municipalities to provide better counterfactuals for their results.

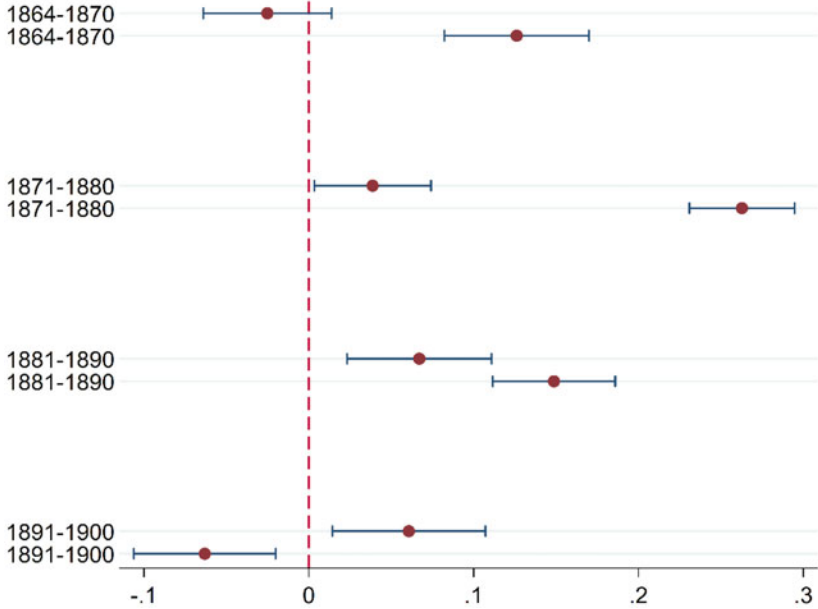
## 5 MAIN FINDINGS

### 5.1 *Short-Term Effects*

#### 5.1.1 *Out-Of-Wedlock Births*

Using baptisms data from 1840 to 1900, Alix-Garcia et al. (2022) analyze the prevalence of out-of-wedlock births. Compared to Argentina and Brazil, Paraguay historically had higher out-of-wedlock births. However, just after the conflict, the share of out-of-wedlock births increased in Paraguay. Comparing this variable to Corrientes (the only province for which data is available in this period), the effect is more notorious.

<sup>13</sup> The results are robust to the inclusion of the capital.



**Fig. 5** Illegitimate Births during and after the Triple Alliance War in Paraguay, by year of baptism (*Notes* The first line, in each group of year of baptism, shows the coefficient on illegitimate births comparing border municipalities. The line below, comparing border departments. *Source* Alix-Garcia et al. [2022], authors calculations)

The results show that out-of-wedlock births increased after the conflict. The effect is larger in Paraguay and then approaches to Argentinean rates. Similar results hold for the within Paraguay analysis: areas closer to battles or marches, had higher share of out-of-wedlock births after the war. Figure 5 shows illegitimate births during and after the conflict in Paraguay, comparing border municipalities and departments.

### 5.2 Female Education

Alix-Garcia et al. (2022) evaluate female educational outcomes in the medium term in a within Paraguay analysis. In particular, in each municipality the authors build the student sex ratio and teacher sex ratio using

1887 Paraguayan census—the data on teacher sex ratios is the only evidence that measures female labor force participation at the end of XIX century. They find that, in municipalities more affected by the war, the share of female students and female teachers was higher after the conflict. As we discussed previously, the sex ratio for individuals born after the war was close to unity, and students in 1887 were also born after the struggle; therefore, the difference in student sex ratios should not be just a mechanical consequence of the scarcity of boys.

### 5.3 *Marriage Market*

The paper shows the impact of the war at the intensive margin within Paraguay, for cohorts before and after the war. It also focuses on out-of-wedlock rates, comparing Paraguay with Argentina and Brazil in the short to medium term. In this chapter, we focus on the overlooked topic of marriages and how they were affected by the war decades after it officially ended. Table 3 shows that the age of brides increased after the war.<sup>14</sup> The effect is significant and large in magnitude, in Column 1, reaching a coefficient of ten for the 1901–1935 cohort, with mean of 21 years, so almost a 50% increase. The effect is still positive and significant, though more muted, once province fixed effects are taken into account, in Column 2. The analysis can also be carried out by comparing bordering municipalities rather than provinces in Columns 3 and 4. We see there again an increase in bride age which peaks at around 7 to 8 years in the specifications without and with fixed effects, respectively.

The patterns for grooms mirror those for brides, using the same econometric structure in Table 4. We see now a reduction in the age of grooms in the decades after the war. Again this decrease is statistically significant and economically large, in the order of ten to fifteen years with a mean of almost twenty-seven years, in Column 1. As before, the effect is still significant, but more muted in Column 2, with department fixed effects. It is also significantly negative and large in the border analysis, with and without fixed effects, in Columns 3 and 4.

Putting the effects together, in Table 5, we see the behavior of the marriage age gap. Unsurprisingly, the gap is reduced, as older males now get married at younger age and younger females at a later age. The

<sup>14</sup> Results were excluded from the paper due to the smaller sample size.



**Table 3** Impact of the war on brides' age

	<i>Border department</i>		<i>Border municipality</i>	
	(1)	(2)	(3)	(4)
Married in 1864–1870 (during the war)	2.383**	1.907*		
	(1.038)	(1.063)		
Married in 1871–1880 (after the war)	6.029***	0.479	3.646**	6.449***
	(1.847)	(0.881)	(1.574)	(0.138)
Married in 1881–1890 (after the war)	7.118***	1.220	4.734***	8.707**
	(1.550)	(2.183)	(1.187)	(3.683)
Married in 1891–1900 (after the war)	6.450***	−0.453	4.023***	4.243***
	(1.039)	(0.400)	(0.072)	(0.220)
Married in 1901–1935 (after the war)	10.364***	4.401***	7.985***	8.936***
	(1.297)	(0.353)	(0.800)	(0.028)
Married in 1871–1880 × Border Dept	−4.288**	0.789		
	(1.796)	(0.901)		
Married in 1881–1890 × Border Dept	−4.390***	1.286		
	(1.464)	(2.175)		
Married in 1891–1900 × Border Dept	−4.227***	2.289***		
	(0.845)	(0.297)		
Married in 1901–1935 × Border Dept	−8.169***	−2.441***		
	(1.132)	(0.232)		
Departments bordering Paraguay	3.374***			
	(0.859)			
Married in 1871–1880 × Border Muni			−3.208	−4.485***
			(2.181)	(0.251)
Married in 1881–1890 × Border Muni			−3.873*	−6.318
			(1.951)	(3.819)
Municipalities bordering Paraguay			4.203**	
			(1.628)	
N	28,844	28,844	1,803	1,803

(continued)

**Table 3** (continued)

	<i>Border department</i>		<i>Border municipality</i>	
	(1)	(2)	(3)	(4)
Mean of outcome variable	21.394	21.394	25.324	25.324
Fixed Effects	No	Department	No	Municipality

*Note* Estimation by OLS. Clustered standard errors at municipal level in parentheses: \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

effect on the age gap is small and sometimes insignificant during the war years and then negative, significant and large for the postwar decades. It peaks at more than sixteen years of age, in the first column. This is a very large magnitude, considering the previous gap of five years of age, enough to reverse the pattern of older males and younger female couples. The results follow the same pattern as before, for specifications with fixed effects in the second column and using bordering municipalities in Columns 3 and 4.

#### 5.4 *Interpretation and Discussion*

Overall, the empirical results are consistent with a model of competition in the marriage market. The remaining men, after the war, given their scarcity, can now marry at an earlier age. In doing so, they opt for older women, who presumably could have other attributes associated with this characteristic, such as higher education and wealth. Despite the lack of corroborating data, this interpretation is consistent with historical descriptions: “Then as boys grew to be men, the preponderance of female over male led to actual if undeclared competition for the few males available. Women were happy enough to work to keep a man, even if he chose only to swing in his hammock all day” (Raine 1956, pp. 16–17). The results are better understood in tandem with the out-of-wedlock results in the paper. Men, after the war, may indeed be forming households with lower age gaps, and older women, but they may still have sexual relations outside of the household, with their concubines. The results on marriage should also be interpreted alongside the employment results, where we saw a shift of activities from absent males to females. Presumably, some of these females might have accumulated some income during the war years

**Table 4** Impact of the war on grooms' age

	<i>Border department</i>		<i>Border municipality</i>	
	(1)	(2)	(3)	(4)
Married in 1864–1870 (during the war)	2.021 (2.218)	2.595 (2.315)		
Married in 1871–1880 (after the war)	-15.403*** (3.099)	-0.676 (1.061)	-17.424*** (2.237)	-13.776*** (0.192)
Married in 1881–1890 (after the war)	-15.079*** (2.458)	0.695 (2.219)	-17.100*** (1.096)	-10.978*** (3.540)
Married in 1891–1900 (after the war)	-10.663*** (2.233)	2.311*** (0.297)	-12.685*** (0.266)	-12.437*** (0.058)
Married in 1901–1935 (after the war)	-9.249*** (2.483)	5.068*** (0.286)	-11.270*** (1.153)	-9.843*** (0.010)
Married in 1871–1880 × Border Dept	17.292*** (2.972)	1.874 (1.187)		
Married in 1881–1890 × Border Dept	18.477*** (2.440)	2.448 (2.225)		
Married in 1891–1900 × Border Dept	13.608*** (2.093)	-0.049 (0.268)		
Married in 1901–1935 × Border Dept	11.641*** (2.297)	-3.046*** (0.274)		
Departments bordering Paraguay	-17.844*** (2.186)			
Married in 1871–1880 × Border Muni			6.149** (2.092)	2.749*** (0.174)
Married in 1881–1890 × Border Muni			8.448*** (0.977)	2.574 (3.575)
Municipalities bordering Paraguay			-4.996*** (0.266)	
N	30,344	30,344	1,838	1,838

(continued)

**Table 4** (continued)

	<i>Border department</i>		<i>Border municipality</i>	
	(1)	(2)	(3)	(4)
Mean of outcome variable	26.966	26.966	32.112	32.112
Fixed Effects	No	Department	No	Municipality

*Note* Estimation by OLS. Clustered standard errors at municipal level in parentheses: \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

or at least were more familiar with the formal labor market. The rest of the chapter examines the impact of these temporary shifts in the very long term.

One important potential confounder of the impact of the Triple Alliance War are the previous gender norms coming from the Guaraní indigenous tribes. This point also links the two main articles discussed in this chapter. Namely, are the effects we observe on different dimensions of Paraguayan society really due to the impact of the war or are they coming from pre-colonial times, as argued by Potthast-Jutkeit (1991)? Alix-Garcia et al. (2022) test this hypothesis econometrically, dividing the sample between more and less Guaraní speaking areas. The authors do not find any consistent pattern with this variable, suggesting that the demographic, educational, and economic effects of the Triple Alliance War are not mediated by the previous Guaraní culture. The authors only find a small effect of females that speak Guaraní, who have higher literacy rates. This result is consistent with Valencia Caicedo (2019) on the role of Jesuit missionaries in fostering human capital among this indigenous group, summarized before, providing a link between the two papers.

## 6 LONG-TERM IMPACTS: CROSS-BORDER ANALYSIS

Next, using contemporary data, the paper focus on the persistence of the temporary biased sex ratios registered in the aftermath of the war. It compares modern Paraguay to modern neighboring areas in Brazil and Argentina. The results indicate that, in Paraguay today, households are more likely to be headed by a woman. In addition, Paraguayan women are more likely to raise a child without a partner—however, Paraguayan men are less likely to do so, compared to Argentinean and Brazilian men.

**Table 5** Impact of the war on the marriage age gap

	<i>Border department</i>		<i>Border municipality</i>	
	(1)	(2)	(3)	(4)
Married in 1864–1870 (during the war)	-2.250** (0.851)	-1.388 (1.564)		
Married in 1871–1880 (after the war)	-15.470*** (1.168)	-0.621 (0.530)	-13.219*** (0.826)	-11.829*** (0.139)
Married in 1881–1890 (after the war)	-16.564*** (1.155)	0.309 (0.688)	-14.313*** (0.806)	-10.695*** (0.919)
Married in 1891–1900 (after the war)	-11.950*** (0.941)	2.338*** (0.385)	-9.700*** (0.416)	-9.666*** (0.369)
Married in 1901–1935 (after the war)	-13.721*** (0.884)	0.901*** (0.141)	-11.470*** (0.247)	-11.129*** (0.051)
Married in 1871–1880 × Border Dept	15.587*** (1.163)	0.424 (0.580)		
Married in 1881–1890 × Border Dept	17.384*** (1.178)	0.448 (0.706)		
Married in 1891–1900 × Border Dept	12.653*** (0.937)	-1.795*** (0.432)		
Married in 1901–1935 × Border Dept	13.984*** (0.921)	-0.795*** (0.255)		
Departments bordering Paraguay	-15.261*** (0.849)			
Married in 1871–1880 × Border Muni			7.679*** (0.700)	6.323*** (0.457)
Married in 1881–1890 × Border Muni			10.659*** (0.771)	7.075*** (0.794)
Municipalities bordering Paraguay			-6.914*** (0.416)	
N	25,646	25,646	1,766	1,766

(continued)

**Table 5** (continued)

	<i>Border department</i>		<i>Border municipality</i>	
	(1)	(2)	(3)	(4)
Mean of outcome variable	5.481	5.481	6.552	6.552
Fixed Effects	No	Department	No	Municipality

*Note* Estimation by OLS. Clustered standard errors at municipal level in parentheses: \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

This is consistent with the prevalence of the concubinato (concubine) marital institution in Paraguay. For educational outcomes, results show that women are less educated than men in general. The authors also find that Paraguayan women are relatively less educated than women across the border. This challenges the idea that biased sex ratios after the conflict increased female education. But, the result might be driven by the weak labor market of Paraguay relative to its neighbors, which pulls down the effect. For employment, they find that men in Paraguay are more likely to be employed than those in neighboring areas of Argentina and Brazil. But, Paraguayan women are less likely to be employed—contrarily to studies finding long-term increases in female labor participation after both World Wars in Europe. This result could be explained by the fact that women working on their own farms do not consider and report themselves as employed. Another explanation might be that women who are raising children by themselves are less likely to be employed—as the share of single mothers is higher in Paraguay. The paper explores these outcomes further in the within-country analysis next.

## 7 LONG-TERM IMPACTS: WITHIN PARAGUAY ANALYSIS

For the within Paraguay analysis, the authors find that households located closer to a march line are more likely to be headed by a woman than those located more than 30km away. In addition, women living closer to a march line are significantly more likely to be single and living with their kid. Women are less likely than men to have completed primary education in Paraguay, but the difference is smaller closer to march lines. In the previous subsection, we saw that women were less likely to be employed in Paraguay. However, the within Paraguay results show that women living

close to historical battles or march lines are *more* likely to be employed, compared to those living farther away. They also seem to have slightly better educational outcomes in these historical conflict locations. Hence, it is likely that the within Paraguay results reflect the true impact of biased sex ratios because it takes into account national labor market features.

## 8 MECHANISMS

The paper explores the cultural mechanism behind the persistent outcomes observed. Altered gender norms appear to be driving the results. The authors find that, both men and women, have a more positive attitude toward women's right to work the closer they live to march lines. In addition, the literature suggests that gender-related labor force participation norms could pass from parents to their children (Fernández et al. 2004). The persistence literature also suggests that gender norms could be less persistent in more open and modern environments and stronger in families with indigenous traditions. The authors do not observe any evidence supporting these claims for higher migration places or those where Guaraní is spoken.

## 9 CONCLUSIONS

This chapter revisits two important historical episodes that have shaped the making of modern Paraguay. First, the case of the Guaraní Jesuit Missions serves as a microcosm to study important economic questions. Valencia Caicedo (2019) finds not only an important degree of economic persistence, in line with the recent literature, but also specific transmission mechanisms through which this persistence is enacted. Using this unique setup, Valencia Caicedo (2019) demonstrates how a historical human capital intervention can lead to substantial differences in educational and economic outcomes in the long term. In this chapter, we further document specific cultural mechanisms that can sustain these differences, such as occupational persistence, intergenerational knowledge transmission, and indigenous assimilation. The findings support the view that historical investments in human capital can have very long-lasting consequences, altering communal culture and individual behavior. Far from advocating historical determinism, and in line with the rest of the book, a thorough understanding of such deep determinants of development can help to make economic policies more targeted and effective.

The War of the Triple Alliance was the most devastating event in Paraguayan history. Beyond its immediate havoc, the war had significant demographic and socioeconomic effects in the short, medium, and long term. In the short-term, the cross-border results show that after the war, Paraguay generated an unprecedented sex ratio imbalance—which approached unity relatively quickly—and higher out-of-wedlock births. The within Paraguay results show that municipalities more affected by the war had more skewed sex ratios and out-of-wedlock births. In the medium term, female educational outcomes increased in areas more affected by the conflict. The long-term results indicate that females living in areas more exposed to biased sex ratios are more likely to be raising a child without a partner today and modern households are more likely to be headed by a woman. Within Paraguay, women living closer to battles or march lines are more likely to be educated, employed, and believe in the value of equal labor markets, suggesting the importance of gender norms. The echoes of a war that occurred more than a century ago are still present today. These results give us a deeper comprehension of Paraguay’s uncommon standing in the region. In addition, they can inform our thinking about present conflicts and crises worldwide and the effects of skewed sex ratios that emerge as consequence—especially in developing countries. These events are likely to alter gender norms and can last for generations.

Several articles have expanded on the findings presented in this chapter, though there are still promising avenues for future research. Gómez-i-Aznar (2022) studies numeracy in the Guaraní Jesuit missions and finds extremely high levels, consistent with the complementary literacy results discussed previously.<sup>15</sup> There could still be other interesting dimensions of the Jesuit Missions to be analyzed, such as the demographic and institutional ones. Researchers could expand on the role of later foreign migration to Paraguay, which is only a heterogeneous effects result in the conflict paper. They could also look at other important conflicts, such as the Chaco War (1932–1935), against Bolivia. Or study its very unique populations, such as the Mennonites, following the work of le Polain et al. (2021) as well as the role of large infrastructure projects such as the Itaipu dam (see Charotti et al. 2017; Charotti et al. 2019; Pedrozo 2022; Straub 2015). On the more political dimension, researchers could study

<sup>15</sup> Okada da Silva (2022) shows that the Jesuit missionary results on human capital and income extend as well to the Brazilian Amazon.



the long list of Paraguayan dictators: Solano López, who was a protagonist of the Triple Alliance War, but also dictator Francia before the War and Stroessner, later on during the twentieth century (see González et al. 2022). Despite recent advances, or perhaps because of them, Paraguay remains fertile grounds for future research in economic history, given its unique past and special standing in the Latin American region.

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# Uruguay: The Rise of a Monocentric Economy

*Emiliano Travieso and Alfonso Herranz-Loncán*

## 1 INTRODUCTION

Urban primacy—the excessive concentration of economic activity and population in a single city—is a defining feature of many Latin American economies. While in most developed economies the degree of primacy followed a bell-shaped curve in the long-run as GDP per capita increased (with urban population and economic activity first concentrating in a single city and then spreading across different regions), in Latin America urban primacy has often proven stickier, persisting even after incomes rise, in marked contrast with ‘late developers’ in East Asia.<sup>1</sup> The case of Uruguay, where the capital city still concentrates two-fifths

<sup>1</sup> Browning (1989) offers a geographer’s overview of the concept. For an introduction to the empirical research on ‘urban primacy’ in developing economies, see Overman and Venables (2005). The extensive economic literature on urbanization, urban concentration, and long-term development is reviewed in Davis and Henderson (2003).

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of the population, is emblematic of this trend because urban primacy developed comparatively early, was consolidated during the First Globalization (1870–1913), and has remained a dominant feature of Uruguayan economic and political history ever since. In this chapter we explore the impacts of urban primacy on Uruguayan economic development, with a focus on the late nineteenth and early twentieth century. We argue that Montevideo’s primacy produced a dualistic economic geography (city-port/countryside) without intermediate towns of an even remotely comparable scale. The lack of a network of cities was reflected in physical infrastructure, notably through a dendritic railway design where would-be secondary towns were not connected to each other. Primacy became an obstacle to the development of a more diversified territorial division of labor and limited the emergence of new clusters, especially in sectors associated with industrialization. Such a monocentric economy was ill-suited for structural change, contributing to Uruguay’s mediocre twentieth-century growth record and its continued divergence from the world’s leading economies.

The rest of the chapter is organized as follows. In the next section we describe the long-term evolution of urban primacy in Uruguay and discuss some of its potential explanatory factors. Section 3 discusses the impact of urban primacy on the development of railway infrastructure and its influence on the density of use of the railway system. In Section 4 we analyze the relationship between urban primacy and structural change during the era of export-led growth under the First Globalization and discuss how some of the processes set in motion at the time affected Uruguay’s subsequent trajectory. The last section concludes by reflecting on the causes behind the gradual decrease of Montevideo’s primacy over the last decades, and why it will likely continue to fall, albeit slowly, into the future.

## 2 MONTEVIDEO’S PRIMACY: STYLIZED FACTS AND ORIGINS

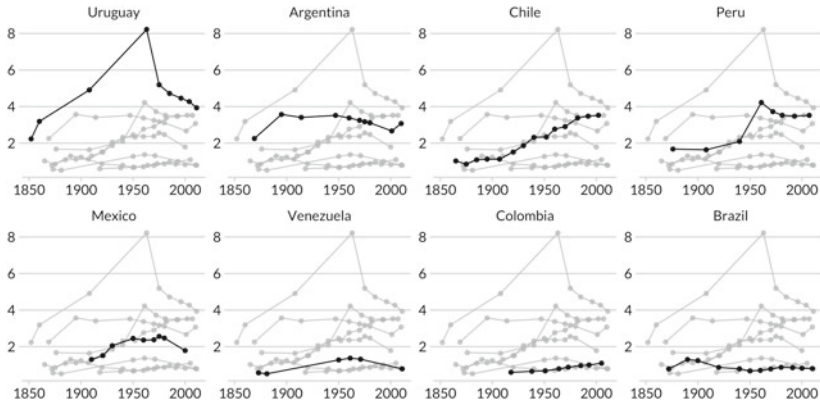
Reporting to the Royal Geographical Society in the late nineteenth century, a foreign scholar noted that the number of settlements in Uruguay had ‘increased to ninety-six, of which thirty-seven are in the interior [i.e., not in the southern coastline], but the great majority are places of little importance; many are probably mere postal stations, and not a dozen deserve the name of towns. Montevideo is indeed a noble

city with 105,000 inhabitants, but according to the map of 1875 no other town had more than 10,000 and only five had above 3,000' (Christison 1880: 664). In the decades that followed, the spatial concentration of immigration flows only strengthened Montevideo's primacy, as the city reached 300,000 inhabitants by 1908, while only three other towns on the western littoral were (barely) over 15,000 people. Montevideo would continue to grow faster than all other urban areas until the mid-twentieth century (Rial 1984).

Figure 1 shows Montevideo's historical urban primacy in Latin American context. While (unlike other Latin American cases) Uruguay's long-term pattern does seem to follow a bell-shaped curve, primacy reached such a high level in the early 1900s that it remains among the highest in the world at the beginning of the twenty-first century. The disproportionate concentration of population in Uruguay's capital developed comparatively early and reached much higher levels than in the rest of the region, even when compared with the other two southern cone economies (Argentina and Chile), which were characterized by high and increasing primacy levels for much of the period. The comparison with Argentina is particularly instructive, because both Montevideo and Buenos Aires depart from the rank-size rule of urban hierarchy, as the second-largest population agglomeration in each country has been about ten times smaller than the urban continuum around the port-capitals throughout the twentieth century.<sup>2</sup> However, taken as a group, secondary cities in Argentina are larger relative to the capital than in Uruguay. Peru, where (as in Uruguay and in Argentina) the capital city was also the main port, also shows comparatively high levels of primacy, especially since the mid-twentieth century. However, Uruguay's urban primacy has remained higher than those countries' during most of the period covered in Fig. 1, only converging with them in the first years of the twenty-first century. It also has remained until the present much higher than in several other Latin American countries, such as Mexico, Venezuela, Colombia or Brazil.

Scholars have long discussed the causes behind Montevideo's long-standing primacy, which we will summarize in three key sets of historical

<sup>2</sup> The 'rank-size rule' suggests that city sizes within national economy are distributed in a lognormal fashion (the second city in a country should be half as large as the first and so on). For a discussion of the rank-size rule and urban hierarchy in economic history, largely in reference to Europe, see Wrigley (2004: 253–257) and de Vries (1984: 85–120).



**Fig. 1** Urban primacy in Latin America: size of largest city relative to four secondary cities (*Notes* Urban primacy calculated as the population of the largest city divided by the combined population of the second-, third-, fourth-, and fifth-largest cities. Urban agglomeration areas considered, which for Uruguay implies including Ciudad de la Costa as part of Montevideo since the 1980s; the results do not change significantly if Ciudad de la Costa is counted as a different urban center. *Sources* National censuses, complemented with: for Uruguay 1852–1860: Rial [1984]; for Peru 1876–1940: Seminario [2015]; for Venezuela 1950–1980: CICRED [1976] and United Nations [1980])

factors.<sup>3</sup> A first set of causes for Montevideo's primacy could lie in colonial settlement patterns: because the territory that would become Uruguay was very lightly populated before European arrival, and became then an overlooked colonial frontier, the Spanish concentrated their resources on a single military and administrative position (Reyes Abadie et al. 1965; Sala de Touron et al. 1967; Pivel Devoto 1974). It is easy to agree that the fact that Montevideo became the only sizable and administrative center in late-colonial 'Uruguay' must have contributed to the origins of its primacy. Nevertheless, Montevideo was not the first Iberian stronghold on the northern shore of the Plata: its very foundation (1724–1726)

<sup>3</sup> The best single study of the genealogy of Montevideo's primacy is Rial and Klaczko (1981). Readers not familiar with the major themes and trends of Uruguay's economic history will find a concise and clear overview in Bértola (2008).



was a belated response to the Portuguese founding Colonia do Sacramento in 1680, across the estuary from Buenos Aires.<sup>4</sup> More importantly, colonial settlement policy only can only get us so far in explaining Montevideo's primacy because Madrid's blueprints never considered 'Uruguay' as a separate entity, and so chose the viceregal capital Buenos Aires as the core city in the region. While colonial Montevideo was indeed more densely populated than any other settlements in the territory that would become Uruguay, the gap was not nearly as large as it would become in the decades following independence.<sup>5</sup> The persistence of subnational fortunes in Uruguay's history, at least in terms of Montevideo's primacy, did not settle in during the colonial period.<sup>6</sup>

The second long-term factor cited in the literature is the country's comparative advantage in extensive agriculture and the patterns of land use during and since colonial times. The historical dominance of pastoral agriculture (which requires many fewer workers per acre than crop farming) promoted the emergence of distant ranches in the grasslands, rather than a continuum of large villages and small towns which could then develop into urban agglomerations (Morse 1975; Prates 1976; Veiga 1979). The trope of an empty countryside only inhabited by nomadic gauchos in the River Plate in the eighteenth and early nineteenth centuries has been thoroughly falsified by rural historians, who have instead described a landscape peopled with young families making their living in productive units of diverse sizes, where cattle raising left room for grain agriculture and land markets (albeit segmented and imperfect) existed.<sup>7</sup> Still, the impact of ranching as the traditionally predominant land use on Uruguayan population geography cannot be denied (Brandt 2022), and it is reasonable to think that a comparatively weak grid of

<sup>4</sup> A recent history of Colonia do Sacramento under Portuguese rule (the Spanish gained definitive sovereignty over the town in the Treaty of San Ildefonso in 1777) can be found in Prado (2015: 13–33).

<sup>5</sup> In the decades before the start of the independence revolution in the northern shore of the Plata (1811), Montevideo's population rose to about 14,000; the other sizable settlements, also in the coastal south, were Colonia (5000) and Maldonado (3000) (Pollero 2016: 225; Gelman 1998: 246–247; Biangardi 2013: 25).

<sup>6</sup> See, for a study that does find subnational fortunes persisting even since pre-colonial times in other Latin American cases, Maloney and Valencia Caicedo (2016).

<sup>7</sup> For an authoritative review of this revisionist literature (known often as the 'renaissance of rural history' in Argentina and Uruguay), see Garavaglia and Gelman (1995). A recent overview focusing on Uruguay can be found in Moraes (2020).

villages contributed to the later lack of a strong network of secondary cities.

Finally, Montevideo's bay provided the best natural harbor in the River Plate, located near the middle point of the estuary, which increased the reach of its agglomeration shadow (Griffin 1973; Travieso 2017).<sup>8</sup> This locational advantage proved ever more important as the economy became increasingly reliant on bulky agricultural exports. As a result, there has historically been a stark contrast between Uruguay's south and south-western coastal regions and the northern and north-eastern interior, where average incomes are today about 50% lower; the gap between the northern provinces (*departamentos*) and the capital's jurisdiction itself is even larger (c.100%).<sup>9</sup> This gap decreased in the mid-twentieth century, particularly during the inter-war decades, and it is currently on a downward trend, but the location advantage of being nearer international markets has not been erased (Martínez Galarraga et al. 2020: 297).

If the causes of Montevideo's persistent primacy have been extensively debated, its impact on Uruguay's development path deserves closer study, because the increase in regional inequality does not necessarily lead to underdevelopment or to the absolute impoverishment of 'left-behind' areas. Agglomeration can sustain long-term growth across a country at the same time it increases relative regional inequalities in productivity and living standards. As shown theoretically by Fujita and Thisse, often 'people residing in the periphery are better off in the core-periphery structure than under dispersion' (2002: 421). Indeed, Uruguayan rates of growth during the First Globalization were the second highest in Latin America (behind Argentina) and real wages were three times higher than in Mediterranean Europe (Williamson 1999; Bértola and Ocampo 2013: 123), which suggests that the consolidation of Montevideo's primacy could have led to some productivity gains and positive spillover effects. Uruguay's growth performance did however fall short by a large margin when compared to other successful settler economies in the southern hemisphere—not only next-door Argentina, but also Australia and New

<sup>8</sup> An 'agglomeration shadow' appears when a major city 'prevents' new cities from emerging in its vicinity or existing ones from growing beyond a low threshold because it can effectively act as a cost-effective supplier of goods and services; see Fujita et al. (1999: 147).

<sup>9</sup> Own calculations on the basis of the latest household survey microdata available (June 2020) (INE 2021).

Zealand—, which could be related in part to the negative effects of excessive urban primacy. In order to disentangle some of the potential negative effects of primacy, we now turn to two dimensions that have been signaled by economic historians as bottlenecks of the Uruguayan economy during and since the First Globalization: the development of physical infrastructure and the incentives for sustained industrialization.

### 3 PRIMACY AND TRANSPORT INFRASTRUCTURE

During the First Globalization era, railways constituted an essential growth engine of export-oriented economies. The different economic experiences of the Latin American countries in the late nineteenth and early twentieth century reveal that the growth of exports was closely associated with the expansion of railways. The capacity of railways to boost economic growth largely depended on two dimensions of the railway system. First, a high network density was essential to enlarge the share of the national territory that would benefit from the new infrastructure and take full advantage of its export potential. Second, sufficiently low railway fares were crucial for the economy to reap the maximum gains from the move from traditional transport means to railroad transportation.

In the context of Latin America, Uruguay was one of the countries that stood out in terms of railway network density. Indeed, and despite a relatively late start, it was one of the most active Latin American countries in railway construction. By the eve of the First World War, its railway network was second in the region in per capita terms, only after Argentina, and it ranked fourth when measured in relation to the country's surface area, right behind El Salvador and the islands of Cuba and Puerto Rico (Herranz-Loncán 2011: 3). Such a dense railway network was the outcome of several successive construction booms, the most important one taking place in the years before the 1890 Baring crisis. The Uruguayan network was built almost completely by British private initiative, although construction was highly subsidized by the government. The main company in the country was the Central Uruguay Railway, which managed 61% of the network in 1913. The remaining 39% of the railway system was split almost in half between the Midland Uruguay Railway and a group of 5 other small companies.

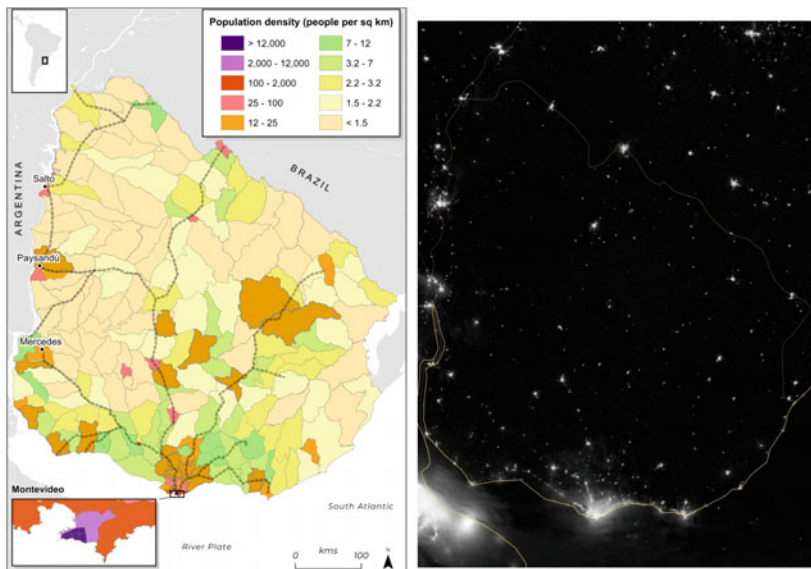
The prominence of Montevideo in the railway system was clear from the start of the construction process. In a context in which the main port city accounted for around 25% of the total population of the

country, all construction efforts were aimed at connecting the capital with the Uruguayan interior through several routes that left Montevideo in different directions. Initially, the only exception to that fan-shaped structure was a short (182 km) line between the western port of Salto, on the Uruguay river, and the small town of Cuareim at the Brazilian border, which was completed in 1887 and aimed at carrying produce from the Brazilian interior to the Uruguay river and the La Plata estuary. However, this line would eventually be integrated into the main network, when Salto was connected to Montevideo through Paysandú in 1890.<sup>10</sup>

In no other Latin American country the structure of the railway network was as centralized as in Uruguay in the early twentieth century. In some economies, railway density was just too low for a centralized network to arise, and the railway system consisted of a short number of routes that were not always interconnected. But even in countries which had a relatively dense network, the structure was not so centralized as in Uruguay. In Cuba, Puerto Rico or Chile there was not a clearly dominant economic port or main city which would serve as organizing center of the network. Such a center was present in Argentina, Mexico or the main section of the Brazilian system (built around São Paulo and Rio de Janeiro). However, in these countries the structure of the network was much more complex than in Uruguay, including a large number of transversal sections that directly connected secondary centers with each other, as well as a significant number of lines that were not incorporated in the main network. By contrast, in Uruguay all lines ran towards Montevideo, with the only exception of the 57 km transversal route between the stations of Tres Árboles and Piedra Sola in the center of the country, built in 1913 (see Fig. 2). As a consequence, the only way to travel between most pairs of Uruguayan cities by railway was through Montevideo. In fact, by 1913, all passenger services of the main company in the system, the Central Uruguayan Railway, started or ended in Montevideo, with no exception (Ferrocarril Central del Uruguay, 1913).

The centrality of Montevideo in the railway network was clearly reflected in the distribution of traffic. Figure 3 shows the number of passengers (panel a) and the total freight (panel b) boarding the train in each station of the country in 1912–1913. The vertical axis indicates the volume of traffic and the horizontal axis shows the distance from

<sup>10</sup> For the structure of the Uruguayan railway network in 1913 and the evolution of the construction process, see the Uruguayan Statistical Yearbook for 1913–1914.



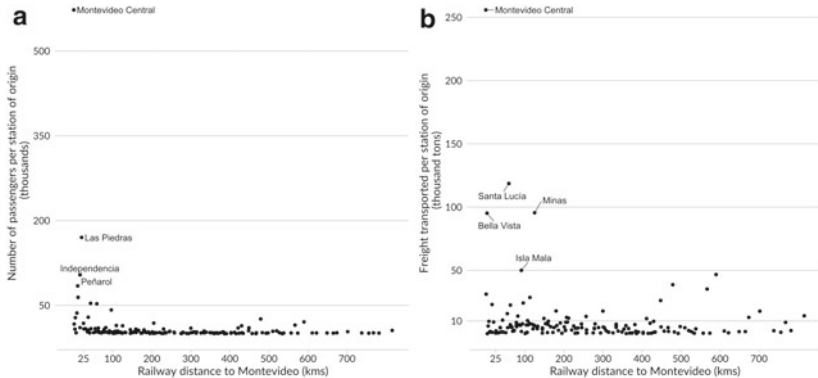
**Fig. 2** Population and railways in Uruguay, 1908 (left) and night-time satellite, 2012 (*Notes* In the map on the left, districts in each category add up to 10% of the national population; all towns over 15,000 inhabitants labelled; Montevideo in inset map. *Sources* 1908 historical district boundaries from Travieso [2023], 1908 railways from Travieso [2017], 1908 population from DGE [1911], satellite image from NASA [available at: <https://earthobservatory.nasa.gov/images/79822/city-lights-of-south-americas-atlantic-coast>])

each station to Montevideo. Panel a shows that passenger traffic in the Montevideo Central station was 3.4 times as large as in the next busiest station (Las Piedras). This figure increases to 4.7 if we add to Montevideo Central the traffic of other stations located within the city.<sup>11</sup> Montevideo Central was the station of origin of 32% of the total passenger traffic of the system, a percentage that increases to 45% if all Montevideo stations are considered. In other words, almost half of the passenger traffic in the Uruguayan railway system had its origin in the stations of the Montevideo area. The figure also shows that all stations with a significant passenger

<sup>11</sup> These stations were Bella Vista, Yatay, Sayago, Peñarol, and Colón.

traffic were in the vicinity of the capital and that the movement of passengers in stations located more than 100 kms from Montevideo was almost negligible. On the other hand, given the structure of the network, it is reasonable to think that a substantial percentage of passenger traffic with origin in other stations was headed to Montevideo.<sup>12</sup>

Panel b indicates that the importance of the Montevideo station as origin of freight traffic was lower than for passenger transport. As can be seen in the figure, freight dispatched from Montevideo Central, measured in tons, was just 2.2 times higher than the cargo loaded at Santa Lucía, the next busiest station, and represented 16.5% of the total freight moved from the stations of the Uruguay railway system (23.5% if we take all stations in the Montevideo area). However, the figure also shows that the next four busiest stations in the system were relatively close to the capital. In fact, the position in the figure of Santa Lucía, Minas, and Isla Mala, was the result of their specialization in bulky commodities with very low value-to-weight ratios (sand, limestone, and stone, respectively), probably destined to a large extent to construction activity in the capital.



**Fig. 3** Number of passengers (panel a) and freight transported (panel b) per station of origin in the Uruguayan railway system, 1912–1913 (*Source* Uruguayan Statistical Yearbook, 1913–1914)

<sup>12</sup> In fact, a very high share of the passenger traffic in the Uruguayan railway system would probably consist of commuting trips between stations within Montevideo or its surrounding areas. Unfortunately, the absence of information about destination stations prevents from knowing the importance of those trips with any precision.

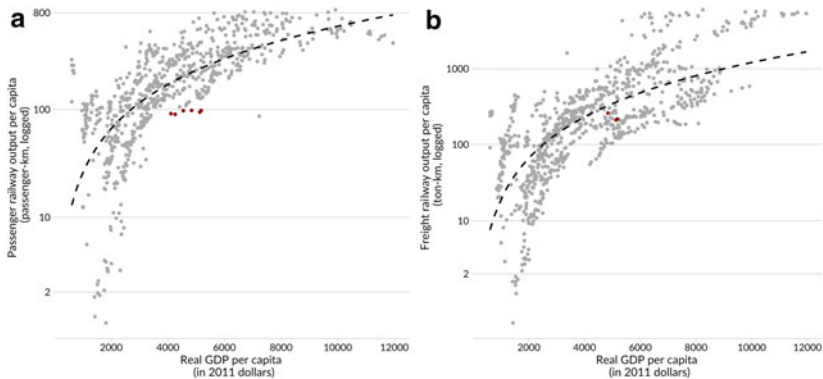
The other one (Bella Vista) was an urban station within Montevideo. The next urban center in the list was Salto, whose volume of freight traffic amounted to just 13% of the freight dispatched from the Montevideo stations. In addition, we may plausibly assume that most of the freight traffic generated by other stations, and specially the transport of export products, had Montevideo as its destination.

The low capacity of the population centers outside the Montevideo area to generate railway traffic is a good indicator of the consequences of the capital's urban primacy on the geography of transport infrastructure. But, more importantly, it also involved a generally low density of use of the network. Other than the capital, no city in the country was able to produce a substantial movement of people nor heavy freight traffic, either to transport local production to the rest of the country and abroad or to be supplied with consumption goods, equipment or raw materials. According to the 1908 Uruguayan population census, at the beginning of the twentieth century, when Montevideo was close to reach 300,000 inhabitants, the second largest city was Paysandú, with just 20,953 people. The population in other provincial capitals ranged from 4421 (Maldonado) to 19,788 (Salto). If we assume railway flows to evolve according to the predictions of gravity models, the fact that, leaving aside Montevideo, Uruguay consisted of a number of very small towns rather distant among them (see Fig. 2) was clearly detrimental for the growth of network traffic. Whatever traffic there was can be assumed to have been largely limited to the relationships between those towns and the capital city, excluding short or medium-distance connections between intermediate centers.

Indeed, railway traffic in Uruguay remained at very low levels during the whole railway era. On average, in countries where the railway network was sufficiently developed to reach most of the inhabited territory, we could expect railway output to have been proportional to GDP. Figure 4 compares railway output and GDP (both expressed in per capita terms) from the mid-nineteenth to the early twentieth century for a sample of countries for which those data are available. In that figure, Uruguayan railway output appears to have been significantly lower than expected. The situation was especially striking in the case of passenger traffic, where Uruguay was a clear outlier in global perspective. Countries with similar levels of GDP per capita had on average a volume of passenger traffic per capita more than 3 times as large as in Uruguay. The disadvantage is less visible in the case of freight. In this case, some European countries

like Norway, Denmark and the Netherlands had a relatively lower level of traffic than Uruguay, which can be explained by factors such as the low population density or (in the Dutch case) the presence of efficient transport alternatives. However, still in the case of freight most countries with similar levels of income per capita had a much higher railway output than Uruguay in relative terms in the first decades of the twentieth century.

High urban primacy was not the only explanation for Uruguay's low level of railway output. As one of us has suggested elsewhere, other influential factors were the small scale of the country, the wide availability of water transport for domestic trade (thanks to the closeness of a large part of the territory to the Uruguay river and the La Plata estuary) and the specialization of the Uruguayan economy in extensive livestock production (Herranz-Loncán 2011). However, while the last two factors might



**Fig. 4** Railway output per capita and GDP per capita in 39 countries, 1840–1929: passengers (panel a) and freight (panel b). Uruguayan values in red (*Note* All countries with available data included, i.e.: Algeria, Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, China, Cuba, Denmark, Egypt, Finland, France, Germany, Greece, Hungary, India, Indonesia, Italy, Japan, Korea, Mexico, the Netherlands, New Zealand, Norway, Peru, the Philippines, Poland, Romania, Spain, Sweden, Switzerland, Taiwan, Turkey, the United Kingdom, Uruguay, and the United States. *Sources* Railway output from Mitchell [2007a, 2007b, and 2007c], Docutren (<https://www.docutren.com/EstadisticasHistoricas/ferroamlat.asp>) and, for Uruguay in 1912–1913, Herranz-Loncán [2011]. Population and GDP pc have been taken from the Maddison Project Database [2020 version])



have hampered the growth of freight traffic, which to a large extent relied on shipping and cattle driving in its way to the Montevideo harbor, their potential influence on passenger transport (where the Uruguayan disadvantage is more visible) was much lower. Driving obviously was not an alternative to railway passenger transport, and shipping could not compete with the railways in terms of speed, reliability, and comfort. Thus, we suggest that the low level of railway transport in Uruguay, specially (but not only) in the case of passenger transport, was associated to a large extent to the specific distribution of population in the country and the huge scale imbalance between the capital and other towns.

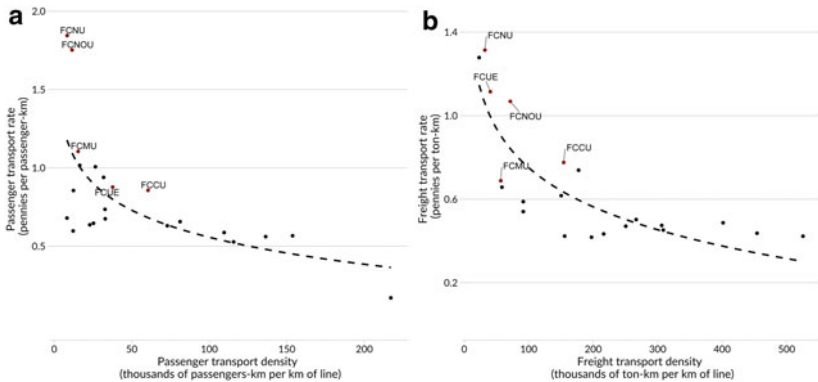
The low level of railway output had some negative consequences for the Uruguayan economy. First of all, it prevented the country from taking full advantage of the railways. During the export-led growth era of the late nineteenth and early twentieth centuries, railways became one of the main growth engines in Latin American economies. Herranz-Loncán (2014) compares the social saving estimates of Uruguay and three Latin American countries with a highly developed national railway network (Argentina, Brazil and Mexico). According to those estimates, in those three countries the resource savings provided by railway freight transport amounted to between 20 and 38% of GDP in the years before World War One. By contrast, in Uruguay the social savings of railway freight transport reached just a tiny 3.8% of GDP. Using an alternative calculation of the impact of railways, we estimate that the whole direct impact of railways in Argentina and Mexico accounted for 20–25% of the whole GDP per capita growth between the beginning of the railway era and 1910–1913; in Uruguay, that percentage was just 8% (Herranz-Loncán 2014: 39).

In addition to the country's inability to take full advantage of the growth-enhancing potential of the railway technology, the low size of railway output had other negative effects. The most important one, which also contributed to reducing the direct benefits that the country could draw from the railways, was the high cost of railway transport. As shown in Herranz-Loncán (2011), the low level of output prevented the Uruguayan railway system from achieving scale and density economies, which resulted into high average variable costs and prices. Figure 5 presents the transport prices applied by the Uruguayan and Argentinean railway companies in 1913 and the density of use of their respective networks, both for passengers and freight. Indeed, the Uruguayan railway companies were located in the most unfavorable sections of both figures

in terms of density of use, which contributes to explain the high fares they set.

To provide a wider context to this problem, Table 1 compares the prices of freight and passenger railway transport in Uruguay and in four other Latin American economies with well-developed railway systems. In Uruguay, freight railway transport was 41% more expensive than in the average of the four other countries. However, where the difference with other countries was strikingly large was in the case of passenger traffic. The price per passenger-km in Uruguay was 150% higher than the average price of the other four countries.

Thus, in Uruguay railway transport was trapped in a vicious circle in which prices could not decrease due to the low density of use of the network, but the growth of the latter was hampered by high transport prices. This problem affected both freight and passenger transport, but was specially worrying for the latter. Railway passenger transport was a rare and luxurious good in Uruguay, largely because the inability of the urban system to generate a sufficiently high transport demand prevented the companies from reducing prices to levels comparable to other countries. It is therefore not surprising that Uruguay is the only country in the table, and probably one of the few countries in the world, in which the



**Fig. 5** Railway density of use and prices in Uruguay and Argentina, 1912–1913. Passenger transport (panel a) and freight transport (panel b) (*Note* Companies operating in Uruguay shown in red. *Sources* For Uruguay, the country's statistical yearbook for 1913–1914; for Argentina, *Estadística de los Ferrocarriles en Explotación* [1913])

**Table 1** Railway transport prices in several Latin American countries, in British pennies per ton-km and passenger-km (1910–1913)

	<i>Freight (pennies per ton-km)</i>	<i>Passengers (pennies per passenger-km)</i>
Argentina, 1913	0.48	0.59
Brazil, 1913	0.54	0.19
Chile, 1912	0.65	0.38
Mexico, 1910	0.57	0.29
Uruguay, 1912–1913	0.79	0.90

*Sources* Freight and passenger rates have been taken from Herranz-Loncán (2014) for Argentina, Brazil, Mexico and Uruguay, and for Chile they have been estimated based on information in Oficina Central de Estadística (1912a and 1912b)

amount of passenger output in the cheap (second) class was smaller than in the expensive (first) class. The high price of railway transport excluded middle- and low-income consumers from the system, reducing therefore the demand for cheaper, less comfortable passenger transport services.

The Uruguayan railway companies not only made up for their high variable costs through comparatively high prices. They also used different strategies to reduce capital costs, including savings in rolling stock and cheap construction. As a consequence of the latter, the system suffered from a scarcity of bridges and tunnels and an excessive circuitousness. All this made railway transport slow and low quality, despite its comparatively high prices, which was reflected in the constant criticisms at the time on the low standards of railway transport services (e.g., Martínez Díaz 1987: 75; Millot and Bertino 1996: 345; Acevedo 1934: 564–555). Low density of use, high prices, and poor service quality combined to transform the Uruguayan railway system into a failed initiative, especially compared with the economic dynamism that railways prompted in Argentina, Brazil and Mexico. Uruguay's extremely high urban primacy was one of the main factors behind this failure and was particularly crucial to reduce the role of railway passenger transport in the country to a minimum.

#### 4 PRIMACY, STRUCTURAL CHANGE, AND POLICY

This section analyses how the consolidation of Uruguay's monocentric population geography shaped early industrial growth by creating supply-side obstacles for sustained structural change. There were of course obvious demand-side limits to domestic-market orientated industrialization in such a small country (c.1.1 million people by 1900, c.2 million by 1950), but we argue that the spatial distribution of population mattered as well as its size.

During the decades of export-led growth under the First Globalization, Uruguay experienced a significant expansion of modern industry, concentrated on the light manufacturing of consumer goods (beverages, cigarettes, flour, and, later, textiles), building materials for the domestic construction sector, and beef processing for export. Manufacturing output grew at over 4% per annum between 1870 and 1913, placing Uruguay as an 'early member of the modern growth club' in global perspective, with rates of industrial growth higher than, for example, Austria-Hungary (Bénétrix et al. 2017: 18).<sup>13</sup> Uruguayan scholarship traditionally explained this 'early manufacturing growth' (*industria temprana*) as primarily a consequence of incipient protectionism (at a time when tariffs made up most of fiscal revenue) and occasional downturns in the external sector, even if they acknowledged its importance for latter development (Faroppa 1969; Sapriza 1978; Jacob 1981). However, more recent quantitative studies have demonstrated that the rise and fluctuations of manufacturing output followed the overall performance of the Uruguayan economy and, in some leading industrial branches, benefitted from backward linkages with the prosperous agricultural export sector (Bértola 2000; Bertino et al. 2005; Rodríguez Weber 2011). As a result, by 1930, before the era of import-substitution industrialization in Latin America, Uruguay boasted one of the highest manufacturing/GDP rates in the continent (16%, compared to a regional mean of 10%), and in the global periphery more generally (Bulmer-Thomas 2014: 187). Relatedly, at the turn of the century Uruguay's rates of urbanization—over 30% of people living in towns (rather, on a single town) of over 20,000 inhabitants—and literacy—c.60%—were also the highest in Latin America

<sup>13</sup> Within Latin America, the largest economies (Brazil and Mexico) as well as the other two southern cone countries (Argentina and Chile) also experienced early industrial growth during the First Globalization; see, for an overview, Bulmer-Thomas (2014: 117–151).

(Mariscal and Sokoloff 2000: 103–104; Bértola and Ocampo 2013: 160). Despite these notable transformations, it would be misleading to characterize this period as one of industrialization. In most years there was no structural change in favor of manufacturing, as industrial output mostly kept pace with the growth of the agricultural export economy (Bértola 2000: 159; Román and Willebald 2021: 66).

Capital and labor for the burgeoning manufacturing sector were highly concentrated in Montevideo. According to the 1908 industrial census, Montevideo accounted for almost 65% of the available motive power in steam engines and over 90% of the horse-power available through electrical engines (DGE 1911: 1209). Electricity-generating plants were also almost exclusively located in the capital, which concentrated over 95% of their installed capacity, including the only public utility in the country and the largest private ones (owned by electric tram companies) (Bertoni 2011: 140–142; Travieso 2019: 124). The contrast between industrial employment in the province of Montevideo (i.e., the city as well as its environs and surrounding countryside) and the rest was equally stark. By 1908, about 35% of Montevideo’s male workforce—almost half of them immigrants—worked in manufacturing (including construction), compared to less than 10% in the rest of the country, where foreigners made up less than a quarter of the economically active population (Travieso 2020a: 157–165). With a third of the country’s population, Montevideo accounted for a much larger share of employment in the more sophisticated industries of the time: 63% of all male workers in metallurgy and 68% of those in textiles.<sup>14</sup>

Immigration and the growth of (light) manufacturing during the First Globalization were therefore concentrated in Montevideo, consolidating the capital’s historical primacy over all other settlements (see Fig. 1). This spatial pattern conditioned Uruguayan industrialization in at least two ways. Firstly, it limited home-market effects in would-be secondary cities, preventing the development of modern transformation industries almost anywhere else, except for a meat-packing factory and a textile plant in the western littoral (in Fray Bentos and Juan Lacaze respectively). Following the new economic geography literature, we argue that these ‘home-market effects’ were not limited to sheer market size (~scale of local

<sup>14</sup> Detailed classifications of occupational data taken from the statistical appendix to Travieso (2020a). Previous estimates of occupational structure based on the 1908 census broadly coincide on this point; see Rama (1969), Klaczko (1979), and Rial (1981).

demand for manufactures), but that they also included the availability of forward and backward linkages which underpin cumulative processes of regional growth (Krugman 1995: 1263–1265).<sup>15</sup> Under increasing returns to scale, producers of differentiated manufactured goods must choose a site for production; *ceteris paribus* they will choose the region with the comparative home-market advantage. Crucially for our discussion, new economic geography models show that this region will not necessarily be the one with the largest absolute number of demanders, but the one with the higher *proportion* of demanders of the product in question relative to others (Davis and Weinstein 1999: 385–386). This insight matters for the effect of Montevideo’s primacy on the geography of manufacturing during Uruguay’s modernization: it was not its absolute size that determined concentration, but the relative strength of local demand for manufactures (as the focal point for immigration and urbanization) compared to every other settlement. Once the vast majority of transformation industries were located in the capital, Hirschman-type linkages (see Hirschman 1977) made it more desirable for other manufacturers to produce there. As a result, most (largely immigrant) skilled industrial labor and most industrial capital (much of it also in the hands of European expatriates) was funneled to Montevideo (Beretta Curi 2014). This positive feedback loop must have contributed to increasing the geographical concentration of industrial activities (Krugman 1991: 486). As the only one city where most manufacturing activities could be profitably located, Montevideo’s aggregate resource constraint became the upper limit for Uruguayan industrial growth.

The second channel through which excessive urban primacy affected structural change was inter-regional trade. The core-periphery relationship between Montevideo and the rest of the country prevented regional comparative advantages in primary production from developing into downstream transformation activities. As we saw in the previous section, the design and operation of the railway system were emblematic of Uruguay’s monocentric economic geography. Livestock and primary products travelled towards Montevideo Central, where manufactures were loaded onto trains going back to the interior (Herranz-Loncán 2011;

<sup>15</sup> For two excellent empirical tests of ‘home market’ effects in explaining the within-country location of manufacturing, see Rosés (2003) and Davis and Weinstein (1999). These effects are of course related to the classic concept of ‘external economies of scale’: the cost savings achieved by firms producing in a large local economy (Vernon 1962).

Travieso 2019: 60–62). In a counterfactual Uruguay where Montevideo's primacy was much less pronounced, secondary cities in localities with comparative advantages for the production of bulky primary products (e.g., wheat, limestone, wool) could have developed downstream manufacturing industries benefitting from those locally available inputs (flour milling, cement production, woolen textile manufacturing). New Zealand, similar to Uruguay in demographic size and endowments, offers an instructive comparative illustration of this point.<sup>16</sup> Contrasting with the extremely high concentration of Uruguay's nonrural population in Montevideo at the turn of the twentieth century, New Zealand's urban dwellers were more or less evenly divided in four port-cities (Christchurch, Auckland, Dunedin, and Wellington), each connected to clusters of economic activity including both primary- and secondary-sector employment (wool scouring and shipping, dairy, mining, and frozen meat) (Condliffe 1930: 233; Lloyd Prichard 1970: 173; Denoon 1983: 150; Grey 1994: 274). Instead, given labor and capital scarcity in Uruguay's small towns and villages outside Montevideo, local transformation activities of their primary production were limited, as shown by the very small share (c.5%) of the non-Montevidean workforce employed in manufacturing by 1908 (Travieso 2020a: 157–165).

Public policy did little to effectively address the concentration of urbanization and transformation activities in Montevideo. Uruguay's early welfare state during *batllismo* (1904–1933) invested in infrastructure, human capital, and the nationalization and expansion of public utilities, but critics pointed out that many such investments were concentrated in Montevideo.<sup>17</sup> There was strong political logic behind this: *batllismo* was a progressive movement which had its largest electoral basis in urban working class and middle-class voters in Montevideo (Real de Azúa 1964: 49–52). This relative lack of regional policies outlived this period and its development model, as national policy generally failed to consider the differentiated impact that sectoral plans would have on diverse territories (Rodríguez Miranda 2005: 192–195; González Posse 2002). It also had deeper roots. The administrative cartography of modern Uruguay, a

<sup>16</sup> The economic history literature on the New Zealand-Uruguay comparison is vast; for recent overviews, see Álvarez (2018) and Travieso (2020b: 272–277).

<sup>17</sup> For a recent historical analysis of the key ideas and policies of *batllismo* (named after José Batlle y Ordóñez, president 1903–1907 and 1911–1915) see Cactano (2013); for a classic English-language study, see the trilogy by Vanger (especially Vanger 1980).

unitarian and centralized state, reflected (and arguably contributed to) the limits of regional development policies.<sup>18</sup> The 19 *departamentos* which form the second level of government were drawn as a result of short-term political calculations,<sup>19</sup> their governments had very limited institutional powers (until 1918 they could not even raise their own municipal taxes), and the geographical boundaries between them (as well as their number) did not reflect the economic geography of the country. As noted at the time by a parliamentarian who proposed a reorganization of the *departamentos*, the failures of administrative geography became a burden on the development of the interior regions (Ros 1912).

The monocentric economic geography of Uruguay's early manufacturing growth during the First Globalization created persistent challenges for structural change in decades to come. Thus, when in the mid-twentieth century the development strategy shifted more decisively towards state-led industrialization, with a multiple exchange rate system as the main policy tool, most of the country had very little manufacturing to build upon. Economic policy in this period did have the unintended effect of incentivizing the location of factories away from Montevideo by favouring specific industrial branches in which other towns had comparative advantages (Martínez Galarraga et al. 2020: 299). Nevertheless, while manufacturing industries grew and diversified notably under state protection, Uruguay's experience of inward-looking development was ultimately short-lived, ending in a protracted crisis since the late 1950s (Bértola 1991). Despite comparatively very high levels of urbanization, nonrural population was extremely concentrated in only one city, and this posed supply-side problems for structural change. Clusters of transformation activities could develop only to a limited extent outside the capital, and Montevideo's aggregate resource constraints (its stock of skilled labor and capital) became limits for the economy as a whole. Furthermore, without a network of secondary cities, the emergence of complex inter-regional industrial value chains was simply not possible, even if policy

<sup>18</sup> See Zubillaga (1977) for a historical overview of Uruguay's administrative divisions and Rodríguez Miranda and Magri (2017) for a study of recent changes in the institutional framework for regional and local governments.

<sup>19</sup> The birth of Flores (the last *departamento* to be founded) is emblematic: its territory was taken from the *departamento* of San José in 1885 by order of president Máximo Santos before leaving office; this resulted in the creation of a new Senate seat, which he then stood for and won (Pível Devoto and Ranieri 1956: 356).



had been more successful, or the international context more favorable. Finally, while this chapter does not deal with policy during state-led industrialization, it could be argued that Montevideo's urban primacy, which was at its historical maximum during the 1940s–1950s, enhanced the problems created by high tariff protection and rent-seeking.<sup>20</sup> From a comparative perspective, it should also be noted that the Latin American economies that achieved the best results during state-led industrialization in terms of economic growth, poverty alleviation, and job creation (Brazil, Mexico and Colombia) were also the most regionally balanced, whereas the southern cone countries (Argentina, Chile and Uruguay), which underperformed in this period (Bértola and Ocampo 2013: 216–217), were characterized by high and rising levels of urban primacy, as shown in Fig. 1.

## 5 CONCLUSION

Montevideo's primacy was consolidated during the First Globalization—earlier than in other Latin American countries—and reached its peak in the mid-twentieth century. Today it remains one of the highest in the world. Even in the context of the region, which is characterized by relatively high levels of urban concentration, Uruguay stands out as an outlier. The degree of concentration of urban population in the Uruguayan capital was unparalleled in Latin America during the nineteenth and twentieth centuries and has only recently converged to levels similar to (but still higher than) Argentina, Chile or Peru. While the historical rationale behind Montevideo's primacy has been abundantly discussed in the literature, its long-term economic consequences have received much less attention. In this chapter we focused on two of these: the relative failure of the railway system built during the First Globalization and the limits faced by early industrialization efforts.

Building a railway network in a country with such a level of urban concentration was a rather difficult challenge. Indeed, the fan-shaped Uruguayan railway system was probably the most centralized one in Latin America, and its dendritic design was a clear reflection of the prominent role of Montevideo in the country's transport activity. In that context, the concentration of urban population and activity in the capital made it very

<sup>20</sup> On the theoretical mechanisms linking rent-seeking and tariff protection with urban primacy, see Ades and Glaeser (1995) and Krugman and Elizondo (1996).

difficult for other stations in the railway system to generate a significant amount of traffic, except for those closest to Montevideo. Therefore, in most of the country railway output and the density of use of the network remained very low. In a sector with substantial economies of scale and density, the low level of output drove railway companies to apply relatively high rates for their services and to reduce quality standards, depressing even more the demand for transport in the country. While those problems affected both freight and passenger railway transport, they were especially serious in the latter. Due to the absence of intermediate cities, the railway movement of passengers remained at extremely low levels during the whole railway era. The very high rates charged by the companies contributed to reduce the demand to a minimum, probably excluding a large part of the population from their services. As a consequence, passenger railway transport, which had a very important role in other countries' economic integration, remained marginal in the Uruguayan case.

The negative consequences of excessive urban primacy levels also represented an obstacle for structural change. The growth of the Uruguayan manufacturing sector was substantial during the First Globalization, and its contribution to GDP was among the highest in the world periphery by 1930. However, further industrial growth was hampered by its overwhelming concentration in Montevideo and the absence of other large industrial cities. Due to the limited home-market effects elsewhere in the country, the capital became the only city where most industrial activities could be profitably located, and its resource endowment set the upper limit to Uruguayan industrial development and structural change. The small scale of secondary towns prevented the development of transformation activities based upon their primary production and the subsequent emergence of local clusters and interregional industrial value chains. The limits posed to manufacturing by the dependence on the capital city and its resources likely contributed to the quick exhaustion of Uruguay's experience of state-led industrialization, which stagnated in the late 1950s, much earlier than elsewhere in the region and just as Montevideo's primacy reached its historical peak and started its decline.

Both the failure of the railways as a development force in Uruguay and the limits that structural change faced since the early twentieth century had a very complex set of determinants, including, among others, the small demographic scale of the country and its resource endowments. However, the fact that Uruguay has had the highest degree of

urban primacy in the region (and one of the highest in the world) since the mid-nineteenth century is a factor that must not be neglected in the analysis of these problems. Indeed, the Uruguayan case provides an illustrative example of the development challenges faced by countries with a high concentration of urban population in a single city and it highlights the importance of paying attention to such geographical imbalances as a crucial spatial dimension of long-term economic history. Modern economic geography models and comparative historical evidence for the nineteenth and twentieth centuries both suggest that national economic development is greatly enhanced by (and has become increasingly dependent on) metropolitan areas and their interactions with one another (Quigley 1998). And yet there are clear scale limits to the economic efficiency of cities, as negative externalities build up when urban agglomerations approach their ‘optimal’ density (Glaeser 1998), which implies that relying on a single sizable city to provide urban spillovers puts the national economy at a significant disadvantage. With only one metropolitan growth engine, Uruguay’s twentieth-century development was tied to Montevideo’s fortunes.

In the twenty-first century, Montevideo remains home to 40% of people in Uruguay and average incomes there are about 60% higher than in the rest of the country, the gap being significantly larger when compared to the north and north-eastern interior regions.<sup>21</sup> Yet, persistence is not perpetuity: while primacy is still at high levels in regional and global comparison, change in Uruguay’s population geography has been slowly underway for decades, in a trajectory approaching a (long) inverted-U curve (Fig. 1). More recently income convergence has ensued. Economists have identified a process of conditional convergence between Montevideo and interior *departamentos* in the twenty-first century, depending on human capital accumulation (Rodríguez Miranda 2014: 52–55). Looking at this recent convergence in long-term perspective, economic historians have found one of its main causes in the development of agro-industrial sectors during the 2000s ‘commodity boom’, encouraged by a set of policy actions aimed at increasing export competitiveness and indirectly promoting growth in interior regions, as China became

<sup>21</sup> Population taken from 2011 census. For incomes: own calculations from household survey data from June 2020 (INE 2021); results are almost identical for household income and personal income. The coronavirus pandemic does not seem to have affected the mean income gap between the capital and the rest of the country.

Uruguay's main external market (Martínez-Galarraga et al. 2020: 301). New laws explicitly targeting local development and governance were also passed in the 2000s which could contribute to the consolidation of these trends, even if local and *departamento* governments still wield very limited institutional capacity for shaping regional growth patterns (Magri 2011).

Changes in Uruguayan agriculture (including the rise of forestry, digital livestock traceability, and precision soybean farming, as well as the effects of widespread access to internet and mobile communications) are crucial to understand why recent export-led growth cycles have resulted in the expansion of secondary towns, as agricultural workers increasingly reside in urban centers and agro-industrial nodes continue to develop (Morales 2014: 50–58; Rodríguez Miranda 2019). While Montevideo's agglomeration advantages will continue to make it the core metropolitan engine of the economy, the slow erosion of the historical association between a specialization in extensive agriculture and a dualistic city-port/hinterland economic geography suggests that Uruguay's future will be less monocentric than its past.

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# The Lasting Development Impacts of El Salvador's 1980 Land Reform

*Eduardo Montero*

## I LAND INEQUALITY AND LAND REFORMS IN LATIN AMERICA

Latin America is the region of the world with the most unequal distribution of land, both historically and today (Oxfam International 2016). The extent of land inequality is stark: modern data from agricultural censuses suggest that the top one percent of the largest landholdings occupy more than half of productive land in the region (Oxfam International 2016). This extreme land inequality—and its associated powerful agrarian elite who historically owned the majority of productive land—has been highlighted as a potential cause of Latin America's relatively poor development path following independence (e.g. Engerman and Sokoloff 2002).

Due to the extent of land inequality, Latin America also stands out as a region of the world that has experienced numerous government-managed land reforms. Between 1920 and 1990, the vast majority of countries in the region undertook land reforms that sought to redistribute landholdings to rural workers, often from large *hacienda* owners (de Janvry

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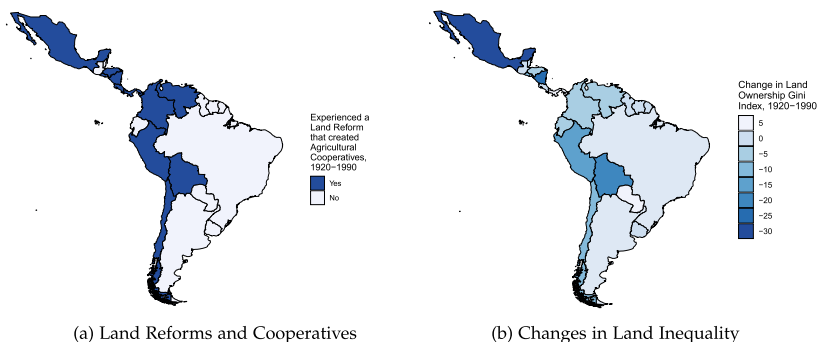
1981; Albertus 2015). Interestingly, many of these reforms distributed land in the form of agricultural cooperatives—where workers jointly own and manage production and share profits—rather than in the form of individual titles. Figure 1a highlights the prevalence of land reforms that redistributed large landholdings to workers in the form of agricultural cooperatives in Latin America, while Fig. 1b shows that these twentieth-century land reforms coinciding with a decrease in land inequality in these countries.

While these land reforms reduced land inequality, little is known about how these reforms affected longer-run economic development. Economic theory is uncertain *ex-ante* for whether cooperative ownership is beneficial or not for equity and efficiency. Some work suggests that cooperative property rights may increase both equity and efficiency by making workers more of the residual claimants of their effort (e.g. Sen 1966; Bonin et al. 1993). However, profit sharing between workers may also lead to free-riding problems within a firm, possibly negating the incentive and equity effects from cooperative ownership (e.g. Holmstrom 1982).

Critically, there is little causal empirical evidence for whether these prevalent land reforms that created agricultural cooperatives led to less poverty and more equity for beneficiaries, or whether the cooperative ownership structures hindered the economic progress of rural workers. This is because the properties that became cooperatives during land reforms are often quite different than other properties (e.g. larger estates, owned by elites, in more productive regions). Thus, due to these underlying differences, a comparison between properties that were part of a land reform and those that were not will likely not provide causal evidence of these land reforms lasting impacts. This challenge has meant that we lack evidence for how these land reforms impacted development in Latin America.

## 2 COOPERATIVE PROPERTY RIGHTS AND DEVELOPMENT: EVIDENCE FROM LAND REFORM IN EL SALVADOR

To overcome this challenge, recent work by Montero (2022) exploits one unique feature of El Salvador's 1980 land reform program to study the causal impacts of cooperative property rights on agricultural choices, productivity, and worker equity in the long run. Before this land reform, almost all of El Salvador's agricultural land was organized in the form of *haciendas*, where landowners contract workers. During the first phase



**Fig. 1** Land reforms across Latin America (*Note* Constructed using de Janvry [1981] and Albertus [2015])

of the 1980 land reform in El Salvador, properties belonging to individuals with cumulative landholdings over 500 hectares (ha) were subject to expropriation by the military junta government; the military then reorganized the properties into cooperatives managed by the former *hacienda* workers. However, properties belonging to individuals with cumulative land holdings under 500 hectares remained as *haciendas*. This discontinuous probability of reform suggests that there some properties were very similar except for whether or not the landowner had over 500 ha in total landholdings and, therefore, whether they were more likely to become a cooperative. I use a regression discontinuity (RD) design to compare these properties—properties that were expropriated and converted to cooperatives vs. those that were not expropriated but were similar prior to the reform—to estimate the economic impacts of cooperative property rights relative to the private ownership system (*haciendas*).

### 3 THE 1980 LAND REFORM IN EL SALVADOR

On March 5, 1980, the military junta in power in El Salvador passed Decree 153 on land reform seeking to reorganize large *haciendas* into agricultural cooperatives (Junta Revolucionaria de Gobierno 1980). The 1980 land reform had three official motivations. First, the reform aimed to diminish land inequality and increase agricultural productivity. Second, the reform was intended to improve development and reduce poverty. Finally, the military government hoped that the land reform would reduce

the power of the economic elite (Junta Revolucionaria de Gobierno 1980). Unofficially, the land reform also had the goal of reducing the likelihood that rural laborers would join left-wing insurgency groups engaged in El Salvador's civil war at the time (Posterman 1982).

In many ways, the El Salvador land reform shares similarities with other land reforms in Latin America in this period of history. First, land reforms in Latin America often shared these varied goals, including reducing agrarian elite power and lessening insurgency group activity via land redistribution (e.g. Dell 2012; Albertus 2020). Additionally, the El Salvador land reform was conducted under an authoritarian regime, a common occurrence across land reforms in this time period in Latin America, possibly because drastic reforms are only feasible in these types of regimes (Albertus 2015).

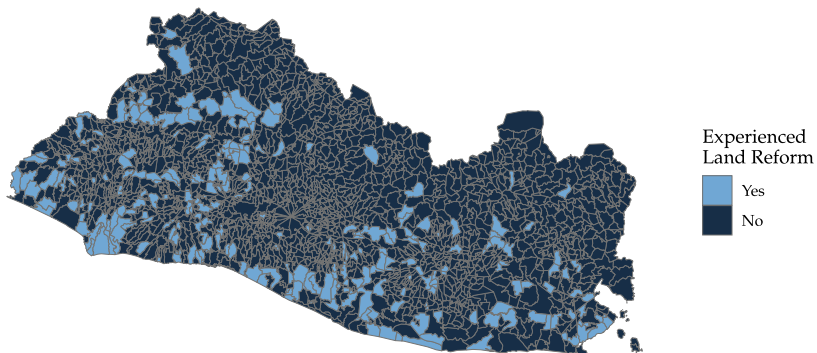
The 1980 land reform was meant to occur over two phases. Phase I called for the expropriation of all agricultural land owned by an individual with over 500 hectares in total landholdings; this land was to be redistributed to the former workers via agricultural cooperatives. Phase II of the land reform called for the expropriation of all agricultural land owned by an individual with over 100 hectares in total landholdings an undefined number of years after Phase I. However, Phase II was never carried out due to organized opposition following Phase I (Figueroa Aquino et al. 1991).

Phase I was carried out immediately after the reform was announced and was enforced by the military. The morning after the publication of Decree 153, the Salvadoran Institute of Agrarian Transformation (ISTA) and the Ministry of Agriculture (MAG) sent intervention teams of “agronomists, technicians, and military personnel to the country's largest farms” to expropriate and reorganize the landholdings (Mena 1988). Rather than providing individual title and possession to workers, ISTA organized former *hacienda* laborers into agricultural producer cooperatives where farmers would work the land in groups (Mennen 2009).

Critically, the 1980 land reform program was unexpected for large landholders. According to accounts from the individuals responsible for its design and implementation, the land reform was “prepared under immense secrecy and executed at full velocity” to avoid strategic adjustments by the landholders (Polío and Antonio 2012, p. 117). Additionally, the 500 ha threshold was chosen as a temporary threshold for implementation reasons (Polío and Antonio 2012, p. 110). Ultimately, former

owners were compensated by a mix of cash and bonds paid out over 30 years (Browning 1983). The compensation for former landholders—while contested and deemed too low by former landholder—matches other reforms from the period, where governments attempted to provide compensation for expropriated land (see Albertus 2015). Due to the strength of the military government at the time, former landholders had little recourse in negotiating for higher compensation (as in many of the land reforms studied by Albertus 2015).

By the end of 1986, ISTA had expropriated over 400 estates throughout the country (Mena 1988). Approximately 20% of all of El Salvador's agricultural land was reorganized into cooperatives during Phase I of the agrarian reform (Mena 1988). This land made up 14% of total coffee land, 31% of cotton land, and 24% of all sugarcane land in El Salvador (Seligson 1994). The reform also had a large spatial reach across El Salvador: Fig. 2 provides a map of cantons in El Salvador that experienced at least one expropriation and subsequent cooperative formation.



**Fig. 2** Land reform by Canton—El Salvador (*Notes Experienced Land Reform* is equal to *Yes* for a canton if at least one property was expropriated in that canton during Phase I of the 1980 land reform, and *No* otherwise. Cantons are the smallest administrative unit in El Salvador, equivalent to approximately one village in rural areas. There are over 1,400 cantons in El Salvador)

#### 4 THE LASTING IMPACTS OF THE 1980 LAND REFORM ON AGRICULTURAL CHOICES, PRODUCTION, AND WORKER INCOMES

Using the 500 ha threshold rule from land reform law and a regression discontinuity (RD) design, I study the impacts of cooperative property rights on agricultural productivity, crop choices, and worker incomes in the long run. The RD approach compares properties above and below the land reform ownership threshold that were similar prior to the reform except that properties where the former owner owned over 500 ha in cumulative landholdings were discontinuously more likely to be reorganized into cooperatives during the land reform. Importantly, I also show that properties near the ownership threshold of 500 ha are similar in terms of geographic characteristics. Additionally, land reform records highlight that the military government successfully expropriated and reorganized most properties above the threshold. This means that properties just above and below the threshold are comparable except that those above the threshold became cooperatives following the 1980 land reform.

Using data from El Salvador's 2007 census of agriculture, I find several key results related to agricultural productivity. First, relative to similar but unaffected haciendas, cooperatives created by the reform devote less land to cash crops, such as sugarcane and coffee, and are less productive at these cash crops. However, this is not the case for staple crops, such as maize and beans: cooperatives devote more land to produce staple crops and are actually more productive at these crops relative to haciendas. Second, I find little evidence that cooperatives are on aggregate less productive than haciendas. By this, I mean that cooperatives and haciendas have similar levels of revenues and profits per hectare overall. The lack of aggregate efficiency differences arises because cooperatives have shifted much of their production away from cash crops toward staple crops.

These results are consistent with focus group evidence that highlights that cooperatives tend to redistribute some of their cash crop earnings, which reduces the cooperative's productivity in the production of cash crops. In contrast, for staple crops, focus group discussions with cooperative members highlight that staple crops are not subject to this redistribution because workers can consume staple crops directly. As a result, cooperatives are more likely to focus on staple crop production and are more efficient than *haciendas* at producing staple crops.



Finally, I examine the impacts of cooperative property rights on worker incomes and inequality to understand the equity implications of cooperative property rights. The income distributions for cantons with reform cooperative are more equitable compared to the income distributions for areas with haciendas, likely due to the redistribution of earnings within cooperatives. These income results suggest that cooperative property rights have significant long-lasting impacts on equity.

## 5 CONCLUSIONS

Examining this land reform serves as a starting point for understanding the understudied economic consequences of similar land reforms across Latin America. This paper contributes to the literature in economics that seeks to understand the lasting impacts of property rights reforms and provide causal evidence (e.g. Besley and Burgess 2000; Banerjee et al. 2002); however, most of this work has focused on land reforms outside of Latin America despite their prevalence in the region. Thus, the work summarized in this chapter examines the impact of the type of land reforms frequently implemented in Latin America that defined cooperative property rights. Additionally, the work outlined here also focuses on the longer-run consequences of property rights reforms instead of concentrating on short-term impacts. Land reforms can often be disruptive, implemented in times of civil conflict and may also impact views on the security of various landholdings. Thus, studying the longer-run consequences allows me to better isolate the differences due to property rights changes.

The findings summarized in the chapter complement a growing literature that seeks to causally understand how land reforms in Latin America have affected the comparative development of the region in the long run. For instance, recent work by Galan (2018) examines how land reform in Colombia affected intergenerational mobility for beneficiaries and their children. Likewise, Lillo Bustos (2019) explores how land reform in Chile shaped subsequent crop choices and agricultural development. Additionally, land reforms in Latin America—including the one in El Salvador discussed previously—were generally implemented during a time of crisis, particularly during civil conflicts, to reduce both landless insurgencies and the influence of the agrarian elite (Brockett 1998). Dell (2012) explores the causes and consequences of land reform in Mexico, in particular on the subsequent conflict following the reform.

Albertus (2020) explores the effects that land reform in Peru had on civil conflict. del Pilar López-Urbe (2019) examines how revolutionary threats impacted the implementation of land reforms in Colombia. Future work can build on all these findings and explore other important outcomes, slowly building a fuller understanding of how land reforms and the land inequality underlying the reforms have helped or hindered development across Latin America.

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# Global Firms and Local Development: Evidence from Costa Rica

*Esteban Méndez and Diana Van Patten*

The United Fruit Company (UFCo) was one of the largest and most controversial multinational companies of the twentieth century. This infamous firm, hosted by the so-called “Banana Republics,” built a profitable global business while operating and being the poster-child of neo-colonialism in over a dozen Latin American countries. There are many lessons that we can learn today from understanding this company’s past.

In particular, contrasting the firm’s strategy and impact between countries delivers insights that can guide current policy debates on multinationals, large-scale foreign investments, and local economic development. This chapter summarizes work by Méndez and Van Patten (2022), which focuses on the UFCo experience in Costa Rica, and discusses the experience of the UFCo in other countries relying on work by Bucheli (2005), and Bucheli and Kim (2012), among others.

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E. Méndez

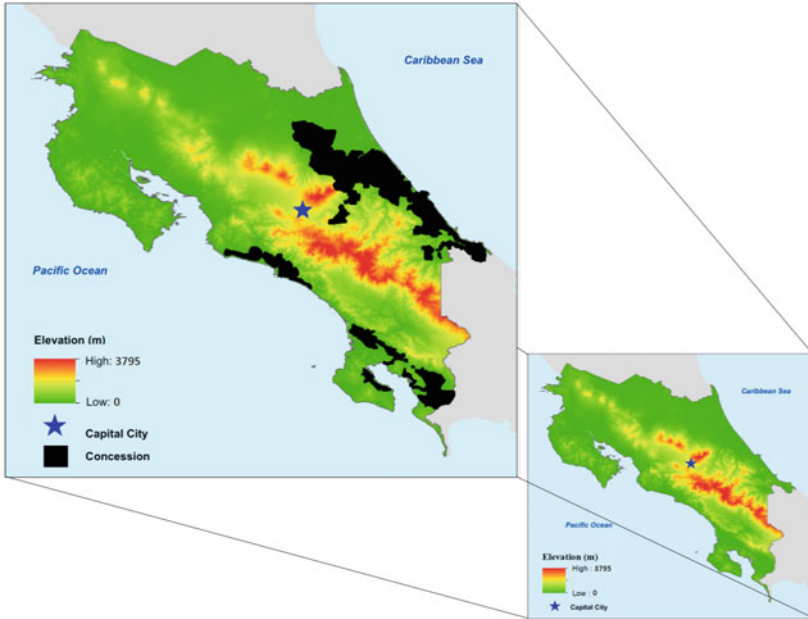
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**Fig. 1** Costa Rica and the UFCo's Land Concession (*Notes* The UFCo's land concession appears in black in this map of Costa Rica. Elevation is shown in the background. The concession area represents 8.92% of the national territory and predominantly consists of flatlands near coastal areas)

An analysis of the UFCo's experience in Costa Rica is particularly insightful, given that, against all odds, the company had a positive and long-lasting impact on local living standards. In Costa Rica, this American firm was given a large land concession, equivalent to almost 9% of the national territory. Within this area, shown in Figure 17.1, the UFCo was virtually the only employer from 1899 to 1984. Moreover, concerned about the spread of diseases like malaria and yellow fever, the firm required most of its workers to live within company lands, thereby potentially gaining more control over them (Chomsky, 1996).

If even today large multinational companies raise concerns about excess market power and workers' exploitation in developed and developing countries, it is fitting to say that the case of the UFCo in Costa Rica in the early twentieth century had many ingredients in a recipe for disaster. In

fact, multiple studies have documented the negative effects of colonial and historical institutions in settings that share multiple characteristics with this one, across different contexts.<sup>1</sup> The next section, however, discusses how the UFCo increased local living standards, leaving behind a healthier and more educated labor force.<sup>2</sup>

## 1 A SURPRISING RESULT

The history of the UFCo and banana plantations in Costa Rica dates back to the construction of a railroad from the capital city to the Caribbean Coast in 1884. What happened? In exchange for completing a railroad that connected the capital city with one of the main ports in the country, the Costa Rican government gave Minor C. Keith—an American contractor—a large concession of undeveloped land, which was virtually unpopulated at the time.<sup>3</sup> While constructing the railroad, Keith realized that bananas, that were planted along the railroad tracks to feed construction workers, grew marvelously and, after completing the railroad, he experimented with exporting bananas planted in the country (Bucheli, 2005). The experiment was successful, and the UFCo was founded in 1899. The American company eventually operated in many countries in Latin America, including Colombia, Costa Rica,

<sup>1</sup> These studies include the slave trade (Nunn, 2008), the *mita* system in Peru (Dell, 2010), forced coffee cultivation in Puerto Rico (Bobonis and Morrow, 2013), forced rubber cultivation in what is today the Democratic Republic of Congo (Lowes and Montero, 2021), or the Dutch Cultivation System (Dell and Olken, 2020). These studies consistently find that companies tend to underprovide public goods within their concessions, and that exposure to these regimes can lead to persistent negative effects on living standards—an exception being Dell and Olken (2020), who find that villages forced to grow sugarcane have better long-run outcomes as a result of sugar factories and industrial structures promoting economic activity.

<sup>2</sup> In this sense, our work also contributes to the literature on the consequences of firms exercising market power, and how this interacts with workers' outside options. We document how local monopsony power affects a firm's incentive to invest in local amenities and consider a compensation that does not focus only on wages as in Gutiérrez, and Philippon (2017) and Autor et al. (2020). Further, we study long-run outcomes and how persistent the effects of such an arrangement can be.

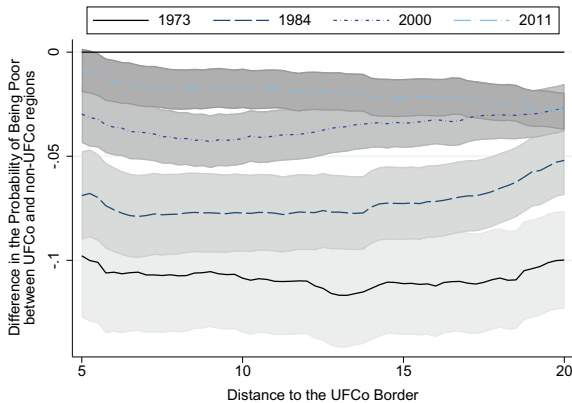
<sup>3</sup> This was the case for most Costa Rican rural areas at the time, as the expansion of the agricultural frontier outside of the Central Valley began in the late nineteenth century (León Sáenz, 2012).

Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Nicaragua, and Panama (May and Lasso, 1958).

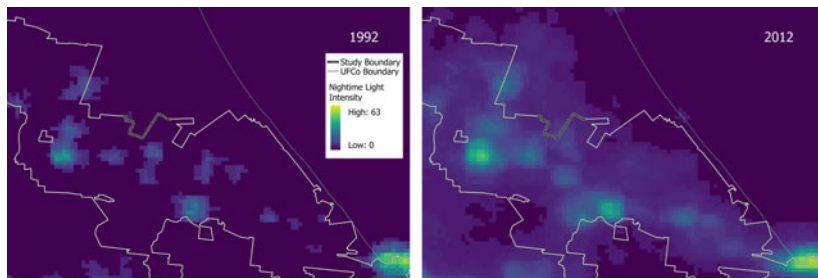
The UFCo left Costa Rica in 1984. Méndez and Van Patten (2022) show that it had a positive and long-lasting impact on the regions where it operated. Using hand-collected historical records, along with detailed census data, and relying on a plausibly exogenous land assignment along a border segment, they implement a geographic regression discontinuity design. Their results show that households living within former UFCo areas have had better economic outcomes—like housing, sanitary conditions, education, and consumption—than other households living in comparable locations in the country.

For instance, households within UFCo areas were 33% less likely to be poor in 1973, with only 59% of this income gap closing over the following four decades. Figure 17.2 shows how this result holds even when conducting the analysis along UFCo’s entire border and at different distances from the boundary. It also showcases the convergence across regions over time.

Moreover, satellite data shows that regions within the concession’s boundary are more luminous at night—which is associated with higher income levels—than those outside the UFCo region, even today. For



**Fig. 2** Differences in the Probability of Being Poor Across Time (*Notes* The figure shows the difference in the probability of being poor between households within the UFCo and their counterparts on the other side of the concession’s boundary, and how this difference evolved between 1973 and 2011)



**Fig. 3** Nighttime Lights and the Study Boundary (*Notes* The figure shows the UFCo's concession's boundary and how satellite nighttime lights data shows a much higher luminosity inside the former UFCo, both in 1992 and 2012)

instance, Figure 17.3 shows the satellite image near the study boundary in 1992 and 2012, and suggests higher luminosity in areas inside the former UFCo area. In fact, nighttime light intensity is 21% higher in the former UFCo, which implies that output in the former UFCo areas is about 6.37% higher (Henderson et al., 2012).

This result stands in stark contrast to the narrative in other Latin American countries where the UFCo operated, such as Colombia, where it has been documented that armed forces prevented workers from forming unions and leaving the plantations on several occasions. Today, these Colombian areas, which include Santa Marta and Ciénaga, are among the poorest in the country. Further historical details on the Colombian case are discussed by Bucheli (2005).

Further, Gabriel García Márquez's masterpiece *One Hundred Years of Solitude* takes place in a fictional town named Macondo, which hosted an American banana company meant to represent the UFCo in Latin America (García-Marquez, 1967). In the book, after the company left the region, the inhabitants of Macondo had mixed opinions about how this firm impacted their town. Márquez relates how some people remembered company times with nostalgia, while others complained about the company's negative impact on the region. This fictional episode depicts the varied sentiments that people across countries in Latin America have about the company, and if true, begs the question: Why would the company's effect differ so vastly across regions? Why was the firm's impact positive in Costa Rica, and why should we expect it to be negative in



regions like Colombia? The next section studies the mechanism behind the company's effect and proposes an answer to these questions.

## 2 FRUITFUL INVESTMENTS

Historical data collected from primary sources suggests that investments in local amenities carried out by the UFCo—hospitals, schools, roads—are the main drivers behind its positive effects in Costa Rica. For instance, investments per student and per patient in UFCo-operated Costa Rican schools and hospitals were significantly larger than in local schools and hospitals run by the government, and sometimes even twice as large.

Why were these investments in local amenities higher than in the rest of the country? While the company might have invested in hospitals to have healthier workers, it is less clear why it would incur in other investments such as schooling, especially given its reputation. Evidence from archival company annual reports suggests that these investments were induced by the need to attract and maintain a sizable workforce, given the initially high levels of worker turnover that it faced. High turnover was a result of the workers' main outside option: coffee. Unlike bananas, coffee is a seasonal crop, and workers could earn relatively high wages during the coffee harvesting season. That is, worker turnover was the result of high competition in the labor market. For instance, a 1922 UFCo Annual Report contains a section highlighting the constant overturn of labor and describes that “[the workers’] migratory habits do not permit them to remain on one plantation from year to year, but *as soon as they become physically efficient and acquire a little money they either return to their homes or migrate elsewhere and must be replaced by new laborers* [emphasis added].” (UFCo, 1924)[p. 45].

As a solution to retain workers, the UFCo increased its investments in local amenities beyond medical measures. A 1925 UFCo Annual Report pointed out that “an endeavor should be made to stabilize the population.... We must not only build and maintain attractive and comfortable camps, but we must also provide measures for taking care of the families of married men, by furnishing them with *garden facilities, schools and some forms of entertainment. In other words, we must take an interest in our people if we may hope to retain their services indefinitely* [emphasis added]” (UFCo, 1923)[pp. 74–75].

Evidence of these investments emerging from competition goes beyond company reports. Empirically, there is a causal relationship between UFCo's effect in a location and the degree of competition for labor faced by the company in that area. Namely, among UFCo land-holdings, those closest to areas where agricultural workers could earn high wages while the company was operating have a lower incidence of poverty even three decades after the UFCo left the region. This difference in economic outcomes can be attributed to higher UFCo investments to retain workers in these locations.

### 3 INSTITUTIONS AND LABOR MOBILITY

The UFCo faced high labor market competition in Costa Rica, which induced high investments in local amenities. Alternatively, the company could have tried to somehow lower local outside options via measures *outside* the labor market. For instance, work by Acemoglu and Wolitzky (2011) on labor coercion discusses how an alternative way to retain workers is to reduce their mobility. Several reasons prevented this from happening in our setting, but might have allowed this to occur in other Latin American countries.

On the one hand, throughout the twentieth century, Costa Rica consolidated strong democratic institutions, which possibly played a role in protecting workers' rights. Bucheli and Kim (2012) conduct a comparison of political institutions between countries in Central America, and discuss how political stability in Costa Rica might have played an important role. Moreover, Costa Rican politics featured higher political competition than other Central American countries, like Guatemala; this competition may have led to an effort by particular political groups to enlarge their winning coalition by protecting UFCo workers (Bucheli and Kim, 2012). On the other hand, some coffee producers were part of the Costa Rican elite, and these producers required workers during the coffee harvesting season, which aligned their incentives with those of workers in terms of incentivizing high mobility.

The latter stands in stark contrast to the reality in other Latin American countries where the UFCo operated, like Colombia, where Bucheli

(2005) describes the situation as a “business-friendly government.”<sup>4</sup> For instance, in this country, armed forces prevented workers from forming unions and leaving the plantations in locations like Santa Marta and Ciénaga (Bucheli, 2005)—two areas that are among the poorest in the country today. Far from contradicting the positive effects that we documented in Costa Rica, the Colombian case aligns with what the labor mobility mechanism would predict, given that, in Colombia, the company did not have an incentive to invest in local amenities to attract workers, given the local labor market dynamics and low labor mobility.

#### 4 LEARNING FROM THE PAST

The mechanism outlined above suggests that the relationship between competition for workers and investments was crucial in determining the firm’s effect. To learn from the history of the company and use it to inform other contexts, it is useful to think about how results would change under different scenarios. What would have happened if workers’ outside options would have been worse? How does the result depend on the government’s actions? Méndez and Van Patten (2022) build a structural model based on the UFCo’s setting and estimated on historical data, which is useful to answer these and other questions, and to derive important policy recommendations. Two lessons are particularly noteworthy.

First, from the point of view of the company’s strategy, the model is useful to understand why providing local amenities was more efficient in attracting workers than just increasing wages. With no public goods (hospitals, schools, churches) in the region, the company would have had to pay extremely high wages for workers to be willing to permanently move in with their families, especially given that during the coffee harvesting season—coffee being the main outside option for agricultural workers—the company was facing very strong competition in the labor market. Thus, undertaking the investments, given the firm’s long horizon, was a profit-maximizing strategy. In fact, we leverage newly digitized special reports that, between 1946 and 1956, include detailed breakdowns of UFCo’s expenditures in amenities (LaBarge, 1959). We

<sup>4</sup> To clarify, Bucheli (2005) does not use the term “business friendly” as a positive attribute. The term suggests that the government was open to cooperating with the UFCo, potentially leading to more labor coercion.

find that expenditures in medical care, education, and total amenities are positively correlated with world coffee prices (with correlations of 0.88, 0.93, and 0.91, respectively). Interestingly, the correlation between coffee prices and expenditures in amenities *as a share of total worker compensation* is 0.87. This result aligns with the idea that it is competition for workers with coffee producers that explains why UFCo provides schooling and amenities rather than only higher wages (Méndez and Van Patten, 2022).

Second, the model shows that the company's effect on living standards depends crucially on workers' outside options, which were relatively high for Costa Rican workers. In fact, the UFCo would have *decreased* well-being if workers' outside options were reduced by one half. The intuition behind this result is that as workers' outside options decrease, the company has fewer incentives to invest in local amenities. To illustrate, in the extreme case of immobile workers, the company could potentially not pay for the labor input or invest at all, thereby *negatively* affecting worker's welfare. This resembles the Colombian case, where workers were coerced by armed forces and therefore faced low outside options that might have led to the UFCo having a negative long-lasting impact on the region. In other words, conditional on some people living within the UFCo region, in the hypothetical case of extreme labor coercion, the company would face a perfectly inelastic labor supply—a case of pure monopsony. However, as we allow workers to be more mobile across regions in the model, the labor supply that the company faces becomes every time more elastic, and if workers were perfectly mobile across regions, the company would be competing against all other firms in the country, close to perfect competition.

Circling back to the disagreement among characters in *One Hundred Years of Solitude*, could individuals on both sides of the argument be somewhat correct? Could the UFCo act vastly different across regions? It is possible; the results outlined above suggest that the company's effect over the local population might have differed across countries and depended on the institutional constraints within which this multinational operated. In particular, better results should be expected in regions with worker empowerment and high labor market competition.

## 5 CONCLUSION

Understanding the implications of large-scale foreign investments is particularly relevant today. In the last 20 years, foreign private investors have acquired more than 64 million acres of land in over 80 countries of Africa, Central and Southeast Asia, Eastern Europe, and Latin America via leases (of up to 99 years) or purchases of farmland for agricultural investment (Cotula et al. 2009, Cotula and Vermeulen 2009). Consequently, a better understanding of the effect of such projects is a matter of first-order importance.

Further, in an era in which large multinational corporations are abundant in both the developed and the developing world, this valuable piece of history can be deeply informative. The history of the UFCo illustrates the creativity of markets, and how even in potentially distorted environments, markets can still deliver remarkably good outcomes with long-lasting persistent effects, while highlighting the importance of worker empowerment and outside options in shaping the ultimate effect of these large global firms.

Finally, it is worth noting that this setting opens several interesting avenues of future research. For instance, after studying the effect of exposure to the UFCo on living standards, ongoing work exploring the long-run effect of the company on attitudes toward trade, political views, and civic engagement (Méndez and Van Patten, 2021a); (Méndez and Van Patten, 2021b).

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# Protestant Doctrinal Heterodoxy and Heterogeneity in Guatemala 1880s to 1950s

*Rachel M. McCleary*

## 1 INTRODUCTION

Religious freedom, Presbyterian missionary Edward Haymaker noted, has negative consequences. All sorts of “dogmatic vagaries” compete with traditional religions as well as with each other. Guatemala, a country geographically close to the United States, at the turn of the twentieth century attracted “extravagant religious fancies hatched under American religious liberty.” Among them “Mormonism, Adventism, Russellism, Dowieism, Eddyism, Holy Rollers, Tongues, Ingersolism,

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and what not” (Haymaker 1946: 41). An omission in Haymaker’s list of religious competitors is the Roman Catholic Church. The liberal reforms of the nineteenth century assured minimal competition from the Catholic Church and freedom for Protestants to enter the country. Beginning in the late nineteenth century, at the invitation of President Justo Rufino Barrios, the Presbyterian Church-USA and then other U.S. Protestant denominations, faith missions, and independent missionaries entered Guatemala. This chapter discusses doctrinal heterodoxy and market heterogeneity as the result of competition among Protestant missions to Guatemala during the first half of the twentieth century. As theological tenets and beliefs crystalized in newly forming holiness and Pentecostal denominations in the United States, missionaries evangelizing new theologies in Guatemala forcing older missions to change their strategies in the mission field. From this increasing Protestant competition for believers, Guatemalans received a diversity of theological messages resulting in doctrinal heterodoxy and heterogeneity. What is outside the scope of this chapter is how local congregations, national evangelizers, colporteurs, and pastors understood the doctrinal messages they were receiving; how they themselves interpreted the doctrines and rituals.

## 2 PENTECOSTALISM COMES TO GUATEMALA

In the late 1880s, the southeast—Georgia, North and South Carolina—was a hotbed of Wesleyan holiness. It was here that in May 1906 the Azusa Street Mission Pentecost message was well-received, spreading “like fire” to the surrounding holiness bands in Alabama, Tennessee, Arkansas, Florida, Kentucky, Mississippi, Missouri, and on to Oklahoma.<sup>1</sup> Holy Spirit baptism accompanied by glossolalia (“speaking in tongues”) is the foundation of Pentecostalism and the most significant doctrinal division between holiness and Pentecostal churches (McGee 2008: 112, footnote 18).<sup>2</sup> Holiness-Pentecostalism professes belief in the three-fold

<sup>1</sup> The Azusa Street church was located in Los Angeles, California. G.B. Cashwell, “Pentecost in North Carolina,” *The Apostolic Faith* 1, 5 (January 1907): 1; G.B. Cashwell, “In Memphis, TN,” *The Apostolic Faith* 1, 8 (May 1907): 1. For an account of how the Pentecost message spread from the north to the southeastern states to southern states and back west, see (Campbell 1951), Synan (1997), and Stephens (2008).

<sup>2</sup> The Pentecostal movement emerged out of holiness prayer revival meetings (Synan 1997: 50, 59, 90–1). For a definition of glossolalia see Spitter (1988).



blessing (conversion, sanctification, and Holy Spirit baptism). Pentecostal leaders coming out of the Wesleyan holiness movement bequeathed to their new Pentecostal denominations Wesleyan theology, rituals of worship, evangelistic techniques, and the Wesleyan emphasis on personal piety (Dieter 1975: 69–76). Added to their new holiness-Pentecostal beliefs were charismatic manifestations including divine healings and Holy Spirit baptism accompanied by glossolalia.

The U.S. south and southeast became the religious epicenter of the comingling of Wesleyan holiness beliefs. From this geographic region came the first holiness-Pentecostal missionaries to Guatemala.<sup>3</sup> Each one affiliated with the holiness institutions of the Altamont Bible and Missionary Institute (Greenville, South Carolina), Tabernacle Pentecostal Church (Greenville, South Carolina), and Pentecostal Mission (Atlanta, Georgia). The first two institutions became doctrinally holiness-Pentecostal while the third remained holiness merging with the Church of the Nazarene.<sup>4</sup> Yet, all three institutions professed an amalgam of Wesleyan holiness beliefs combined with Keswick premillennial dispensational missiology.<sup>5</sup>

The second group of first generation Pentecostal missionaries was known as “Finished Work.” Conversion defined as an act of spiritual renewal removed a person’s sinful condition making Wesleyan holiness sanctification as a second act of grace redundant. Conversion and Holy

<sup>3</sup> They were John T. Butler and his wife Mary Magdalena (missionaries in 1901), Emma Goodwyn (1901), Conway Anderson (1901), Augie Holland (1902), Conway Anderson’s nephew Richard Simpson Anderson and his wife Anne Maude (1904), Effie Mae Glover (1906), Daisy Oferte (1907), Amos Bradley (1907), Carey Casey and Will Barnett (1909). The dates in parenthesis after their names signify the year they entered Guatemala.

<sup>4</sup> The Church of the Nazarene formed in 1908 and in early 1915 the Pentecostal Mission merged with the Nazarenes (Benson 1977: 182).

<sup>5</sup> The Keswick interpretation of sanctification is one of the Holy Spirit enduing a believer with “the power to service.” Originating in the annual meetings in Keswick, England in the mid-1870s this type of holiness professes the indwelling of the Holy Spirit not as an eradication of sin (according to Wesleyan holiness) but as the progressive indwelling of Christ leading a believer toward “the higher life.” This endowment of the Holy Spirit, often referred to as “Spirit Baptism,” fills the sinful believer with the Holy Spirit, a prerequisite of “securing the fullness of blessing, victory, and power.” On the Keswick view, the indwelling of the Holy Spirit suppresses sin. Believers who give themselves up to the experience of sanctification achieve victory over their carnal, sinful nature. Hence, Keswick became known as the Victorious Life or Higher Life Movement (Dayton 1980: 3–21).

Spirit baptism accompanied by glossolalia (speaking in tongues) were the foundational beliefs of Finished Work Pentecostals. In 1910, three independent missionaries, Christopher Albert Hines, his wife Inez Ruth, and her sister Della Goodrich, arrived in Guatemala supported by an Assemblies of God church in Cincinnati, Ohio.<sup>6</sup> They originated from the northeastern part of the United States. The Hineses attended the Christian and Missionary Alliance Institute in Nyack, New York, and could have been present at Nyack when in 1906–1907 a spontaneous revival broke out among students spreading across the country to Alliance churches.<sup>7</sup> This second type of Pentecostalism evolved out of non-Wesleyan theological traditions and Keswick missiology taught at Nyack (Menzies 1971: 75–7). Four future leaders of the Assemblies of God received baptism of the Holy Spirit during the Nyack revival.

In 1916, the Hineses and Goodrich welcomed, supported, and guided the second generation of Pentecostal missionaries to Guatemala, two young men, Charles Truman Furman and Thomas Pullin who arrived from Pennsylvania. The common denominator between these two generations of Pentecostal missionaries was that they attended the Christian and Missionary Alliance in Nyack. Pentecostal churches such as the Assemblies of God profess a twofold blessing of conversion and Holy Spirit baptism accompanied by tongues. Furthermore, the Assemblies of God interpret Holy Spirit baptism with evidential tongues along Keswick lines, namely, “the enduing of the Holy Spirit,” dispensational premillennialism, divine healings, and other charismatic “gifts of the Spirit.” This small group of “Finished Work” Pentecostal missionaries shared this constellation of beliefs.<sup>8</sup>

<sup>6</sup> Christopher Albert and Inez Ruth Hines were financially supported from 1918 to 1922 by an Assembly of God Church in Cincinnati, Ohio, which was part of the Eastern division of the Assemblies of God. They retired from the mission field in 1922. Receipts of financial support archived at the Flower Pentecostal Heritage Center provided to the author by Glenn Gohr, June 13, 2014 and Gloria Robinett, July 1, 2014.

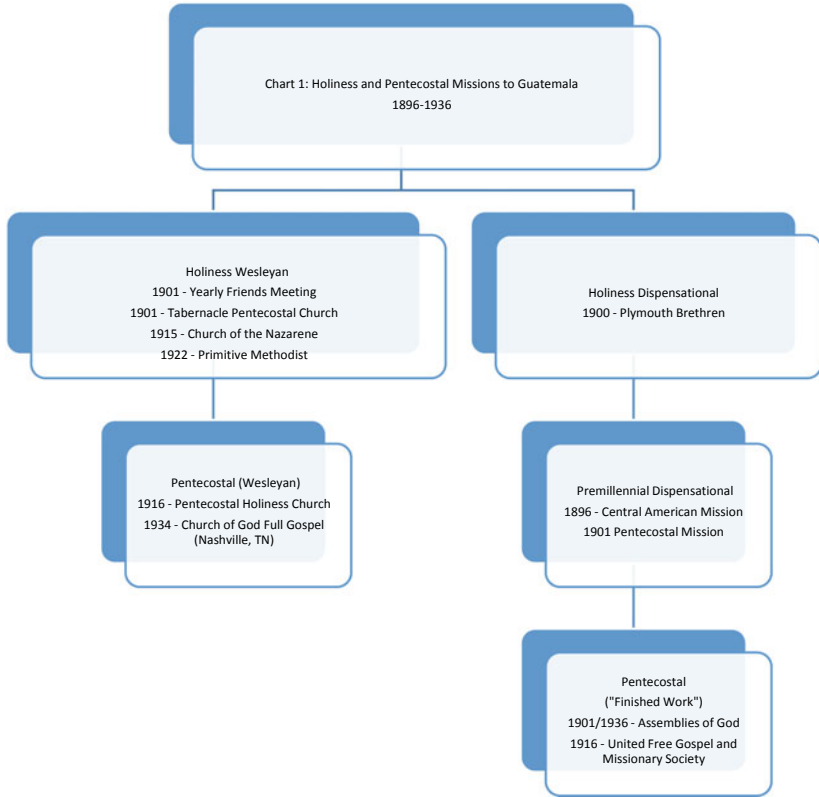
<sup>7</sup> Blumhofer (1993: 186). Ohio was a hotbed of “Finished Work” Pentecostalism, see Menzies (1971: 70–1). The Christian and Missionary Alliance in Nyack, New York, strongly influenced the organizational formation of the “ecclesiology of the Assemblies of God, the missionary vision, the emphasis on divine healing, much of its early hymnology, and even a significant portion of its leadership” (Menzies 1971: 28).

<sup>8</sup> Menzies (1971: 388). The International Church of the Foursquare Gospel formed from a schism from the Assemblies of God.

Until early 1918, a small nucleus of seven Pentecostal missionaries were serving in Guatemala.<sup>9</sup> They evangelized holiness-Pentecostalism, which professed belief in the three-fold blessing and “Finished Work” with their twofold blessing (See Chart 1). Both types of Pentecostals evangelized primarily in the northwestern departments of Totonicapán and El Quiché, the northern department of Baja Verapaz as well the eastern department of Zacapa. The three contiguous north-northwestern departments are the historic epicenter of Pentecostalism in Guatemala.<sup>10</sup> Through series of revivals originating in the western highlands, Pentecostalism quickly

<sup>9</sup> Amos and Effie Mae Bradley (holiness-Pentecostal), Christopher Albert and Inez Ruth Hines (“Finished Work” Pentecostal), Della Goodrich (“Finished Work” Pentecostal), Charles Truman Furman and Thomas Pullin (“Finished Work” Pentecostals). Conway Anderson returned to the United States in 1915 and died the following year from what appears to be yellow fever. The Bradleys, by 1916, were missionaries of the International Holiness Pentecostal Church.

<sup>10</sup> I do not discuss Pentecostal missionizing in the eastern department of Zacapa, bordering El Salvador mainly for the reason that this geographic region was evangelized by holiness denominations The California Yearly Meeting of Friends and Central American Mission, eventually to be taken over by the Central American Mission in 1918. One indication of early Pentecostal presence in the eastern region of Guatemala bordering El Salvador was the independent Canadian Pentecostal missionary Frederik W. Mebius. Since 1904, Mebius had been evangelizing in Lomas de San Marcelino, El Salvador, an area near the southwestern border of Guatemala. For some years, Mebius had been planting Pentecostal churches in the western coffee growing region of El Salvador. Guatemalans working in that region of El Salvador attended his services. Mebius soon became well-known in the Guatemalan department of Jutiapa bordering El Salvador. Mebius also made itinerant evangelistic trips to Guatemala during the years covered in this chapter, visiting the Pentecostal Holiness Mission missionary Conway Anderson in Zacapa where Mebius also met Amos and Effie Bradley in 1910. See Amos Bradley, “San Jeronimo, B.V., Guatemala, C.A.” *Bridegroom’s Messenger* 3, no. 68 (August 15, 1910): 4; Conn (1959: 134, 140–1); Peterson (1994: 38); Holland (2020). The Conways and Bradleys frequently visited the Friends missionaries in Chiquimula (the department on the southern border of Zacapa), traveling there to participate in religious activities with Friends missionaries Ruth Esther Smith and Cora Wildman, see Amos Bradley, “From Central America,” *Bridegroom’s Messenger* 2, no. 56 (April 15, 1909): 2; Amos Bradley, “From Central America: Zacapa,” *Bridegroom’s Messenger* 2, no. 42 (July 15, 1909): 4; Amos Bradley, “San Jeronimo, B.V., Guatemala, C.A.,” *Bridegroom’s Messenger* 3, no. 28 (August 15, 1910): 4; C. G. Anderson, “Central America,” *Bridegroom’s Messenger* 6, no. 127 (February 15, 1913): 2. It is certainly conceivable that Mebius traveled with Conway and Bradley to the Friends’ headquarters in Chiquimula, or visited them on his own. Around 1926, Mebius participated in one of Furman’s revivals in Totonicapán possibly characterized by glossolalia, see Hays (1972: 19). The relationship between Furman and Mebius continued with Furman traveling in 1940 to introduce Mebius to a Church of God (Cleveland, TN) representative. See, Conn (1959: 139–40).



**Chart 1** Holiness and Pentecostal missions to Guatemala 1896–1936

spread among indigenous population and by the 1950s became the fastest growing religion in Guatemala.

### 3 THE COMITY AGREEMENTS AMONG PROTESTANT MISSIONS

Protestant missions officially entered Guatemala in 1882 in the form of the mainline denomination Presbyterian Church-USA, first setting up headquarters in Guatemala City and sixteen years later establishing a

church in Quetzaltenango, the second largest city in the country.<sup>11</sup> The faith mission, Central American Mission (CAM), entered Guatemala in 1896, but not until 1899 were they able to establish a permanent presence.<sup>12</sup> CAM's home station was in Guatemala City, where the Presbyterians had their home base as well. These first two Protestant missions to Guatemala—mainline Protestant Presbyterian Church-USA and dispensational premillennial Central American Mission—differed in theological beliefs, mission strategies, and evangelizing styles.<sup>13</sup> Yet, they were similar in that they did not profess belief in the charismatic phenomenon of speaking in tongues and downplayed other charismatic phenomena such as prophesying, visions, and divine healings.

The practice of entering into comity agreements was common worldwide among Protestant missions as they moved into new geographic regions establishing missions (Rouse and Neill 1968: 353–4). Comity agreements created an oligopolistic religion market, minimizing competition by eliminating duplication and overlapping of work that, at times, led to starting churches with members from other missions. The comity agreement, by regulating the supply of religious goods, also allowed

<sup>11</sup> The Guatemalan national census of 1880 shows that Protestants were living in Guatemala prior to President Barrios' formal invitation to the Presbyterian Church. For a history of the Presbyterian Church-USA mission in Guatemala see, Bogenschild (1992).

<sup>12</sup> The first missionary, H.C. Dillon, died in El Paraíso, Honduras on July 27, 1897. His widow returned to Honduras, from where they had come thus temporarily ending CAM's presence in Guatemala, Winn (1964: 65). The CAM was a dispensational premillennialist faith mission. "Evangelical, evangelistic, and undenominational, described the policy and purpose of the Mission. Its evangelical and orthodox theology stressed the vicarious and efficacious death of Christ and salvation by faith in Christ alone. It laid great stress on the evangelization of the world, not the civilization of the world, as the important work of the church, although it was sympathetic with humanitarian movements. It was undenominational, though it sought the fellowship of all 'true believers.'" See Winn (1964: 10) and Spain (1954: 7–9). On the Keswick view, sanctification suppresses (rather than cleansed) sin through the indwelling of the Holy Spirit. Believers who gave themselves up to the experience of sanctification achieved victory ("victorious life") over their carnal, sinful nature. Some of the main proponents of this theological innovation were the Christian and Missionary Alliance (Nyack, New York), the Moody Bible Institute (Chicago, Illinois), and CAM.

<sup>13</sup> Premillennial dispensational theology holds Jesus Christ's return to earth will initiate a seven-year period of tribulation during which the anti-Christ is defeated, followed by a 1000-year period in which Christ and his followers reign on earth. Premillennialists disagree on whether believers will rise and join Jesus (an event called the "rapture") before, during or after the tribulation period.

participating missions in their comity-designated geographic territory to require up-front commitment costs such as attending Sunday school, Bible classes, worship services on a regular basis, and evangelizing. By contrast, Pentecostal churches did not enter into agreements, dispersing throughout the country directly engaging in church planting and openly competing with other Protestant missions. In the case of Guatemala, independent Pentecostal missionaries began in indigenous areas of the country learning the indigenous languages. By contrast, Presbyterian and CAM missions began in Spanish-speaking (*ladino*) urban areas. Both the Presbyterian and CAM missions had a Spanish-only policy that favored *ladino* leadership over indigenous (McCleary 2020: 350–3). These two evangelizing strategies had important implications for the growth and prominence of each mission’s presence today in the country.

The 1902 earthquake and subsequent eruption of volcano Santa María from October 24 to 26, 1902, created conditions that led up to the 1903 comity agreement. The devastating effects of this huge eruption (7.5 on the Richter scale) affected the republics of Guatemala, El Salvador, and the southern part of Mexico and the Yucatán (Eisen 1903). The departmental capital towns of Quetzaltenango and San Marcos were destroyed as well as small villages surrounding them. This included the Presbyterian Church and parsonage in the town of Quetzaltenango. The Presbyterian missionary couple stationed there immediately returned to the United States leaving the field deserted. The CAM mission, realizing the Presbyterian missionaries had left, took over the Presbyterian mission territory of Quetzaltenango and the department of San Marcos. At this point, the Presbyterian Foreign Mission Board seriously considered withdrawing completely from Guatemala. Instead, the board decided to maintain its presence in the country without plans for expansion.<sup>14</sup> To resolve differences with CAM, a comity agreement was reached reaffirming Presbyterian claim to parts of Guatemala City and the department of Quetzaltenango. CAM’s territory became areas of Guatemala City and the department of San Marcos. Reading missionary accounts of itinerate evangelizing by both these missions, it becomes clear that the comity agreement of 1903 was only strictly abided by in the region of the home base of each mission.

<sup>14</sup> “In Guatemala, the board has not sought to do more than maintain the small existing force as a testimony to evangelical religion in a land greatly needing the forces of a pure religion.” Presbyterian Church in the United States of America (1902: 262).

The parties to the 1903 agreement intentionally excluded several faith missionaries that were now evangelizing in the country who were Plymouth Brethren (entered in 1900), the Pentecostal Mission (1901), and Nickels John Holmes's Tabernacle Pentecostal Church, Greenville, South Carolina (1901).<sup>15</sup> Excluding the Plymouth Brethren, I refer to this group of Protestant missionaries as the first wave of holiness-Pentecostal missions, reflecting the theological and organizational fluidity of religion in the United States during the last decade of the nineteenth century and into the second decade of the twentieth century.<sup>16</sup>

The 1903 comity agreement excluded the Friends Yearly Meeting Society of California. The Friends entered Guatemala in 1901 itinerate evangelizing, establishing a permanent station a year later in the eastern department of Chiquimula. The Friends were a holiness denomination, financially supporting its missionaries. With no intention of setting up a station in Guatemala City, and settling in the eastern part of the country where no other mission had yet to have a permanent presence, the Friends mission did not pose any competitive threat.

<sup>15</sup> By the phrase "faith missionary" it is meant a believer affiliated with an religious organization, sometimes a fledgling denomination, who raises his or her own financial support from individuals or groups of believers, and receives not salaried position from a denomination or formal organization. Plymouth Brethren, especially the largest branch known as "open," are usually considered in the wider "baptistic" category. Most Plymouth Brethren are dispensational in eschatology as were most Pentecostals in their early days as well as Keswick holiness groups such as the Christian and Missionary Alliance and the Central American Mission. Open Brethren are usually "restorationist" or "renewalist" in ecclesiology whereas Exclusive Brethren tend to be "remnantist." See Tinder (2010: 606–10).

<sup>16</sup> Wesleyan holiness revival of the late nineteenth century in the United States with a focus on sanctification. Holiness groups sought to reinvigorate their Methodist congregations forming prayer groups while remaining members of the denomination. The holiness movement came to include members from several Protestant denominations including non-Wesleyan such as the Baptist. The holiness movement preached that entire sanctification or Wesleyan perfectionism was possible. Through a state of grace, the believer comes to live a more perfect love-filled life through a deeper commitment to Christ. According to John Wesley, sanctification was a cleansing or eradication of sin that could occur over time or instantaneously Wesley (1840: 384–91, esp. page 386, paragraph 9). The term Pentecostalism refers to the belief that the blessing of speaking in tongues (unknown) is evidence of having received Holy Spirit baptism, see Synan (1988: 219–22). Holiness-Pentecostal believers are those who profess a Wesleyan understanding of sanctification as a blessing apart from conversion. They believe in the three-fold blessing of conversion, sanctification, and Holy Spirit baptism accompanied by glossolalia.

In 1907, a second comity agreement among the Presbyterian, CAM, and the Friends missions was reached to avoid disagreements over converting each other's churches. By 1916, circumstances required a revised comity agreement. Independent Plymouth Brethren medical missionary Dr. Clayton "Carlos" Secord (whom the CAM mission mentored upon his arrival in Guatemala in 1900) established his clinic and pharmacy in the indigenous town of Chichicastenango, El Quiché. Secord extended his activities to itinerate evangelizing in El Quiché and in the department of Totonicapán.<sup>17</sup> The 1916 comity officially recognized his territory.

In 1915, the Pentecostal Mission merged to form the new denomination Church of the Nazarene. A Wesleyan holiness denomination the Nazarenes hold the doctrinal position that glossolalia is contrary to the biblical and historic position of the Christian church.<sup>18</sup> The Pentecostal Mission missionaries in Guatemala, Richard and Anne Maude Anderson, became Nazarene missionaries stationed in Cobán, Alta Verapaz. Yet, the Andersons believed in the charismatic blessing of glossolalia. In the United States on furlough in 1910, the Andersons received Holy Spirit baptism with Richard miraculously healed of appendicitis (Holmes 1920: 177). Not invited to participate in the 1916 comity agreement were Pentecostal missionaries Amos and Effie Bradley, now missionaries of the International Pentecostal Holiness Church, who evangelized in Guatemala City and the department of Zacapa. The Assemblies of God independent missionaries, Albert and Inez Hines, did not participate as well.

<sup>17</sup> The presence of the Plymouth Brethren was short lived as their one missionary, Clayton Forsythe Secord (mistaken referred to as Charles or "Carlos" Secord), who arrived in 1900 and left for political reasons in 1920. See, Hays (1972: 15). The entry "Christian Mission, England (1827)," in Dwight, Tupper, and Bliss (eds.), (1904: 161) mentions the one mission in Guatemala.

<sup>18</sup> The Pentecostal Church of the Nazarene was formed from several mergers in 1908. In 1919 the Church of the Nazarene dropped the term "Pentecostal" from its denominational name so as to clearly remain identified as holiness. See General Secretary of the Church of the Nazarene, "Minutes of the Fifth General Assembly," *Herald of Holiness* (15 October 1919, p. 7). Although Nazarenes expressed an aversion to the practice of speaking in tongues, as a denomination, it doctrinally ban the preaching of glossolalia in 1934. The denomination since the General Assembly in 1972 has consistently held against the doctrine of speaking in tongues as a sign of Holy Spirit baptism.



The removal of President Manuel Estrada Cabrera in April 1920, with the open support of the Catholic Bishop José Piñol y Batres and a broad coalition of urban political opposition organized by the urban Labor Union (*Liga Obrera*) and the Unionist Party demonstrated the ability of civil society movements to change national politics. Interim President Carlos Herrera, supported by the unionists, espoused “democratic tendencies and election rhetoric” (Kit 1993: 54–58). Several factors such as a more democratically vibrant civil society forming new political parties, cooperatives, associations, and unions; newspapers spreading information and political propaganda; the diminished presence of the Guatemalan state in rural areas; and the destabilizing effects of the Mexican Revolution just across the border contributed to activism on the part of urban and rural populations.

This growing activism, particularly in rural areas, was unprecedented and extended to Protestant congregations. Protestant lay preachers and congregants engaged in electoral campaigning were elected to public office, joined or formed Unionist political clubs on *fincas* (Bogenschild 1992: 167–8). Political engagement and activism split congregations. In some cases, lay preachers and national evangelizers sought autonomy from missionary oversight and ladino control.<sup>19</sup>

CAM’s response to increasing to the fluidity of competition was to change evangelizing strategy from one of entering a community by invitation to systematically developing a country plan of evangelization “leaving no town or village unworked” (Winn 1964: 107). The CAM in cooperation with the Presbyterian mission spearheaded a national ecumenical approach. The two missions organized the evangelization campaign of Harry Strachan and Argentinian preacher Juan Varetto (accompanied by Robert C. McQuilkin). Beginning in November 1921, the two evangelists with CAM and Presbyterian missionaries led daily prayer meetings, classes, and preached to large crowds sometimes with over 2000 in attendance. For four months, they evangelized in Guatemala City, Quetzaltenango, San Marcos, Totonicapán, Huehuetenango, and Zacapa. The departmental *jefes políticos* welcomed Strachan and Varetto with some attending

<sup>19</sup> The interrelationship between the civil movements and political mobilization of these years and the movement towards autonomy on the part of congregations is understudied, as is the heterogeneity of Protestantism in Guatemala.

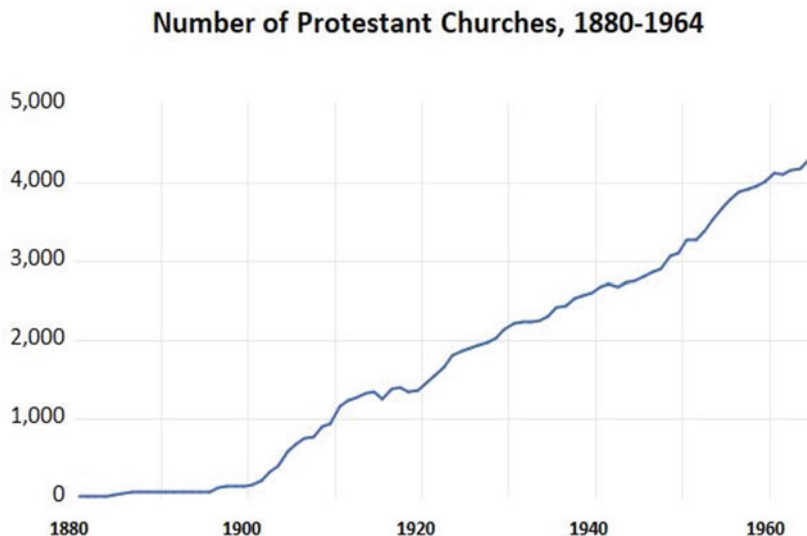
the evangelistic meetings.<sup>20</sup> In San Marcos, the local government on its own accord printed and distributed invitation fliers to the public prior to the meetings (McQuilquin 1922). Overlapping with the evangelistic campaign was the visit of Howard Dinwiddie and Leonard Livingston Legters at the invitation of CAM to assess biblical translation into indigenous languages.<sup>21</sup> While in Guatemala for several months, Dinwiddie and Legters held Keswick Victorious life prayer meetings in Quetzaltenango, Guatemala City, Chichicastenango (El Quiché), and the eastern departments of Chiquimula and Zacapa.

The entry of the Seventh Day Adventists, Pilgrim Holiness Church, Russellites, Primitive Methodists and independent unaffiliated missionaries created theological confusion among congregations as well as schisms among Presbyterian and CAM congregations. One of the more unusual schisms that typified the Protestant religion market in Guatemala was the creation of the Guatemalan church *Salas Evangelicas* by a former Presbyterian, Carlos Kramer. In 1923, Kramer left the Presbyterian Church on theological grounds, convinced by Plymouth Brethren missionary Secord that baptism by immersion, not infant baptism, was biblically correct (Bogenschild 1992: 249–51). As Fig. 1 shows, Protestant expansion gauged by number of Protestant churches began in the early 1900s and then continued through 1964.

In 1935, a final comity agreement occurred among the Presbyterian, CAM, Friends, Nazarene, and Primitive Methodist missions. It was merely a formality among the signatories carrying no enforcement. The

<sup>20</sup> The *jefes políticos* were governors assigned by the president of the republic and responsible to his office. Some *jefes políticos* were also *comandantes de armas* for the department.

<sup>21</sup> Leonard Legters and Cameron Townsend in 1930 founded a linguistic training program, Camp Wycliffe, to train missionaries and others in indigenous languages for Bible translation among minority language groups. An excellent example of the interconnected nature of the organizations and movements is the history of the formation of the Wycliffe Bible Translators. Its founder, William Cameron Townsend, was raised a Presbyterian and attended Occidental College (Presbyterian). As a student he joined the Student Volunteer Movement and after college became a *colporteur* in Guatemala for the non-denominational Bible House of Los Angeles. Townsend then became a missionary for the premillennial dispensational CAM. While a CAM missionary, the American Bible Society published Townsend's translation of the New Testament into Kaqchikel. When Townsend left the CAM to set up the Wycliffe Bible Translators, he did so with financial backing from the Pioneer Mission Agency and the Columbia Bible College in South Carolina (Svelmoe 2008: 253, 259).



**Fig. 1** Number of Protestant Churches in Guatemala, 1880–1964

presence of the Plymouth Brethren and the International Pentecostal Holiness Church ended years earlier due to the loss of missionaries. In the 1935 agreement, the CAM officially relinquished work in the department of El Quiché to the Primitive Methodist mission, which continued medical work in the form of clinics and the Good Samaritan Hospital (Hays 1972: 18, 26–9).

The four comity agreements intentionally excluded Pentecostal missionaries (See Chart 2). Independent Pentecostal missionaries Pullin and Furman were evangelizing in the departments of Totonicapán and El Quiché. Both came to affiliate with the Pentecostal denomination Church of God Full Gospel (Cleveland, TN) that officially entered Guatemala in 1934, but was not a signatory to the 1935 comity agreement. The Assemblies of God, whose missionaries were evangelizing in the country since 1910 (before the denomination formed in 1914), also were not a signatory to any comity agreements. What is important to learn from these comity agreements is that the participating foreign mission boards in the United States intentionally acted to shut out Pentecostal missionaries who openly preached charismatic gifts. Yet, those same mission boards sought

Protestant Missions, date of entry, and their Geographic Territories by Department over time.

1903—First Comity

- Presbyterians (mainline Protestant denomination, entered in 1882):  
Northern section of Guatemala City, department of Quetzaltenango
- CAM (Premillennial dispensational faith mission, entered in 1896):  
Southern section of Guatemala City, department of San Marcos

1907—Second Comity

- Presbyterians: Departments of Guatemala, El Progreso, Quetzaltenango, Suchitepéquez
- CAM: Chimaltenango, Sacatepéquez, Sololá, San Marcos, Huehuetenango, Escuintla, Santa Rosa, Jalapa, Jutiapa
- Pentecostal Mission (holiness faith mission, entered in 1901):  
Alta Verapaz, Baja Verapaz, Petén
- Yearly Friends Society (holiness denomination, entered 1901):  
Chiquimula, Zacapa, Izabal

1916—Third Comity Agreement

- Presbyterians: Departments of Guatemala, El Progreso, Quetzaltenango, Suchitepéquez, part of El Quiche
- CAM: Departments of Chimaltenango, Sacatepequez, Solola, San Marcos, Huehuetenango, Escuintla, Santa Rosa, Jalapa, Jutiapa
- Nazarene [formerly Pentecostal Mission] merger in 1915): Alta Verapaz, Baja Verapaz, Petén
- Yearly Friends Society: Chiquimula, Zacapa, Izabal
- Plymouth Brethren (Charles Secord, independent missionary, entered in 1901):  
El Quiché and part of Totonicapán bordering

1935—Fourth Comity Agreement

- Presbyterians: Departments of Guatemala, El Progreso, Quetzaltenango, Suchitepequez, part of El Quiché
- CAM: Chimaltenango, Sacatepéquez, Solola, San Marcos, Huehuetenango, Escuintla, Santa Rosa, Jalapa, Jutiapa
- Nazarene: Alta Verapaz, Baja Verapaz, Petén
- Yearly Friends Society: Chiquimula, Zacapa, Izabal
- Primitive Methodist (holiness denomination, entered 1922): Totonicapán, and part of El Quiché

**Chart 2** Four comity agreements

out and enthusiastically hired experienced missionaries who had received the Holy Spirit baptism accompanied by glossolalia. What occurred in the mission field was of little significance unless news of doctrinal heresy reached the boards in the United States.

By the 1930s, doctrinal disputes and theological confusion among the Protestant congregations were leading to schisms and the creation of national churches. Itinerate national evangelists affiliated with different missions and the missionaries themselves engaged in debates over theological points. Even some Presbyterian missionaries were preaching doctrines outside their denomination's tenets (Bogenschild 1992: 235–6). Local congregants accused each other of not following biblically based doctrine, arguing with each other and missionaries over proper interpretation. One result was that missionaries relinquished doctrinal authority over their local congregations while retaining nominal denominational affiliation. Another response was for local congregations to take the initiative and abandon their denominational affiliation in favor of another one. Often, outstations would become independent forming an autonomous national church. Yet another response was for local leaders of congregations to mix theological messages they favored disregarding all denominational orthodoxy.

#### 4 WHY THE ROMAN CATHOLIC CHURCH COULD NOT COMPETE

The liberal reforms instituted in Latin American counties during the 1800s had a persisting influence on religious diversity (Mecham 1934). In Guatemala, the liberal governments of Miguel Garcia Granados (1871–1873) and Justo Rufino Barrios (1873–1885) introduced civil liberties, among them freedom of religion, intentionally breaking the monopoly of the Roman Catholic Church. Bruce Johnson Calder describes the Roman Catholic Church in Guatemala during this period as being in a “virtual paralysis” (1970: 11). In 1871, the government exiled the Jesuits, Archbishop Bernardo Piñol y Aycinena, the Bishop of Teya Mariano Ortíz Urrútia, and two years later the governor of the Archbishopric Francisco Espinosa. Those members of religious orders remaining in the country were required to become secular priests, thereby submitting to the authority of the Guatemalan Catholic hierarchy, and by default the Guatemalan government. Prior to becoming president of Guatemala, as Minister of the Interior Barrios enacted in 1872 several anticlerical decrees abolishing religious orders (decrees number 59, 61, and 64), transferring their libraries to the national university, and nationalizing their properties

to fund a free public education system.<sup>22</sup> Upon assuming the presidency, Barrios oversaw the enactment of a new constitution in 1879, which remained in effect until 1944, establishing public education separate from religious schooling, removing the Church's juridical status, abolishing the *fuero eclesiástico* (corporate clerical privileges) and the *diezmo* (tithing), and reiterating the dissolution of religious orders and monasteries.

The western highlands where the majority of the Guatemalan population lived was accessible only by horseback, mule, or foot and visited by a Catholic priest on holy holidays such as Good Friday and Corpus Christi day. The preserving of indigenous Maya religious beliefs, practices, and institutions continued, uninterrupted from the colonial period (LaFarge and Byers 1931; Siegel 1941). Conversion to Catholicism remained ritualistic and superficial. The liberal reforms of 1829–1838 and 1871–1879 effectively left Mayan populations free from the oversight of the official Catholic Church. During the first liberal reforms (1829–1838), the Catholic Church came to rely on interim priests (*encargados*) as a means of circumventing the government's legal authority to assign priests (usually for political purposes) through the right of *patronato* (Sullivan-González 1998: 25–6). As would recur during the second liberal reforms (1871–1879), the archbishop, to enforce his interim system, required regular priests to become secular submitting to the authority of the Guatemalan Catholic hierarchy. Then a cholera epidemic swept through the country (1837–1852), killing between 40 and 60 percent of the clergy.<sup>23</sup> By 1868, the number of parish priests dramatically declined to eight (Sullivan-González 1998: 22, table 1).

With increasingly absent priests over the course of the nineteenth century, religious authority became concentrated in the community

<sup>22</sup> In 1873, the government consolidated the Church's property including those belonging to religious orders, *cofradías*, *archicofradías*, and congregations into the national treasury. The newly formed *Comisión Central de Consolidación* administered the transfer of property, revenues and accrued interest to the Treasury. In 1871 the Jesuit order was expelled from Quetzaltenango and Totonicapán (see Miller 1969) and soon after from the republic of Guatemala by decree 59, May 1872. Their properties were confiscated by the government.

<sup>23</sup> Between 1837 and 112 priests died (approximately 63 percent). At the same time, 12 priests were ordained and 6 foreign priests entered the country (Diez de Arriba 1988: 130). Sullivan-González's count is much lower. From 1829 to 1841, 35 priests died and seven were ordained. From 1857 to 1858, thirty-six clergy died representing 40 percent of the total number of priests in the country (1998: 30).

elders, shamans, and the *cofradías* who were responsible for the performance of rituals (often in syncretized form), supplying candles and flowers as well as maintaining and worshipping in church buildings. *Cofradías*, during the first liberal reforms, were decreed autonomous entities with control over their finances and activities, independent of the parish priest (Sullivan-González 1998: 52). By 1871, the *cofradías* were not only the guardians of Roman Catholicism, these brotherhoods assumed a pivotal role in the revival and expansion of syncretic Maya-Roman religion, particularly by overseeing, planning, and financing the patron saint's feast day as well as feast days on major Christian holidays (Thompson 1954: 23–4; Carmack 1979: 323; McCreery 1994: 136–8; Early 2012: 110–2).<sup>24</sup> The worship of saints became more important than the sacraments with supernatural power residing in the image itself rather than in a transcendent deity.<sup>25</sup>

Catholicism, for the vast majority of Guatemalans in the nineteenth and early twentieth century, was *in absentia*. “Fewer priests were trained and fewer spent their energies in rural parishes as the issues of the Reform heated up. In absentia, the parish priests lost their key role as the indispensable brokers between the villagers and the larger society. It became clearer to villagers that the Church was not the priest, it was the faithful, the people. In this period after Independence [1821], villages may have had greater leeway to reconstitute their ceremonial organizations and express religion in their own terms” (Chance and Taylor 1985: 22).

In 1897, Archbishop Casanova y Estrada, who was living in exile, entered Guatemala but like his successors, failed to reinvigorate the Catholic Church. The low point for church-state relations occurred with the expulsion of Archbishop Luis Muñoz y Capurón in September 1922, one month after he assumed leadership of the Guatemalan Church. President José María Orellana accused the clergy of participating in anti-government activities. Complaints received by the Vicar General of the Church confirmed the government's accusation (Holleran 1949: 208–10). A papal report investigating the events similarly concluded that the

<sup>24</sup> For a discussion of *cofradías* and their activities see, Christenson (2019). Blake D. Pattridge presents a good discussion of *cofradías* in Guatemala incorporating previous research (1995).

<sup>25</sup> John M. Watanabe phrases this point very well, “Cosmologically, Maya saints have become decidedly local personages relatively independent of the remote, almost inaccessible figure of God” (1990: 137).

archbishop and clerics had become political actors, politicizing their spiritual positions (Sandoval 2018: 30). The Archbishop and all foreign priests intervening in domestic political affairs were exiled on September 6, 1922. In the years 1925 and 1926, President Orellana imposed more restrictions on the entrance of all foreign priests as well as required governmental approval for parish appointments and other ecclesiastical posts (Diez de Arriba 1988: 344).

Statistical data on the Church during the late 1800s and early twentieth century are scant. According to one source, in 1872, 119 priests resided in Guatemala (Diaz 1932: 138–40). Data from documents in the Vatican Secret Archives and the *Anuario Eclesiastico de Centro América* show a precipitous decline in priests and parishes during the politically tumultuous decade of the 1920s. In 1920, 105 parishes existed in Guatemala with 115 priests, 70 of whom were assigned to parishes, mostly secular, with 9 that had secularized and 5 belonging to the order of Saint Vincent de Paul. The remaining 45 priests were concentrated in chapels (*capellánias*) and other churches in Guatemala City. Seven years later, the number of priests fell to 75 in country with 58 assigned to parishes outside Guatemala City.

The unexpected death of President Orellana in 1927 and General Lázaro Chacon's ascendancy to the presidency brought a slightly more favorable government approach to the Church. Chacon rescinded Orellana's prohibition on foreign priests and granted Monseñor Jorge José Caruana, Apostolic Administrator for Guatemala, permission to enter the country and take possession of the archdiocese. Among Caruana's first priorities were the reorganization of the parishes, a reunion of all the clergy in the republic, and a collection of reports from all the clergy (Diez de Arriba 1988: 450). On August 4, 1928, Pope Pius XI named the French priest Luis Durou y Sure Archbishop of Guatemala and Jorge Garcia Caballeros as bishop of the newly created diocese of Los Altos. Both assumed their positions in November 1928 thereby ending the crisis of the Catholic Church in Guatemala.

Archbishop Durou y Sure reopened the seminary in April 1929, engaged in a pastoral visit to all the parishes, and ceded the administration of the *Colegio de Infantes* first to the Salesian order and then to the Marists. Foreign orders such as the Society of Jesus soon entered the country assuming the administration of the national seminary. The Dominicans and Salesians were assigned to the northern departments (Alta and Baja Verapaces and Petén) with the plan to create a diocese in



the near future (which took place in 1935). In 1934, Archbishop Durouy Sure reported to the Vatican that there were 80 priests and 62 parishes in Guatemala.

In 1933, the Vatican appointed its first Papal Nuncio to Guatemala sidestepping the archbishop's office. Although the Nuncio had no canonical authority with regard to the bishops (his office was a diplomatic one representing the Papal office), he exerted significant influence through direct communications between the diocesan bishops and the Vatican. The decentralization of the Catholic Church into new dioceses and smaller parishes had the twofold effect of establishing direct Vatican control over dioceses as well as reducing the government's attempts to assert influence over the Church through the archbishop's office. To this end, the Vatican created (in 1921 the country was one diocese, in 1937 three dioceses), four new dioceses and one apostolic administration. The Vatican assigned bishops, some foreign, to the newly created positions.

Reducing the archbishop's ability to influence Guatemalan clergy led to creative solutions on the part of the Vatican to centralize control through the apostolic nunciature. Once the Nuncio obtained governmental permission, orders quickly entered: 1937 (Jesuits-Guatemala City), 1943 (U.S. Maryknolls-Huehuetenango), 1947 (U.S. Franciscans-Jutiapa), 1948 (Italy Franciscans-Jutiapa), 1955 (Spain Order of the Sacred Heart-Quiché, Sololá), 1955 (Belgian Congregation of the Immaculate Heart of Mary-Zacapa, Escuintla), 1959 (U.S. Benedictines-Chiquimula), and 1962 (U.S. Benedictines-Alta Verapaz).<sup>26</sup> Reintroducing foreign orders to Guatemala came with its own Vatican logic. The dioceses with foreign bishops were predominantly in the western part of the country with high indigenous populations. Those dioceses with a national bishop of the Nuncio's choice comprised the easternmost departments with predominantly ladino (Spanish-speaking) population as well as the presence of the United Fruit Company.<sup>27</sup> The Vatican concerned itself with assigning

<sup>26</sup> This is not a comprehensive list and a glaring omission are the female orders that entered Guatemala.

<sup>27</sup> The Franciscans were assigned to the eastern department of Jutiapa under the authority of the Archdiocese of Guatemala (Bacigalupo 1980: 55). In 1947, two U.S. Franciscan priests arrived in Jutiapa to begin their order's serving an estimated 200,000 Guatemalans. Two years later, they were asked to assume mission work in Santa Lucia Cotzumalguapa and Tiquisate in the department of Escuintla. Due to the scarcity of priests, they struggled and accepted the offer of the Belgian missionaries to take over the two missions (Bacigalupo 1980: 69-72).

foreign priests to the highly populated abandoned north and north-western highlands. Bringing human capital and resources from the United States and Europe, these foreign orders, including orders of religious sisters, directly improved churches, led to the construction of local bridges and roads, schools, medical clinics, and establishing credit cooperatives.

As Fig. 2 shows, using an estimated ratio of Catholics to priests for the years with available data, the Catholic Church never regained a significant number of priests to serve the Catholic population. The fall in numbers of priests from 138 in 1893 to 75 in 1927 generated a rise in the ratio from 9600 in 1892 to 26,700 in 1927. Then the recovery in the number of priests—to 165 in 1942 and 758 in 1964—led to a fall in the ratio. By 1953, the ratio had returned to the value seen for 1893. Subsequently, the ratio fell further, reaching 5200 in 1964.

Archbishop Mariano Rossell y Arellano (1939–1964), a conservative, sought to renovate the Church through the re-introduction of Tridentine Catholicism with emphasis on the sacraments and instruction of the catechesis in Spanish (Early 2012: 102; Sandoval 2018). The negatives consequences were several. First, a predominantly foreign and ladino clergy focused on administering the sacraments and enforcing orthodoxy.<sup>28</sup> Foreign priests, particularly, those assigned to areas of the north and northwestern highlands misunderstood the syncretic nature of Catholicism creating conflicts with *cofradías* and community leaders (Escaler 1974: 83–4; Pattridge 1995: 31–40). Second, instruction of catechical lessons in Spanish required memorization on the part of the indigenous communities with little understanding of the content (Early 2012: 97). Third, the Archbishop, like his predecessor, interpreted his main Protestant competition to be those missions that invested in human

<sup>28</sup> Many of the foreign priests followed collaborated with catechists of the lay organization, Catholic Action, introduced to Guatemala in 1937. Catholic Action spread to the departments of Sololá and El Quiché from neighboring Santa María Chiquimula, Totonicapán, in the early 1940s. Initial evangelization efforts by the catechists of Catholic Action established small groups focused on a conversionary experience to the ‘Catholic life’ (reading the Bible, praying, sacraments, and constructing an oratory) shifting away from syncretic Roman-Maya practices. Catholic Action focused equally on eliminating indigenous cultural aspects such as fiesta dancing, drinking alcohol, burning pom in the main aisle of the church and on religious aspects such as worshipping saints and performing rituals at mountain altars. Eliminating rural indigenous religious practices created tensions, sometimes escalating into violence, between catechists and the traditional *cofradía* system in villages, see Bruce Johnson Calder (1970), Falla (1978), Rojas Lima (1988), Samandú et al. (1990), Diócese of El Quiché (1994), Pattridge (1995), and Murga Armas (2006).



Fig. 2 Catholics per priest in Guatemala, 1880–1964

capital. The Presbyterian Mission, as well as CAM, Nazarenes, Primitive Methodists, and Friends had schools, printing presses, church buildings, and the Presbyterians had one of the few modern medical facilities in the country (McCleary and Barro, 2019). In order to increase the number of Guatemalan priests attending the newly reopened seminary, the Archbishop had to find the funds and staff for primary and secondary religious schools that would educate future clergy.

Rossell y Arellano implemented a return to a centralized “Romanized vision and agenda” with the performance of the sacraments and preaching a Eurocentric morality, in short, a ladino religious-civic uniformity that relied on the clergy to carry out the doctrinal reform (Sandoval 2018: 61, 65). By contrast, the Protestant missions were independent of each other, their presence scattered throughout the country with their own doctrinal approaches, rituals, missionaries, funding, and evangelizing strategies. Unlike the centralized Catholic Church imposing top-down doctrinal orthodoxy, Protestant missionaries were introducing theological heterodoxy and heterogeneity by evangelizing throughout the country, often overlapping, hosting evangelizing campaigns.

## 5 HOW U.S. MISSION BOARDS ENCOURAGED DOCTRINAL HETEROGENEITY

Among holiness and Pentecostals believers, doctrinal controversies arose over the nature of sanctification, the trinity, adult or infant baptism, divine healing in atonement, and the use of medicines causing disunity and schisms.<sup>29</sup> Divorce and remarriage were highly contentious issues.<sup>30</sup>

<sup>29</sup> The debate over sanctification was discussed in the previous section. The trinity was brought into questions by the “oneness” doctrine which held that Jesus was the one name for the Father, Son and Holy Ghost, requiring rebaptism “in Jesus’ Name” as the only correct New Testament interpretation of that event. The doctrinal dispute led to schisms from the Assemblies of God, creating several Oneness Pentecostal churches among them the General Assembly of the Apostolic Assemblies and the Pentecostal Assemblies of the World, see Menzies (1971: 318–9); Blumhofer (1993: 221–39). The controversy over divine healing centered on whether human remedies should be used in conjunction with divine healing. The Congregational Holiness Church split from the Pentecostal Holiness Church over its willingness to allow medicine, see Campbell (1951: 277). For a brief discussion of the Church of God (Cleveland, TN) position, see Conn (1977: 76).

<sup>30</sup> Evangelist Aimee McPherson left the Assemblies of God over that denomination’s strict stance on divorce and remarriage. McPherson went on to found the International Foursquare Gospel Church, see Menzies (1971: 170, n34). On the official divorce stance

During the second decade of the twentieth century, doctrinal tenets became defined and codified in the creeds and disciplines of the major holiness and Pentecostal denominations in the United States.<sup>31</sup>

As newly formed holiness and Pentecostal denominations initiated foreign missions, they sought out experienced missionaries, placing them on salary. Independent missionaries preferred salaried appointments and denominations favored these experienced missionaries. To this mutually beneficial end, during the first three decades of the twentieth century, missionaries minimized, and at times blatantly disregarded, denominational doctrinal positions, resulting in accusations of heresy as well as doctrinal heterogeneity in foreign mission fields. Cases of heresy highlight the doctrinal fluidity of the religion market in the United States during the first decades of the twentieth century. This doctrinal fluidity conveyed to the mission field and played a significant role in the nature of the Guatemalan religion market.

The first case of heresy was a charge brought against Amos Bradley in August 1919.<sup>32</sup> While attending the first annual camp meeting of the Pentecostal Holiness Church in Franklin Springs, Georgia, Bradley was accused by Francis M. Britton of being a “Finished Work” believer rather than a holiness-Pentecostal.<sup>33</sup> The denomination expelled Bradley

in Pentecostal Holiness Church, see Campbell (1951: 251, 261–2) and in the Church of God (Cleveland, TN), see Conn (1977: 83–4).

<sup>31</sup> Synan (1971: 141–63). An exception is the Church of God (Cleveland, TN) discussed later in this chapter. The General Assembly of the Church of God issues “Teachings” on doctrinal issues and lifestyle choices such as alcohol and tobacco use. Not until the 1948 did this denomination issue a Declaration of Faith, see Conn (1977: 278–9). The holiness denomination of the Church of the Nazarene formed in 1908 during this period in the United States (Smith 1962).

<sup>32</sup> The “Biography of Rev. and Mrs. Bradley,” p. 5, states that the incident occurred in January 1919. This cannot be the case as a general official board meeting occurred at Franklin Springs during January 8–9, 1919. Bradley was not an officer of the denomination and would not have attended. The official minutes of this meeting make no mention of a heresy charge being brought against Bradley by Britton. This would have been a serious omission given that the minutes mention Britton requesting that Miss Bertha Coffee be investigated for her “spiritual experience in regard to the baptism of the Spirit.” A.E. Robinson, General Secretary, “General Official Board Meeting,” *The Pentecostal Holiness Advocate* 2, no. 39 (January 30, 1919): 7, 9–10; Canavesio (2005: 5).

<sup>33</sup> “One work” refers to “finished work” in that sanctification occurs at conversion. “Biography of Rev. and Mrs. Bradley,” 5. A brief discussion of the first Franklin Springs Camp Meeting can be found in Campbell (1951: 276).

for “being out of harmony with the teachings set forth in the basis of Union and General Rules” (Pentecostal Holiness Church 1918: 7–8).<sup>34</sup> The charge of heresy brought against Bradley occurred within the U.S. religious context while he was on furlough. The charge itself had no bearing on the nature of his evangelizing activities as a preacher or missionary. The basis of the heresy charge did not come from those in the mission field. From all accounts, Bradley was tolerant of others’ beliefs and supportive of their missionary activities. Bradley felt unjustly accused, defending himself only to say that his calling came from God, not the church, and he was not reconciling that quickly with the denomination.

In July 1922, the Bradleys became the second Primitive Methodist missionary couple in Totonicapán, Guatemala. Wesleyan holiness denomination, the Primitive Methodist foreign missions board was actively looking for experienced missionaries to serve in their new mission field of Guatemala.<sup>35</sup> Retiring Assemblies of God missionaries Christopher Albert and Inez Ruth Hines (“Finished Work” Pentecostals) had just sold their Totonicapán property to the Primitive Methodist Church and recommended the Bradleys (Hays 1972: 16). The Bradleys, holiness-Pentecostals, were now missionaries for a Wesleyan holiness denomination that doctrinally rejected all manifestations of glossolalia. Furthermore, they were now responsible for “Finished Work” congregations in Totonicapán founded by the Hineses, Assemblies of God missionaries.

Of the first generation of holiness-Pentecostal missionaries to Guatemala, Amos and Effie Bradley exemplified the fluidity of holiness and Pentecostal beliefs without rigid adherence to either theological grouping. Glossolalia, for the Bradleys, was a charismatic manifestation not limited to Holy Spirit baptism but a sign of God’s indwelling in subsequent manifestations. The Bradley’s institutional affiliations over the course of their lives exemplified the fluidity of holiness-Pentecostal beliefs in the United States. Both Amos and Effie Bradley began their

<sup>34</sup> Given Britton’s stature as a former assistant general overseer of the Fire-Baptized Holiness Church general, and his leadership role as treasurer of the Pentecostal Holiness Church’s General Mission Board, this accusation against Bradley carried institutional gravitas (Conn 1988: 99; Campbell 1951: 262). Bradley was not present at the denomination’s annual conference in November 1918 when the judiciary committee took up his case.

<sup>35</sup> In 1917, the Primitive Methodist Church in the United States decided to begin their own missions rather than supporting the mission of the British Primitive Methodist Church. Hays (1972: 6, 17).

evangelizing education at the Holmes Bible Institute (which became holiness-Pentecostal merging with the Pentecostal Holiness Church). Amos and Effie spiritually were influenced by the Pentecostal Mission (Wesleyan holiness). They later became missionaries of the Pentecostal Holiness Church (holiness-Pentecostal) and the Primitive Methodist Church (Wesleyan holiness). Their institutional affiliations demonstrate that even though by the 1920s doctrinal lines were drawn between Wesleyan holiness and holiness-Pentecostal denominations in the United States; the Bradleys in their capacity as missionaries were not forced by those denominations to make doctrinal choices. The Bradleys in their spiritual orientation were doctrinally Wesleyan holiness and they, like others from the southern holiness movement, incorporated within that theological tradition Pentecostal beliefs.<sup>36</sup>

The second charge of heresy was raised against Charles Truman Furman who was a “Finished Work” Pentecostal. As mentioned earlier, in 1916, Furman and Pullin arrived in Guatemala as missionaries of the independent Pentecostal association of the United Free Gospel and Missionary Society, Turtle Creek, Pennsylvania.<sup>37</sup> In 1902, Frank J. Casley founded the Free Gospel Church of Turtle Creek. Frank, ordained in 1905 at the Christian and Missionary Alliance, Nyack, New York, and his brother Will Casley, were known as “rough-and-ready” evangelists proselytizing premillennial dispensational theology in various parts of Allegheny County, Pennsylvania (Menzies 1971: 157). When the Pentecost movement reached their congregations in 1906, the Casley brothers received the Pentecost experience. In May of 1916, they founded the United Free Gospel and Missionary Society.<sup>38</sup> That same year, Furman

<sup>36</sup> In June 1930, due to Effie’s poor health, the Bradleys left the mission field. See, “Central America,” *Bridegroom’s Messenger* 23, no. 276 (April-June 1930): 13. As H. Vinson Synan points out, “Finished Work” Pentecostalism was not well received in the south (Synan 1997: 152).

<sup>37</sup> The United Free Gospel and Missionary Society, an independent Pentecostal church, was founded in 1905 by two brothers, Frank and William Casley, who were strongly influenced by the Christian and Missionary Alliance placing an emphasis on missions. Similar in doctrine to the Assemblies of God, the Society changed its name in 1957 to the Free Gospel Church, see Warner (1988: 315).

<sup>38</sup> By 1916, the Casley brothers had the following congregations in Pennsylvania: Vandergrift, North Side Pittsburgh, Braddock, Turtle Creek, Pitcairn, Glassport, Horning, Jeannette and Clairton. These congregations would later become part of the Assemblies of God. August 14, 2017, <http://www.ag100stories.org/clairton.html>.

and Pullin became missionaries of that newly founded Pentecostal society. During his first assignment as missionary in Guatemala (1916–1920), Furman along with Pullin, moved to Santa Cruz del Quiché in a strategic attempt to take over southern El Quiché left vacant when Secord exited the country suddenly. However, the CAM quickly sent their missionaries to occupy Secord’s property in Chichicastenango and assume responsibility for his congregations and evangelizing routes.<sup>39</sup>

In 1921, due to lack of financial support from the United Free Gospel and Missionary Society, the Furmans did not return to the mission field.<sup>40</sup> The Primitive Methodist Church, headquartered in Pennsylvania, learned of the Furmans, through the Hineses. In January 1922, Charles and Carrie Furman became the first Primitive Methodist missionaries to Guatemala (Furman n.d.: 4; Pullin n.d.: 23; Hays 1972: 6–7, 15–9). The Furmans settled in Santa Cruz del Quiché where Pullin, who remained with the United Free Gospel and Missionary Society, was stationed, thereby renewing their practice of evangelizing together. The United Free Gospel and Missionary Society (“Finished Work” Pentecostalism),

<sup>39</sup> Secord gives an account of his work in Chichicastenango (Pierson 1907: 188–91). A supporter of President Manuel Cabrera who was forced to resign his office on April 15, 1920, Secord suddenly left the country leaving his mission area open for other missionaries to take over. Abram Benjamin and Louise Treichler, missionaries with the Central American Mission, quickly moved to Chichicastenango to take over Secord’s territory. See Dahlquist (1995: 17). This move on the part of the Central American Mission was to be expected. Central American Missions’ first missionary to Guatemala, Albert Edward Bishop, had welcomed Secord to Guatemala when he first arrived in Guatemala. Bishop These two words need to be unbolded. mentioned that Secord was preaching for their mission even to the point substituting for a missionary. See “A. E. Bishop,” *Central American Bulletin* 6, no. 4 (October 15, 1900): 6–8. For about three months, Secord worked alongside Bishop in Guatemala City before traveling to Santa Cruz del Quiché and then to the indigenous town of Chichicastenango where he set up permanent residence, Miss Fannie C. Buck, “The Indians of Guatemala,” *Central American Bulletin* 8, no.1 (January 15, 1902): 7–8, and J. G. Cassel, “A Trip into West Guatemala,” *Central American Bulletin* 8, no. 2 (April 15, 1902): 5–6. Secord was treated by the Central American Mission as if he were one of their missionaries and the *Central American Bulletin* contained regular reports on Secord’s activities. Secord’s mission station in Chichicastenango was considered part of the Central American Mission with missionaries staying with Secord for weeks, preaching, and going with him on itinerant evangelizing trips to surrounding towns. See “Guatemala,” *Central American Bulletin* 9, no.1 (January 15, 1903): 11. It appears that the Central American Mission’s quick occupation of Secord’s territory was done unilaterally without discussion among those missions who were members of the 1916 comity agreement.

<sup>40</sup> Furman (n.d.: 4).



learning of the cooperation between Pullin and Furman, officially ordered Pullin to move north to Nebaj, El Quiché, an unproselytized territory. It is important to note that Pullin referred to the ordered separation as “only in distance, however, for our fellowship and doctrine remained the same” (Pullin n.d.: 23).

Northern El Quiché now became “Finished Work” Pentecostal territory just as the department of Totonicapán was “Finished Work” Pentecostal domain. As mentioned earlier, the Bradleys in 1922 were assigned by the Primitive Methodist Church to evangelize in the historically “Finished Work” Pentecostal territory of Totonicapán. Doctrinal heterogeneity was bound to result from holiness-Pentecostal missionaries evangelizing in historically “Finished Work” churches. Furman, a “Finished Work” Pentecostal, was assigned to southern El Quiché, a territory originally evangelized by Plymouth Brethren missionary Secord and CAM missionaries of premillennial dispensational theology.

In joining the Primitive Methodist Church, Furman accomplished what he was unable to accomplish as a Pentecostal missionary. Furman legitimately gained control of the evangelizing territory of southern El Quiché as well as securing a Pentecostal colleague in Bradley who now controlled Totonicapán. To the north of Furman was his former companion Pullin, a “Finished Work” Pentecostal missionary. Soon other Primitive Methodist missionaries arrived who observed Pentecostal beliefs professed and practiced among their congregants (Wolf 1971: 6). Two representatives of the Primitive Methodist Board visited the Furmans in Guatemala to resolve the “Pentecostal Issue.” The Furmans were denominationally constrained from evangelizing and teaching Holy Spirit baptism accompanied by glossolalia (Pullin n.d.: 48–9). They resigned in 1927.<sup>41</sup> The year he left, Furman had congregations in the surrounding towns of San Pedro Jocopilas, Chiché, Chiniqué, Chichicastenango, and Patzité. On horseback, Furman preached in these towns in a day’s trip circling around Santa Cruz del Quiché. The Bradleys (holiness-Pentecostal) relocated to Chichicastenango and assumed responsibility for those congregations until their retirement in 1930 as Primitive Methodist missionaries.<sup>42</sup>

<sup>41</sup> J. H. Ingram, “Report of the Guatemala Mission Turnover in Central America,” *Church of God Evangel* 26, no. 14 (June 1, 1935): 12–13; Hays (1972: 19).

<sup>42</sup> “Biography of Rev. and Mrs. Bradley,” p. 7.

In the fall of 1929, the Furmans returned to Guatemala as Primitive Methodist missionaries with a verbal agreement that they would not preach Holy Spirit baptism. Less than two years later, in April of 1932, Furman participated in a revival led by the Guatemala evangelist José María Enríquez in the small town of San Cristóbal Totonicapán.<sup>43</sup> Holy Spirit baptism accompanied by speaking in tongues occurred, thereby countering the official Primitive Methodist position. The revival continued for several days spreading to congregations in surrounding indigenous towns as well into the evangelizing territories of other missions. The Presbyterian missionary stationed in Quetzaltenango sent a letter to the Primitive Methodist Church complaining about the revival. Furman, in one of his regular reports to the mission board, mentioned the revival with numerous conversions and Holy Spirit baptisms accompanied by evidential tongues.<sup>44</sup> Furman was confident that “in pouring out the Holy Ghost the Lord simply ignored their man-made rulings and geographical boundary lines [referring to the other missions and their comity agreement] and we just took it for granted that he set us free from them and we also ignored them” (Furman n.d.: 10).

In 1934, on furlough in Pennsylvania, the Primitive Methodist foreign mission board asked the Furmans to sign a doctrinal statement (“code of ethics”) (Hays 1972: 19; Pullin n.d.: 51–2; Conn 1959: 135; Furman n.d.: 6). From their perspective, the Furmans believed they had been transparent with the Primitive Methodist board regarding their “Finished Work” Pentecostal beliefs. They refused to sign the doctrinal statement, remaining in Pennsylvania. In June of that year, while the Furmans were in the United States, James Henry Ingram, missionary ambassador for the Church of God, arrived in Guatemala (Humphrey 1966: 64–73). He traveled to Totonicapán where he visited national pastors and their congregations. Upon his return to the United States, Ingram

<sup>43</sup> This town sits at a major intersection of roadways connecting east–west San Miguel Totonicapán with Quetzaltenango, the second largest city in Guatemala, and the Pan-American highway running north–south. Amos Bradley gave an account of the revival, mentioning that an indigenous evangelist led the revival days later. “A Missionary Journey in Guatemala,” *Bridegroom’s Messenger* 26, no. 286 (August 1, 1932): 6.

<sup>44</sup> Furman mentions that the Presbyterian missionary sent a letter to the Primitive Methodist Church foreign mission board complaining of the revival. The revival moved into Presbyterian territory, violating the comity agreement among the Protestant missions, even though the Pentecostals were not party to the comity agreement and disregarded it., see Furman (n.d.: 7).

wrote to Furman asking him to represent the Church of God (Cleveland, TN) in Guatemala. Furman accepted and on December 29, 1934, he and his wife sailed on the steamship *Cuzco* to Guatemala. Upon returning to Guatemala, two-thirds, or 14 churches, of the Primitive Methodist mission joined Furman and the Church of God.<sup>45</sup> The Primitive Methodist Church reached an accommodation signing over church property in the towns of San Cristóbal, Chuicacá, and Paquí, all in the department of Totonicapán, to the Church of God.

The irony of the situation was that Furman was theologically a “Finished Work” Pentecostal. The Church of God is a holiness-Pentecostal denomination, formed in western North Carolina and eastern Tennessee out of a Wesleyan holiness movement, professing belief in entire sanctification (separate from conversion) (Conn 1977: 3–12; Synan 1971: 80–2). The Church of God began as a Baptist reform movement, evolving into a holiness and then a holiness-Pentecostal denomination. The Furmans did not believe in the holiness-Pentecostal three-fold blessing (conversion, sanctification, and Holy Spirit baptism) but, rather, the “Finished Work of grace” (conversion and Holy Spirit baptism with glossolalia).

Records and histories of the Church of God do not refer to theological disputes arising between the Furmans and their denominational mission board. Quite to the contrary. The Church of God during the 1930s (the time-period the Furmans joined) was experiencing “diversity and controversy” among its members on the nature of sanctification. “Finished Work” believers were advocating sanctification as “finished” within the membership of the Church of God, which professes the Wesleyan view of sanctification as a defining second blessing. Rather than resolving the controversy with a doctrinal statement (creed or declaration of faith) thereby producing a schism among its members, the General Assembly postponed any decision so as “to keep the unity of the Spirit in the bond of peace, till we all come in the unity of the faith” (Roebuck 1998: 5). For this reason, the Church of God accepted the Furmans without raising any doctrinal issues, as the Primitive Methodists previously had done.

The Furmans and Pullins encountered direct competition from the Assemblies of God who primarily evangelized to *ladinos* in the eastern

<sup>45</sup> Hays (1972: 19); Conn (1959: 136). A letter of withdrawal from the pastors and elders of the congregations in J.H. Ingram, “A Report of the Guatemalan Mission Turnover in Central America,” *Church of God Evangel* 26, no. 14 (June 1, 1935): 12.

part of the country, losing churches to them.<sup>46</sup> The Assemblies of God, like the Presbyterians, CAM, and Friends evangelized in Spanish to ladino populations. As a result, their indigenous church growth was small, attracting only those indigenous populations that were ladino-oriented and bilingual (Lloret 1976: 195–7).

The Church of God sought out experienced missionaries who spoke Spanish, including the former Assemblies of God missionaries Albert and Inez Hines, whom the Church of God approached about the possibility of affiliation, but they never accepted.<sup>47</sup> Furman continued to work with his friend Pullin who, in early 1944, joined the Church of God, bringing all his “Finished Work” churches into the denomination. The two men actively evangelized among the K’iche in the departments of Totonicapán, El Quiché, and to a lesser extent in Quetzaltenango. Furman passed away in 1947, and Pullin continued as the superintendent of the Church of God work in Guatemala.<sup>48</sup>

Beginning in the 1940s, the Church of God began an aggressive evangelizing campaign among ladinos. A revival occurred in Guatemala City in 1943. An intense schedule of revival services during the 1940s and 1950s resulted in thousands of conversions and a fifty percent growth in membership between 1950 and 1954 (Teague 1966: 74; McCleary 2020: 356–7).

The congregations of southern El Quiché and Totonicapán, over the course of the first decades of the twentieth century received a diversity of theological messages from Plymouth Brethren, holiness-Pentecostal, “Finished Work” Pentecostal, Assemblies of God, the CAM, Primitive Methodists, and Church of God missionaries. Doctrinal debates and controversies occurred among the missionaries and with their mission boards in the United States. With few if any archival records of those decades on the part of congregations and national leaders, we will not know their interpretations of the various doctrines preached or the heterogeneity of beliefs resulting from the comingling of these theological traditions.

<sup>46</sup> In 1939, a Church of God congregation in the eastern part of Guatemala was won over by the Assemblies of God (Teague 1966: 63, footnote 5).

<sup>47</sup> J.H. Ingram, “Missions and Missionaries: Spanish Mission Report,” *Church of God Evangel* 25, no. 46 (January 23, 1935): 11–12.

<sup>48</sup> Pullin (n.d.: 60–1) and Conn (1959: 137–8). Pullin retired from the mission field in 1958.

## 6 THE LEGACY OF HETERODOXY

In this chapter, I have sought to show that the missionaries themselves introduced Protestant doctrinal heterodoxy to Guatemala's religion market. Through their open market approach to evangelizing, they and their national leaders evangelized crisscrossing each other's territory. Mission boards of newly formed denominations sought out experienced missionaries downplaying doctrinal differences.

A major legacy of the doctrinal heterodoxy introduced by missionaries and U.S. denominational mission boards is the highly schismatic nature of the Protestant religion market in Guatemala. The introduction of theological heterodoxy had the unintended consequence of contributing to heterogeneity through generational schisms that continue today. Initially, schisms occurred when a national pastor sought autonomy from mission or denominational oversight (Pullin n.d.: 63, 1). Doctrinal disputes occurred and when they did, they were often resolved through schisms rather than substantive debates over beliefs. Schisms also took place over issues of loyalty to a respected elder of the church. When an elder left to join another church, family members and those within the respected elder's clientelistic network followed. Another sociological process of schisms is the "two-man feud" where two members of a church seek to gain prestige and influence through each developing their own clientelistic network (Mayers 1966). This occurred with Iglesia Evangélica El Calvario, founded in 1948 by independent Baptist missionaries the church quickly evolved into a denomination. By the early 1960s, Pentecostal beliefs entered El Calvario's congregations with several schisms occurring. By 2003 two brothers, Abraham Castillo who headed the denomination and Job Eliú who pastored the central church in Guatemala City, fought over the denomination's properties. As with this case, schisms at times occur over finances and properties. By 2009, the denomination El Calvario split with each brother retaining his loyal followers.

Another context in which schisms occurred was in the aftermath of the 1976 devastating earthquake. With Protestant denominations bringing aid in the form of medical personnel, food, clothing, housing materials, and volunteer work crews, the attraction of garnering resources created

several schisms.<sup>49</sup> Schisms also take place when a member within a church disagrees with the existing church leadership over succession issues. This type of schism commonly occurs upon the death of the founder as in the case of Ministerios Elím.<sup>50</sup>

Finally, a topic for future research is schisms among the neo-Pentecostal megachurches in Guatemala City that formed in the 1990s. The ‘superstar’ pastors of neo-Pentecostal megachurches nationalize, as well as internationalize, the brand of his church’s message by offering leadership workshops advertised on television and radio. Adherents from denominations and churches come from around the country and Central America to attend the leadership workshops. In the economics of organizations literature, a single manager, much like a movie star, can play a critical role in organizational productivity (Mollick 2012; Lazear et al. 2015). This argument extends to religious denominations and churches. Large neo-Pentecostal megachurches in Guatemala City have grown into the tens of thousands, and their ‘superstar’ pastors such as Jorge H. Lopez of *Fraternidad Cristiana de Guatemala*, Luis Fernando Solares of *Familia de Dios*, Rony Madrid of *Vida Real Iglesia Cristiana*, and Cash Luna of *Ministerios Cash Luna* are widely viewed as essential to their megachurches’ successes. These churches are technology-savvy, extending their presence through cable satellite churches in urban areas and around the country. Workshop participants seek to gain skills so as to emulate the success of these “superstar” megachurch pastors. The nondenominational nature of the workshops, their affordability, and targeted training on church building as a business is more attractive than attending seminaries and Bible institutes. Schisms in denominations often occur once participants acquire leadership and organizational skills from these megachurch workshops and seek to make a name for themselves independent of their former religious affiliation.

<sup>49</sup> Interview with Steve and Elaine Elliott, August 11, 2011, Antigua, Guatemala; interview with Nery Lopez, President of *Presbiterio Metropolitano*, August 24, 2011, Guatemala City, Guatemala.

<sup>50</sup> *Ministerios Elím* was founded in 1973 by Othoniel Ríos Paredes whose parents were members of the CAM. Paredes left his medical practice to found *Elím* after attending a revival led by the Argentine Fernando Vangioni, who was in Guatemala in 1972 as part of the Billy Graham Crusade. Upon Paredes death, in 1979, two *Elím* pastors, who disagreed on the selected head of the denomination, took several congregations to form a new denomination *Ministerios Palabra MI-EL*. Several schisms have subsequently occurred among *MI-EL* congregations.

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# The Expansion of Public Education in Puerto Rico after 1900

*Matthew Curtis and Mateo Uribe-Castro*

## 1 INTRODUCTION

Latin American countries made a substantial progress in their educational outcomes around the beginning of the twentieth century. As with many other indicators of development, there was significant variation in the pace at which the literacy rate progressed across different countries. Argentina and Uruguay led the way. In 1900, around half of their population over 10 years old knew how to read and write. Other large countries like Mexico and Brazil had literacy rates just above 20% in 1900 and only slowly managed to catch up during the first half of the century.

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Most countries, however, laid somewhere in between (Bulmer-Thomas, 2003); (Engerman and Sokoloff, 1997).

Puerto Rico started from a particularly low literacy rate. The 1899 Census reported an overall literacy rate of 16.6%. Approximately 18.3% of the adult population were literate, placing Puerto Rico near the bottom of Latin American countries at the turn of the century (Sanger et al., 1901); (Núñez, 2005). However, it also showed some of the fastest progress, with an increase of literate population over 10 years old to 33.7% by 1910. During the next couple of decades that figure doubled. In the 1930 census, 57.6% of people in the same demographic declared they knew how to read and write.

Puerto Rico was also an outlier when it came to political economy. It became a formal colony of the United States in 1898 after the Spanish-American war. It then experienced several decades of American colonial rule until 1947 when the island's inhabitants gained the right to elect the governor (though neither independence nor US statehood; Puerto Rico is in a legal gray area as an organized but unincorporated US territory). During this time, Puerto Rico experienced rapid economic growth, measured using national accounts (Devereux, 2019) and anthropometric evidence (Godoy et al., 2007); (Marein, 2020). Part of the economic dynamism from the early twentieth century was driven by the export of agricultural commodities. The island developed its sugar production, complementing the coffee cultivation which had been a staple during Spanish rule. However, as in other countries in Latin America, improvements in education, growth, and trade hide significant geographic variation that is key to understanding the patterns of economic development (Maloney and Valencia Caicedo, 2016).

This chapter explores the main local trends in education in Puerto Rico during the first half of the twentieth century. Because of the United States colonial administration, the island has better historical information than other countries at similar stages of development. This chapter takes advantage of newly digitized yearly reports from the Governor to the United States government and the decennial Census of Population in 1910, 1920, and 1930. We use them to build a panel database of counties (*municipios*) between 1907 and 1943, which allow us to compare how school enrollment changed over time and to document differential trends by the level of urbanization and by the agricultural specialization of each county.

Overall, Puerto Rico started the twentieth century with around 20% of children of school age enrolled in school. By 1945 that figure went up to

around 50%, with significant geographic variation. After the imposition of US control, the number of children enrolled in elementary school grew rapidly until 1915, both in urban and in rural schools alike. However, around a third of the progress that was made between 1904 and 1915 was reversed by 1920. The subsequent two decades saw very limited growth in capacity but a shift toward more urban schooling, especially in highly populated counties. Such increase in capacity was not entirely followed by increases in the most basic learning measure: literacy rates. We combine data from the reports of the Governor and literacy data from the Census of Population. The growth in rural schooling has a modest positive correlation with literacy rates. However, we show that counties that expanded their schooling capacity the fastest between 1910 and 1930 are not the ones with the fastest growth in literacy.

The expansion of public education also depended on the type of crop produced in each county. Investments in education relied partly on local finances. Since sugar exports brought more revenue to producer counties, sugar counties increased their enrollment rate faster than coffee counties during the first decade of US control (Bobonis and Toro, 2007). Coffee counties caught up by 1920, but the gap widened again during the 1930s and early 1940s. This difference in long-run trends between coffee and sugar counties is especially striking for urban schools.

While capacity was driven by fundamentals like local finances, demand for schooling fluctuated quite dramatically in the short run. For instance, between 1915 and 1918, enrollment dropped by about 25% in coffee counties. Using our enrollment panel data and international commodity price data, we compare how school enrollment and attendance responded to increases in crop's export revenues in a county that specializes in sugar production versus one that specializes in coffee production.

Puerto Rico did export other crops besides coffee and sugar. In 1910, for example, Puerto Rico exported sugar worth \$24 million (nominal USD), tobacco products worth \$6.8 million, coffee worth \$5.7 million, and tropical fruit (oranges, pineapples, coconuts, etc.) worth \$1.9 million (Annual Report of the Governor of Puerto Rico, 1901). However, we focus on coffee and sugar for three reasons. First, the areas suitable for tobacco and fruit cultivation were less geographically distinct than coffee and sugar (Wilson, 1899). Second, while coffee and sugar were homogeneous commodities with a single price, tobacco was exported as cigars, cigarettes, tobacco leaves, and scraps. Likewise, while fruit was an important category of exports, specific crops had relatively small shares. Third,

tobacco processing was an important manufacturing industry on the island. While sugarcane was refined in mills, it lost value if not transported quickly or processed close to the plantation (Bergad, 1978). Therefore, sugar price variation likely had a more localized effect than that of tobacco price variation.

This exercise is useful for two reasons. First, the way coffee and sugar were produced is different. Sugar production was characterized by strong economies of scale, which generated larger farms than those used for coffee cultivation (Bobonis and Morrow, 2014). Second, farmers in the island were price takers in coffee and sugar markets, which allow us to use changes in the international world price of commodities to proxy for local prices.<sup>1</sup>

In sugar counties, increases in the export revenue of sugar led to increases in enrollment and attendance rates. However, when the export revenue for coffee went up, school enrollment in counties that specialize in that crop went down. Why did increases in agricultural income have such different effects on investments in human capital? When export revenues increase, workers involved in sugar production have higher wages so they can afford to send their children to school. While this effect is also present in coffee areas, coffee farms tend to be smaller farms with no economies of scale. Moreover, since picking coffee cherries and cutting sugarcane require very different skill and strength levels, coffee is more amenable for child labor than sugar. Therefore, when coffee revenues increase, the opportunity cost for a family of not sending their children to school also increases. This chapter provides evidence that this substitution effect dominates for coffee areas, while the income effect dominates for sugar areas.

The negative relationship between coffee price shocks and education has been explored historically for the cases of Colombia (Carrillo, 2019); (Uribe-Castro, 2021) and Puerto Rico during the Spanish period (Bobonis and Morrow, 2014), as well as contemporaneously for the case of Brazil (Kruger, 2007); (Duryea and Arends-Kuenning, 2003). This chapter highlights that such relationship depends on the specific production technology of coffee that easily employs child labor. The

<sup>1</sup> It should be noted that Puerto Rico was operating within the US tariff system, with sugar receiving a protective tariff and coffee not. However, there is more variation in international prices than in the tariff rate, and local farmers effectively had no control over either.



comparison between coffee and sugar is useful to understand other mechanisms through which export price changes can affect the accumulation of human capital (Musacchio et al., 2014); (Atkin, 2016) and to highlight that the specific production functions of commodities can shape the development path different areas take (Bustos et al., 2016); (Droller and Fiszbein, 2019). More generally, understanding differences in education outcomes across and within countries is crucial to understand long-term development (Porzio et al., 2020); (Valencia Caicedo, 2019); (Gennaioli et al., 2013).

This chapter also provides context to the rise in public schooling in Latin America. The United States was a clear leader since the nineteenth century in the development of a public school system. This was in part due to “the long-standing commitment of the United States to democratic ideals,” but also due to “decentralized decision-making...greater geographic mobility and technological dynamism” (Goldin and Katz, 1997). The supply of schooling was determined by local elections. Regions with low wealth inequality, fewer opportunities for youth employment, and more homogenous populations saw the earliest rises in schooling during the twentieth century (Goldin, 1999).

However, democratic considerations are not the only explanation of why countries expanded their public education systems. Elites can benefit from investing in schooling in multiple ways. For instance, elites can enjoy the benefits from a more educated service industry (Galiani et al., 2008). Moreover, governments have often promoted education to “foster industrialization, forge a national identity, promote loyalty and domestic order or strengthen military power” (Paglayan, 2021). Without decentralized democratic decision-making, an autocratic elite might still impose top-down educational reforms despite high inequality, opportunities for child labor, or heterogeneous population.

The American colonial government oversaw a large expansion of schooling despite high inequality and child labor. While some decisions were decentralized, the Commissioner of Education also pushed for top-down reforms. Alongside promoting loyalty and the culture of the United States, these reforms genuinely attempted to improve human capital. Indeed, increasing education was both an ideological goal of many administrators and a frequent justification given for colonial rule.

## 2 PUBLIC EDUCATION IN PUERTO RICO, 1898-1948

### 2.1 *Spanish Attempts at Reforms*

Aside from limited efforts at reform in the early nineteenth century, the first major attempt at public schooling was the Organic Decree of 1865. This decree attempted to establish a standardized school system, but the “founding, financing, and management of schools remained under the responsibility of municipal governments” (Bobonis and Morrow, 2014).

The new school system had many shortcomings. Due to this decentralization, the development of schooling was very heterogeneous across different counties. While schooling was made compulsory for those aged 6 to 12, compliance was extremely low (Bobonis and Toro, 2007). The frequent turnover of governors led to serious uncertainty regarding education policy. For example, the 1865 decree was suspended in the 1870s but reinstated in 1880. The more conservative governors also saw schools as a tool of political suppression, especially after the Grito de Lares revolt of 1868.

“The mission of an Inspector of primary instruction in these countries distant from the motherland, and influenced by currents of thought, censurable ...[is to] discover the social wound where it exists, more or less hidden, and apply to it with all the energy that the gravity of the circumstances demands an effective cauterization”

—Don Juan Macho Moreno, School Inspector, late 19th c. (Osuna, 1923).

### 2.2 *The Regime Change*

After the US conquest, Puerto Rico was under military rule for two years and education policy was left to the local school boards. After the Foraker Act of 1900 established a civilian government, the new Department of Education decided educational reform was necessary. It saw its task as remedial, increasing basic literacy in both Spanish and English and instilling pro-American sentiment:

“The crying and current need is a school that can reduce this appalling illiteracy. To teach children to read, to write, to count, and to love home and country”

—M. G. Brumbaugh, Commissioner of Education (Report of the Commissioner of Education, 1900).

Why was education such a priority to the colonial authorities? The annexation of new colonial territory had sparked a fierce debate among American elites (Sparrow, 2006). Up until that point, territorial expansion came with at least an implicit path to statehood.<sup>2</sup> The territory seized from Spain 1898 was seen as vital to secure maritime trade and secure tropical resources, but the local populations were seen as unlikely to assimilate into American culture. Would Puerto Rico be incorporated into the United States, reducing (at least numerically) the dominance of white Anglo-Saxon Protestants, or would it remain a colony held indefinitely at arms-length, undermining the democratic norms of the United States?

The compromise reached was to give some rights to the colonies but to prevent full integration. Puerto Rico hence became classified as an organized yet unincorporated territory. This ruling was justified by an argument that colonial subjects were lacking the training needed to participate in the US democratic system. While to some this may have been merely an excuse to deny full political participation to the new colonies, it implied that civic education might someday open the door to statehood. In promoting public schooling, the Department of Education in Puerto Rico made the implication explicit:

“In my remarks it seemed fitting to say that the free public school was infinitely more potent in lifting the island than all political discussion; that the product of the school, as it is known in the States, will most of all contribute to the speedy placing of a new star in the azure field of the glorious flag of freedom —the star of Porto Rico”

—M. G. Brumbaugh, Commissioner of Education (Report of the Commissioner of Education, 1900).

Indeed, the imperial conquest was often portrayed in the contemporary press as a benign intervention, with the United States playing the role of school teacher and Puerto Rico as a new student.

<sup>2</sup> There was notable hesitancy in the cases of Utah and New Mexico due to large Mormon and Mexican-American populations.

### 2.3 *American Attempts at Reform*

The American attempts at reform faced similar issues to the ones that the Spanish encountered decades before. Although the Department of Education centralized the selection of teachers and curricula, schools were still funded locally. This led to greater funding in rich counties, such as those producing sugar (Bobonis and Toro, 2007). Even though school was made compulsory for children age 8 and 14 in 1903, compliance was at first low. Policy, in particular that relating to English instruction, varied wildly as new Commissioners of Education were frequently appointed (Angrist et al., 2008).

The outbreak of World War I had major ramifications for US rule on the island. Under President Woodrow Wilson, the Jones-Shafroth Act of 1917 increased the power of the locally elected government in Puerto Rico and granted its inhabitants US Citizenship. However, the unelected governor still appointed the Commissioner of Education. The war also resulted in severe staffing problems for schools (Report of the Governor of Puerto Rico, 1918). The war also saw an increased urgency in the mission to instill loyalty to the United States.

“[M]any of the teachers and not a few of the older pupils have become efficient propagandists, ready and able to take part in the molding of public opinion along patriotic lines.” —Paul G. Miller, Commissioner of Education, 1918 (Report of the Commissioner of Education, 1918).

During the relatively long tenure of Commissioner Miller (1916–1934), a new major focus of the Department of Education was rural school consolidation. By combining several small schools, in theory the school could provide better facilities and more differentiated curriculum. This program attempted to copy similar reforms in the mainland United States that were seen as increasing efficiency.

One of the targets of this consolidation was the practice of "double enrollment," where each teacher has a different morning and afternoon class of half-time students (Report of the Commissioner of Education, 1916). This system allowed limited rural resources to go further when the goal was basic literacy. It also accommodated the needs of rural families: students could make the often-long journey home for lunch and could work part-time during the coffee harvests. The Department of Education noted that this compromise helped increase enrollment and attendance

(Report of the Commissioner of Education, 1916). However, it had the obvious drawback that the students only received half as much schooling.

The problem with the rollout of consolidated schools, according to the Department of Education, was the low level of rural development. Consolidated schools required a population willing to enroll and roads that allowed them to attend.

“The advantages of the rural consolidated school are no longer questioned; since these schools require good roads, the problem of roads must naturally be solved first. The only solution to this problem would be the forming of villages which would ...attract to these places the great majority of our peasant population”

—Report of the Commissioner of Education, 1922.

In other words, economic development of rural areas fell under the mission of the Department of Education, as it was necessary to support modern consolidated schools.

Due to the existing transportation infrastructure, the new consolidated schools were often in coastal regions (Report of the Commissioner of Education, 1918). In particular, the goal was to consolidate more densely settled rural villages that allowed greater economies of scale for schooling and other public goods. The department sought to promote such villages through what it called “the rural uplift,” a campaign that promoted use of rural schools as community centers (Osuna, 1923). The department was so confident in this plan that by 1926 “[s]upervisors [had] been instructed to allow one-room rural schools only in exceptional cases” (Report of the Commissioner of Education, 1926).

However, progress in rural areas remained slow. The Great Depression hit the island’s budget hard, combined with the devastating 1928 hurricane and a second, smaller yet still damaging hurricane in 1932. By 1934, blaming budget shortfalls, the new Commissioner of Education claimed to face a stark trade-off:

“the Commissioner has to decide in favor of one of three urgent needs, viz., opening a school where none existed before and admitting pupils to the primary grades; assigning the new position to a school organized on the double-enrollment plan in order to allow pupils in upper grades to attend school for the full day; and assigning the position to a consolidated school in order to add one upper grade to the organization”

—Report of the Commissioner of Education, 1934.

One thing that had not changed by the 1930s, despite (or perhaps because of) an increasingly active pro-independence movement, was the Department of Education's interest in instilling loyalty to the United States. One of the first priorities of education in Puerto Rico, according to the 1939 Commissioner, was to promote "a fundamental faith in the ideal of American democracy" (Report of the Commissioner of Education, 1939).

Overall, while the Department of Education did genuinely seek to improve educational outcomes, it was adverse to neither top-down policy reforms nor propaganda to encourage loyalty to the United States.

### 3 MAIN TRENDS IN PRIMARY EDUCATION

The evolution of primary education in Puerto Rico during the first half of the twentieth century was characterized by a rapid increase in capacity followed by a period of slow but steady growth. From the beginning, the US government emphasized the provision of education as an important steppingstone to the modernization of the island and especially the acquisition of "American values" by the native population (Dietz, 1986); (Cabán, 2018); (Osuna, 1923). As such, the number of schools per children of school age increased until around 1915–1920, when it stagnated at just above 7 schools per 1,000 children between 5 and 17 years old. During those early decades, enrollment in primary education also increased rapidly though actual attendance to classes was more sluggish. Overall, the improvements in capacity led to an overshooting of enrollment rates. At first, this did not translate into improvements in attendance, which only caught up between 1915 and 1920. Afterward, the pace at which the primary education system improved was more gradual and persistent. The initial push to build and operate rural schools was followed by moderate improvements in the literacy rate. However, starting in the 1920s, there was a shift out of rural schools and into graded schools that followed the modernization process of the island.

This section reviews these and other trends of the Puerto Rican primary education system during the period between the Foraker Act of 1900 and 1949, when the first democratic elections for Governor took place. We collected data from several sources, most importantly from a series of

reports to the federal US government, written by the Governor of and the Commissioner of Education for Puerto Rico from 1900 until 1948<sup>3</sup>. In the reports, the Governor accounted for the fiscal situation on the island and provided information on a wide set of issues at the county level. The reports are rich in terms of topics, ranging from crime and order to taxation. In this chapter, we focus on education data. We digitized a yearly panel of enrollment and attendance for different levels of schooling. We also use data from the reports on cultivated land by crops to measure local economic activity. We complement these data sets with information from census of population samples in 1910, 1920, and 1930.

## Data

We build a yearly panel at the county level with total enrollment and average attendance in elementary schools for the years 1904–1943. The reports provide information on the number of students in every county that were enrolled in a public school by March 1 as well as the average number of students who attended school each day the school was operating. We refer to these measures as "Enrollment" and "Attendance," respectively. The reports present information for two types of "Common" (public primary) schools: "Graded" and "Rural" schools.

The panel is unbalanced as there were several changes in county borders over the period. We aggregate the data at the smallest level consistent over time. For new counties created in the 1910s, we include them as they are formed as part of the original set of counties.<sup>4</sup>

The way the reports present information on enrollment and attendance also changed over time. Moreover, during some years, the reports do not present information disaggregated at the county level. Toward the end of the sample, information on attendance stops being produced. Despite these limitations, we have information on enrollment for the years 1904, 1907 to 1920, 1922, 1927, 1929, 1931, 1932, 1933, 1934, 1939, 1941, and 1943. For attendance, we managed to compile information for 1907,

<sup>3</sup> Full citations in the Primary Sources bibliography section.

<sup>4</sup> Barceloneta and Jayuya in 1912; Guainabo and Hormigueros in 1913; Ceiba, Guánica, Las Piedras, and Luquillo in 1915; Villalba in 1917. We omit Cantaño which only formed in 1927. Río Piedras, which was merged with San Juan in 1951, is kept separate in our regressions but not in the maps as we use contemporary county boundaries.

1910 to 1913, 1915 to 1920, 1922, 1927, 1929, 1931, 1932, 1933, and 1934.

Finally, there is also information on the number of schools that are operating at each municipality. We digitize information on the number of graded and rural schools in 1900, 1907, 1910, 1922, and 1932. At the beginning of the sample, the vast majority of schools were a classroom operated by one teacher, so the number of teachers correspond nearly one to one to the number of schools. While the educational system develops, the reports start measuring both school buildings as well as classrooms and teachers. We focus on the number of classrooms as the definition of school to guarantee consistency over time.

To create per capita education indicators and control for differences in population over time and across counties, we combine data from the reports with data from Census of Population (Ruggles et al., 2021). We estimate the number of children of school age—that is between 5 and 17 years old—using census samples from 1910, 1920, and 1930. We linearly interpolate between decennial census to estimate the number of kids between 5 and 17 years old for each year. For years before the 1910 Census or after the 1930 Census, we extrapolate using the rate of growth of school-age population between 1910 and 1920 and 1920 and 1930, respectively. We follow the same interpolation process for the total population and the urban population.

To explore regional trends in education, we split counties in two ways. First, we define "urban centers" as counties with more than 50% of their population living in urban areas in the 1920 census. Urban centers include San Juan, Ponce, Mayagüez, Bayamón, Fajardo, and Guayama. Their combined population is around 618,700, equivalent to 47.6% of total population. Second, we classify counties according to their main agricultural product. We use data from the reports on the area devoted to sugar, coffee, tobacco, and fruits cultivation in 1901, 1910, and 1920. With a k-means clustering algorithm, we classify counties in 3 groups: coffee counties, sugar counties, and ambiguous counties. That is, for each county, we know how much land is devoted to coffee and sugar during the three years for which we have data. We let the algorithm decide which counties are grouped together. The third group are counties with balanced area between coffee and sugar cultivation or with more production of different crops. Figure 5 illustrates why there is persistence in the crop mixture. Counties located in the central and western parts of the



island have a mixture of high elevation (Fig. 5a) and high average rainfall (Fig. 5b) that make them suitable to grow coffee trees. The lowlands in the east and southwest parts of the island have better suitability for planting sugarcane (Fig. 5d).

Finally, we compile geographic information at the county level from two different sources. From the United States Geological Survey we collect information on average altitude (Fig. 5a). We also use information on latitude and longitude to calculate distance of each county to San Juan, the capital and largest city, located in the northeast, and Mayagüez, the largest western city and a major port. Finally, we use data from weather stations available from the National Oceanic and Atmospheric Administration on average yearly precipitation between 1981 and 2010. We averaged measures from stations contained on each county. Since 34 counties do not have their own weather station, we averaged measures from stations within 20 km radius, weighting then inversely according to distance to the county's centroid.

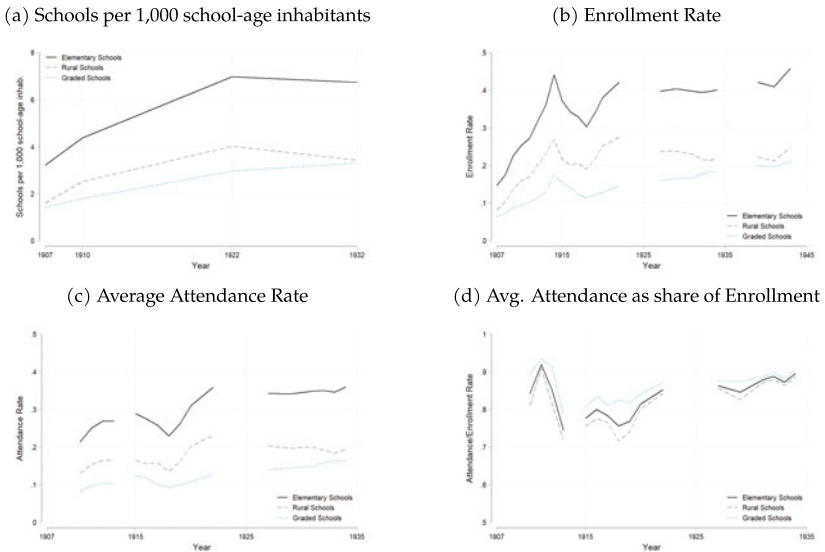
### **Primary Education in Puerto Rico**

In the 1903 report to the Secretary of the Interior, M. G. Brumbaugh, then Commissioner of Education of Puerto Rico, asserted: “the people want schools. The pupils will attend schools. This year we shall maintain at least 1,000 schools, an increase of 30 percent” (Report of the Commissioner of Education, 1900). Indeed, after starting the century with 680 schools, the US colonial government had managed to increase access to primary schools by about 34% in only 3 years. According to the 1903 report, Puerto Rico already had 3.1 schools per 1,000 people between 5 and 17 years old. The growth in capacity picked up even more after 1907. By 1922, the island had managed to more than double that figure as there were 7.6 schools per 1,000 children of school age. After the 1920s, the number of schools started to grow just fast enough to keep up with population growth, which was quite high over the first half of the century (Marein, 2021).

The early years of US control were also characterized by a sharp increase in enrollment. In 1907, around 15% of children between the ages of 5 and 17 were enrolled in schooling. In less than 10 years, that figure was over 42% (see Fig. 1b). Such sharp increase in enrollment was driven by the initial push from the government to modernize Puerto Rico's school system and it proved to not be sustainable. From 1914 to

1918, enrollment as share of school-age population fell to around 30%. The increase was not sustainable since it did not translate into increased attendance. Average attendance to school was stable from 1910 until 1918, where it started to grow slowly but steadily.

In other words, the first two decades of the primary school system established by the US government in the island was characterized by a rapid increase in supply that was met by more sluggish demand. Even though there was high enrollment, about a fifth of enrolled children did not attend school regularly (see Fig. 1d). Only after 1918, attendance started to converge to actual enrollment. By 1930, only about 10% of enrolled children did not actually attend school. The mismatch between both was more striking early on for rural schools, where children had the



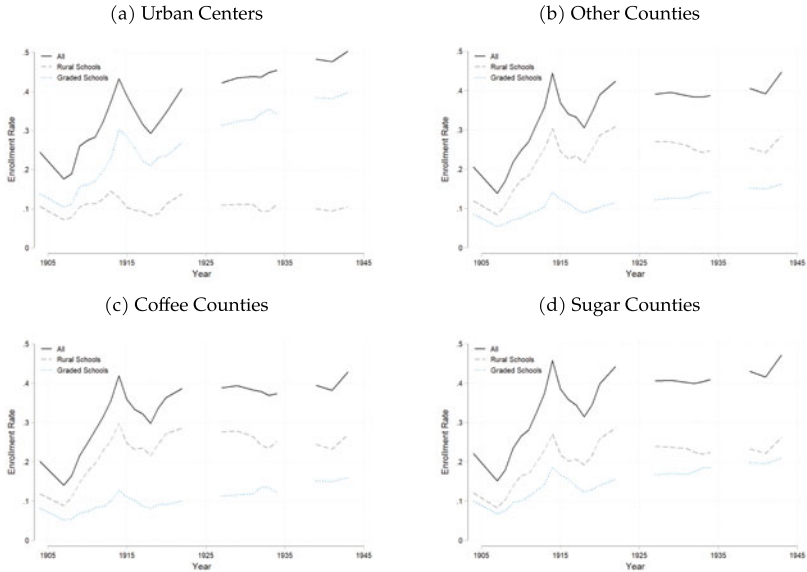
**Fig. 1** Main Trends in Primary Education. (*Note* Figure (a) shows the number of schools divided by school-age population. Figures (b) and (c) show, respectively, total enrollment and average attendance divided by total school-age population. Figure (d) shows average attendance divided by total enrollment. Schools, Enrollment, and Attendance data comes from yearly reports from the Governor of Puerto Rico. School-age population data comes from Census of Population (1910, 1920, 1930), compiled by IPUMS)

chance of working in the agricultural sector and where school facilities were more precarious.

During the decades between 1910 and 1940, rural and urban schooling converged in terms of their attendance to enrollment ratio. Part of the reason was a shift into more urban schools and out of rural schools that is shown in Figs. 1a and 1b. Since graded schools had higher quality due to the separation of classes by ages, the government pushed for the consolidation of rural schools into graded schools. The enrollment rate in graded schools increased steadily while it fell for rural schools. This substitution started earlier in counties that were more urbanized, at least by the standards of the time, as shown in Figs. 2a and 2b. The number of enrolled children in rural schools stayed constant in urban centers and enrollment in graded schools reached almost 80% of total enrollment in elementary school in the 1940s. In the rest of the country, rural schools continued to grow until the early 1920s. Graded schools only managed to represent about 40% of total enrollment in the 1940s.

The accelerated growth in enrollment and number of schools during the first three decades came together with growth in the literacy rate in the country. According to the 1910 census, 33.7% of people over 10 years old knew how to read and write. In 1930, that share had increased to 57.6%. These figures mask significant geographic variation. Some counties like San Juan had literacy levels comparable to Argentina. In about a quarter of counties, the literacy rate was below 50% in 1930. The best results in terms of literacy were clustered in the southwest and northeast corners of the island. The southeast corner was the region that struggled the most. Maps in Fig. 3 show that even though there is some correlation between enrollment rates and literacy rates in 1930 across counties, it is not necessarily large. Given that enrollment in primary schooling also doubled between 1910 and 1930, it is natural to ask how much of the improvement on literacy at the local level is correlated with improvements in enrollment.

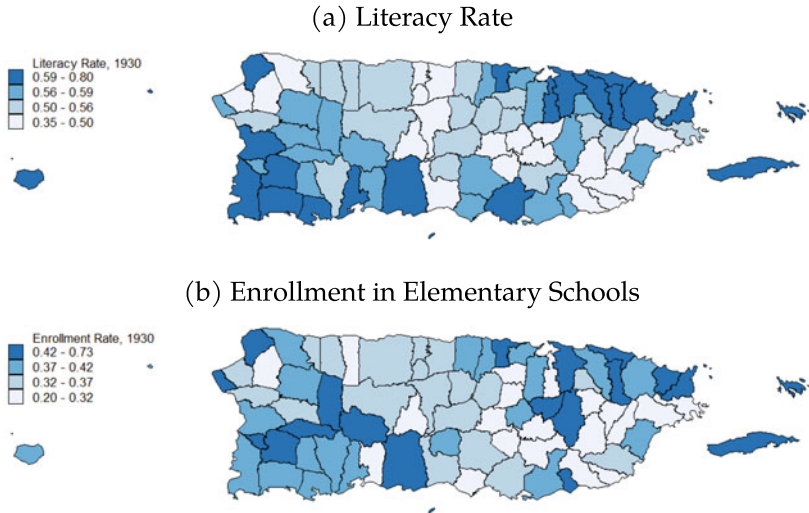
Figure 4a shows the correlation between the growth rate of attendance and the growth rate of literacy rate between 1910 and 1930. Growth rates of 1 imply that the literacy or attendance rate doubled between those two years. There are two striking findings. First, there is a very small but positive correlation between growing growth in the primary school capacity, measured with attendance rates, and education, measured with literacy rates. The counties where enrollment grew the most are not necessarily the ones where literacy rates improved the most. Second, the correlation is much



**Fig. 2** Enrollment Rates in Graded and Rural Schools (*Note* Figures show the share of children enrolled in graded, rural, and all schools divided by total school-age population. Enrollment data comes from yearly reports from the Governor of Puerto Rico. School-age population data comes from Census of Population (1910, 1920, 1930), compiled by IPUMS. Urban counties are those with more than 50% of population classified as urban in the 1920 census most populous urban centers in 1920 (San Juan, Ponce, Fajardo, Bayamón, Guayama, and Mayagüez). Classification of coffee and sugar counties is described in Sect. 3)

stronger for rural schools. In other words, counties where rural attendance grew faster are the ones where literacy rates grew relatively fast as well. These correlations between schooling and literacy growth are robust to how we measure schooling (enrollment or attendance). This could be because those counties were relatively more rural and therefore started with low levels of both schooling and literacy. Counties like San Juan or Mayagüez, which already had relatively high levels of literacy in 1910 had high growth in graded schools but not in rural ones.

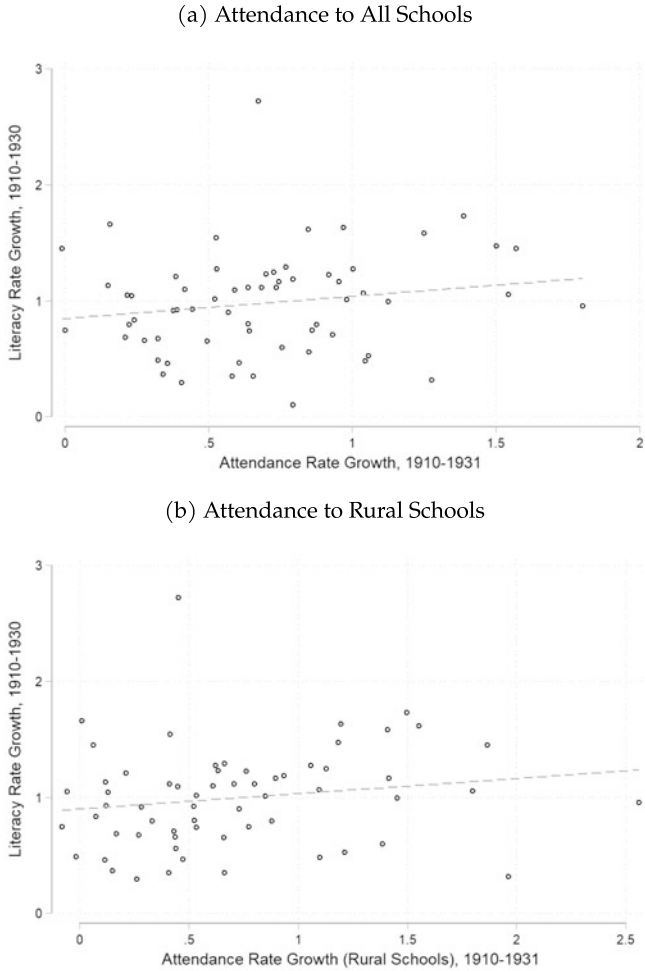
The preference for increasing capacity in graded rather than rural schools is not only evident when comparing urban centers with the rest of counties. Counties that specialized in sugar also increased their number



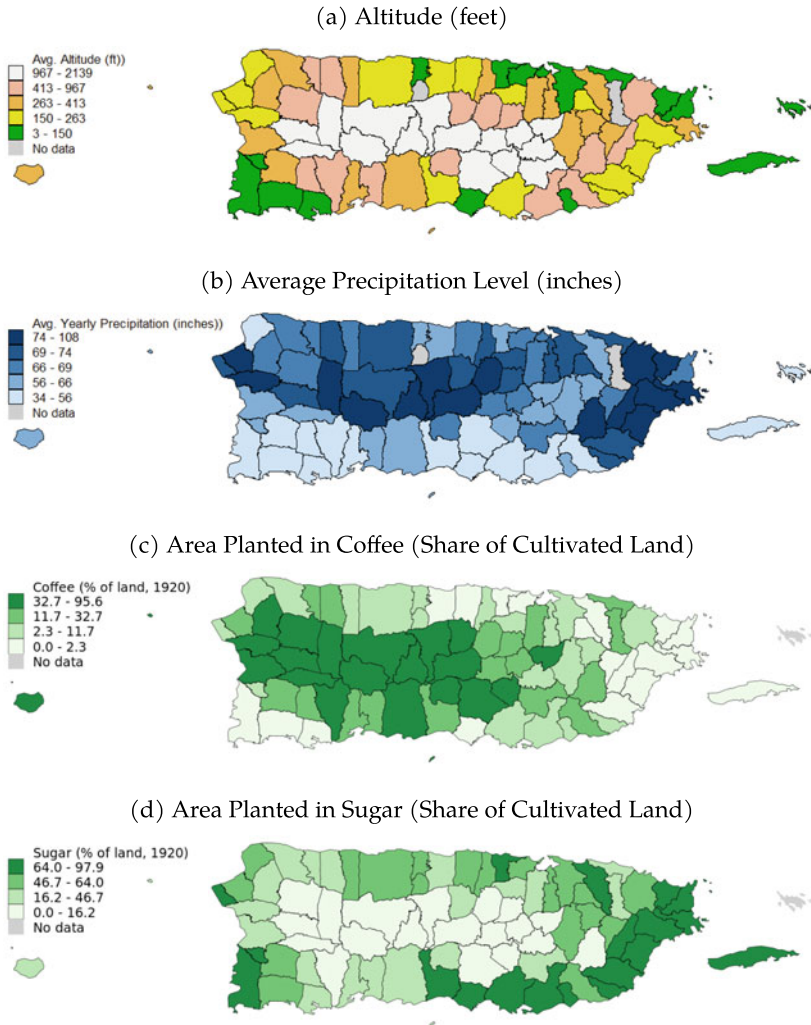
**Fig. 3** Geographic Distribution of Enrollment Rates and Literacy Rates, 1930 (*Note* Maps show (a) the share of population over 10 years old who knows how to read and write; and (b) the share of school-age population enrolled in elementary school. Data from enrollment comes from the reports of the Governor. Literacy data comes from 1930 Census of Population)

of graded schools per 1,000 inhabitants at a faster pace than counties that specialized in coffee production, despite starting the century at similar levels of 1.5 graded schools and 3 rural schools per 1,000 children of school age. In 1922, sugar counties had 7.2 elementary schools on average, while coffee counties only managed to get to 6 schools. All the difference is due to graded schools, as rural schools per 1,000 children of school age grew at roughly the same pace. In the 1920s, coffee counties managed to close about 80% of the gap with respect to sugar counties. The latter group followed a similar trajectory than what we call “ambiguous counties,” a mix of counties with a balanced basket of crops (sometimes including both sugar and coffee) and counties with little agricultural production.

These medium-term differences in capacity are also present in enrollment rates, shown in Figs. 2c and 2d. Children in sugar counties were enrolled in school at a faster pace during the first decade and continued to lead over coffee counties, though the difference did not grow much



**Fig. 4** Attendance Rates and Literacy Rates, 1910-1930 (*Note* Figures plot the percentage change in literacy rate between 1930 and 1910 census on the vertical axis and the percentage change in average attendance rates between 1931 and 1910 in the horizontal axis. Panel (a) plots changes in attendance for all schools. Panel (b) plots changes in attendance in rural school)



**Fig. 5** Weather, Geography, and Main Crops (*Note* Author's elaboration with data from USGS, NOAA, and Reports from the Governor of Puerto Rico to the US Congress)

before 1940. Moreover, while enrollment in rural schools in sugar counties started to decrease after 1920, replaced by faster growth in enrollment in graded schools, enrollment in rural schools in coffee counties remained constant over time. Coffee counties prioritized rural schools from the start, with graded schools having slow but constant increase in enrollment. Rural and graded schools in sugar counties followed a more balanced trajectory until 1915. Afterward, they followed a strategy similar to coffee counties where graded schools started to replace rural ones.

#### 4 AGRICULTURAL PRODUCTION AND EDUCATION

Beside these differences in education supply in the long run, in this section we show that coffee and sugar counties also differed in terms of their short-term demand for schooling. We do so by leveraging changes in export revenue of both crops and cross-county differences in the degree of agricultural specialization. Intuitively, the main idea behind the empirical exercises in this section is to compare coffee (sugar) counties in years with high and low coffee (sugar) export revenues to the other counties. Given the differences in the incentives coffee and sugar production generate for rural families to invest in their children's schooling, we show that export revenue shocks affect enrollment and attendance very differently in coffee and sugar counties. In coffee counties, high export revenues reduce schooling while the opposite happens in sugar counties; when sugar export revenues are high, enrollment and attendance increase. Moreover, we show this relationship is stronger in rural schools than urban schools for sugar counties. For coffee counties, the effect of export revenue shocks on schooling does not seem to vary according to the type of school.

The production processes of coffee and sugar are, even today, very different. While coffee production is mostly undertaken in small, family farms; sugarcane cultivation happens in larger farms. We can corroborate these differences by looking at simple statistics from the 1910 Census of Population and data on land use from the reports of the Governor. 1910 is a relevant year because coffee was starting its slow decline in terms of importance within Puerto Rican exports, while sugar production was only starting to consolidate as the main source of external income (Figueroa, 2006); (Ayala and Bergad, 2020).

On average, each Puerto Rican county had 104 coffee farm owners and 44 sugar plantation owners, despite having 761 coffee workers and



896 sugar workers. In other words, there were 10 workers per farm in the coffee sector and 28 workers per farm in the sugar sector. The differences in scale are also evident while looking at farm sizes. Coffee farms had around 23 acres on average while sugar farms had around 102 acres.<sup>5</sup>

Moreover, picking and classifying coffee cherries is more amenable for the use of child labor than cutting and collecting sugarcane, which is an activity performed by workers at least in their teens (Mintz, 1959); (Solá, 2011). These two dimensions—economies of scale and child labor—create differences in incentives for families involved in the production of coffee and sugar. When the coffee price increases, the opportunity cost of sending children to school increases, even though the family is potentially richer due to income increases. Moreover, since coffee is produced in small family farms rather than plantations, the opportunity to use household labor for production increases. For families involved in sugar production, only the income effect applies since young children of elementary school age do not participate directly in the production process.<sup>6</sup> We document these differences using simple regression analysis and panel data.

Here, we estimate the following model for two measures of schooling: total enrollment and average attendance during the school year. We leverage short-term changes in export revenues at the national level and variation in crop intensity at the local level to explain short-term changes in schooling outcomes.

$$\Delta y_{ct} = \beta_t + \theta_c + \gamma_s \Delta x_t^s p_t^s \times \text{sugar}_c + \gamma_c \Delta x_t^c p_t^c \times \text{coffee}_c + \alpha X_{ct} + \epsilon_{ct} \quad (1)$$

where  $\Delta y_{ct}$  is the yearly change in each measure of schooling for county  $c$  on year  $t$ . The coefficients of interest are  $\gamma_j$ .  $\Delta x_t^j p_t^j$  is the yearly change in export revenues for crop  $j$ . That is the product of multiplying  $x_t^j$ —the

<sup>5</sup> Table 2 in the Appendix has more detailed information about coffee and sugar production in 1910

<sup>6</sup> It is possible high sugar prices might benefit the owners of large plantations or *centrales* (large sugar mills) much more than they increase the income of an average sugar farmer. In this case, we'd still expect to see an increase in schooling due to increased local tax revenue. However, this increase would be due to supply-side factors such as school construction and hiring of new teachers, not increased demand for schooling. Therefore, it would be less pronounced during the period when enrollments overshoot attendance. We plan to test this in future research.

total exports of crop  $j$ —and  $p_t^j$ , which is the real price of crop  $j$ , deflated using US CPI from Measuring Worth (2022). Those are coefficients on interactions between a dummy equal to one for county specialized in crop  $j$  (sugar or coffee) and  $p_t^j$ , crop  $j$ 's real international price. The specification includes county and year fixed effects ( $\theta_c$ ,  $\beta_t$ ), and time-varying population controls ( $X_{ct}$ ) comprised of logs of total population and school-age population. We cluster standard errors at the county level to account for serial correlation.

Table 1 illustrates how coffee export revenue increases lead to schooling in coffee counties to decrease while sugar export value increases make schooling in sugar counties to increase. Each column and panel represents a different regression result. Column 1, Panel A shows results for the enrollment in all elementary schools. For instance, when the sugar export revenue increases by 1 million USD, total enrollment in sugar counties increases by 0.173%, which is equivalent to an increase of around 2% with respect to the mean of 8.4%. Similarly, when the coffee export revenue increases, the total enrollment falls by almost 1%. Though these two coefficients are rather large in magnitude, they are not statistically significant. Column 2 shows that average attendance behaves similarly, growing with the crop's revenue in sugar counties and decreasing in coffee counties. However, the results for attendance are stronger: coefficients are larger, even more so with respect to the mean, and they are statistically significant for sugar.

Panels B and C have the same structure as Panel A, but they focus on different types of school, rural and graded, respectively. Comparing both panels, the effect seen on Panel A for sugar counties is being driven by rural schools, which respond much more strongly to commodity price changes than common schools, where we find very small coefficient which is also not significant. However, for coffee counties, even though the coefficients are not statistically different from 0, we cannot rule out that the effect of coffee export revenues on rural schools is larger than in graded schools. The coefficients are around the same magnitude.

## 5 CONCLUSION

Puerto Rico in the early twentieth century was a microcosm for the complexities of the rise of public schooling in a developing region. Under Spanish rule, the country had made little progress in increasing

**Table 1** Effect of Coffee and Sugar Income on Enrollment and Attendance

<i>Dependent Variable:</i>	(1) $\Delta$ Enrollment	(2) $\Delta$ Attendance
<i>Panel A: All Common Schools</i>		
$\Delta$ Sugar Exports Real Value $\times$ Sugar Area	0.172 (0.156)	0.238* (0.136)
$\Delta$ Coffee Export Real Value $\times$ Coffee Area	-0.995 (1.071)	-2.080 (1.344)
Observations	1,024	704
Mean Dep. Var.	8.419	5.169
R2	0.566	0.553
<i>Panel B: Only Rural Schools</i>		
$\Delta$ Sugar Exports Real Value $\times$ Sugar Area	0.359 (0.227)	0.442** (0.204)
$\Delta$ Coffee Export Real Value $\times$ Coffee Area	-1.106 (1.532)	-3.126 (1.929)
Observations	1,024	704
Mean Dep. Var.	9.627	6.117
R2	0.433	0.465
<i>Panel C: Only Graded Schools</i>		
$\Delta$ Sugar Exports Real Value $\times$ Sugar Area	0.170 (0.229)	-0.065 (0.244)
$\Delta$ Coffee Export Real Value $\times$ Coffee Area	-2.256 (2.039)	-2.816 (2.027)
Observations	1,024	704
Mean Dep. Var.	6.412	3.188
R2	0.377	0.270
Years	1907 - 1943	1907 - 1934
Counties	65	65

*Note* Dependent variables are: Column (1): change in log total enrollment times 100; Column (2): change in log average attendance times 100. Panel A uses data for all schools; Panels B and C focus on Rural and Graded schools, respectively. Our sample consists of a set of counties defined consistently over time. Coffee and sugar total export values are total crop export volume times real crop prices. Coffee and sugar areas are average share of cultivated land in 1901 and 1910 used for each crop for each county. All specifications include: year fixed effects, county fixed effects, total population, and school-age population. Standard errors clustered at the county level in parenthesis.

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

literacy rates and schooling. By 1900, Puerto Rico was well behind similar Latin American countries. However, the country's educational system benefited immensely from American control. Motivated by a desire to

instill “American values” to the Puerto Rican population, the US colonial regime strongly promoted top-down educational reforms. Moreover, it provided the detailed statistical records that we systematically use in this chapter. Due to its history, the small island can provide large insights into the history of the rise of public education.

Schooling expanded rapidly during the first few years of US control, but there were pronounced regional differences in the rates of growth. Later, during the 1920s and 1930s, the growth rate of schooling outcomes was more moderated. In other words, there were big inefficiencies and bottlenecks that the US government on the island managed to solve early on, but structural factors made improvements beyond the first decade more difficult to come by. The varied urban and rural settings resulted in separate types of schools with differing effectiveness. Recruiting teachers and school administrators was not an easy task, and managing school funding to run schools was proven to be challenging, specially in rural areas.

Finally, regional specialization in the two main crops implied that educational policies to increase enrollment and attendance had to be very different across regions. The different production techniques for coffee and sugar resulted in opposite impacts of export prices on school attendance and enrollment. While positive booms to export revenues improved attendance to school in sugar counties, it had the opposite effect for coffee regions. Since the channel through which export revenues affected schooling was different, a simple policy at the national level would have been insufficient to reduce regional gaps in education. More sophisticated policies that account for the opportunity cost of schooling, especially when there are positive export booms, would have been more effective to level the playing field in terms of education. In fact, modern programs like conditional cash transfers are designed precisely with that channel in mind. We show the opportunity cost of schooling channel is more prevalent for coffee production than for sugar production.

During the beginning of the twentieth century, Puerto Rico started to increase its sugar production, leaving coffee exports behind. Given the results we show in this chapter, we could speculate that the consolidation of sugar exporting helped the consolidation of a public education system under US colonial rule. Sugar provided the government with revenue

to fund schools and teachers. Moreover, its production function allowed rural households to send their children to school without having to decide between child labor or schooling (Table 3)

### **Primary Sources**

Report of the Commissioner of Education of Puerto Rico to the Hon. Governor of Puerto Rico. Official Report, Government Printing Office, Washington DC. Years: 1900-1907, 1909-1911, 1915, 1916, 1918, 1919-1923, 1926, 1927, 1931-1934, 1938, 1941, 1943, 1948, 1950, 1951, 1952.

Annual Report of the Governor of Puerto Rico to the President of the United States through the Hon. Secretary of State. Official Report, Government Printing Office, Washington DC. Years: 1901, 1902, 1904, 1907, 1910-1948, 1950.

## APPENDIX

**Table 2** Average Crops' Characteristics: Coffee and Sugar Production 1920

<i>Measure</i>	<i>Crop</i>	(1) <i>All Counties</i>	(2) <i>Coffee Counties</i>	(3) <i>Sugar Counties</i>
Land (Acres)	Coffee	2103.4 (3327.0)	6680.8 (4339.1)	708.2 (1360.7)
	Sugar	3159.9 (2832.1)	722.4 (1132.3)	4860.4 (2782.8)
Farm Owners	Coffee	104.8 (170.5)	287.5 (265.0)	50.92 (94.90)
	Sugar	44.41 (55.00)	17.19 (28.11)	63.95 (66.47)
Workers	Coffee	761.1 (886.4)	1640.3 (1145.1)	561.2 (710.0)
	Sugar	896.1 (820.7)	280 (402.1)	1377.6 (813.5)
Workers per Farm	Coffee	10.10 (13.44)	6.592 (3.273)	10.73 (12.50)
	Sugar	28.71 (27.54)	17.37 (10.69)	33.83 (26.67)
Workers per Acre	Coffee	6.422 (37.35)	0.269 (0.111)	3.421 (8.722)
	Sugar	1.996 (13.91)	7.934 (29.89)	0.304 (0.103)
Acres per Farm	Coffee	22.88 (19.91)	30.46 (22.70)	14.98 (12.15)
	Sugar	102.6 (99.93)	50.22 (48.10)	119.7 (97.29)
Counties		76	15	38

*Note* The table presents cross-county means and standard deviations (in parenthesis) for different crops' characteristics in 1920. Land acres devoted to each crop's production comes from Governor Reports. Number of farm owners and number of workers come from the census of population. Workers per farm are equal to the number of workers over the number of farm owners. More details in section 3

**Table 3** Descriptive Statistics: 1910 Census and Governor Reports

	<i>(1)</i>		<i>(2)</i>		<i>(3)</i>		<i>Source</i>
	<i>Full Sample</i>		<i>Coffee Counties</i>		<i>Sugar Counties</i>		
	<i>Mean</i>	<i>Std. Dev.</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Mean</i>	<i>Std. Dev.</i>	
Enrollment rate, Census data	0.39	0.11	0.35	0.08	0.41	0.09	1910 Census
Enrollment rate, Governor reports	0.29	0.07	0.28	0.06	0.30	0.08	Governor Reports
Literacy rate	0.23	0.09	0.20	0.06	0.23	0.06	1910 Census
Population (thousands)	17.13	12.85	16.20	9.52	15.58	8.49	
Urban share	0.21	0.17	0.14	0.10	0.23	0.14	
Black share	0.36	0.15	0.27	0.13	0.42	0.14	
Labor Force Participation	0.61	0.04	0.59	0.03	0.62	0.04	
Women's Labor Force Participation	0.21	0.07	0.19	0.06	0.22	0.06	
Employment in Manufacturing	0.08	0.06	0.05	0.03	0.09	0.06	
Livestock Heads (thousands)	3.23	2.08	2.09	1.39	4.11	2.12	Gov. Reports
		<i>Coffee Cultivation</i>					
Coffee (% of cultivated area)	22.22	23.37	45.02	21.03	7.47	8.37	Gov. Reports
Employment (share work age pop.)	0.05	0.10	0.11	0.13	0.01	0.02	1910 Census
# Coffee Farm Owners	78.53	135.40	155.58	178.42	26.39	52.87	
Workers per farm owner	5.28	3.66	5.57	2.78	3.94	3.91	
		<i>Sugar Production</i>					
Sugar Cane (% of cultivated area)	34.60	30.95	8.75	12.45	55.97	24.97	Gov. Reports
Employment (share work age pop.)	0.15	0.12	0.04	0.06	0.23	0.10	1910 Census

(continued)

**Table 3** (continued)

	(1)		(2)		(3)		Source
	Full Sample		Coffee Counties		Sugar Counties		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
# Sugar Cane Farm Owners	72.94	90.39	26.73	47.75	112.08	101.71	
Workers per farm owner	33.94	52.76	19.19	21.01	34.94	46.30	
# Refinery Workers	8.09	13.77	3.85	9.09	11.11	16.52	
<i>Geographic Characteristics</i>							
Avg. Elevation (ft)	552.46	549.32	1091.68	570.44	239.23	133.77	USGS
Avg. Yearly Precipitation (inches)	67.39	15.40	68.74	12.87	68.32	16.83	NOAA
Distance to San Juan (km)	59.11	31.88	62.99	29.13	54.00	32.89	USGS
Distance to Mayaguez (km)	81.34	47.00	61.17	34.59	96.36	47.47	USGS
Counties	76		28		41		

Note The table shows descriptive statistics from 1910 census and other sources. It divides the sample in three groups: full sample, only coffee, and only sugar counties according to details in section 3

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# Historical Persistence, Possibilism and Utopias in Latin America and the Caribbean

*Alberto Diaz-Cayeros*

Vtopos ha Boccas peu la chama polta chamaan  
Bargol he maglomi baccan soma gymno sophaoon  
Agrama gymno sophoon labarembacha bodamilomin  
Voluala barchin heman la lauoluola dramme pagloni  
Thomas More (1518).<sup>1</sup>

1

The commander Utopus made me into an island out of a non-island.  
I alone of all nations, without philosophy,  
have portrayed for mortals the philosophical city.  
Freely I impart my benefits; not unwillingly I accept whatever is better.

More, Thomas (2002). George M. Logan; [Robert M. Adams](#); Raymond Geuss; Quentin Skinner (eds.). *Utopia* (Revised ed.). New York: Cambridge University Press. p. 119. ISBN 0-521-81925-3.

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## 1 INTRODUCTION

After decades of pursuing economic and social development strategies, the landmass referred to as Latin America, including the island nations of the Caribbean, remains a relatively poor and underdeveloped area in the world. It is not the poorest region, but despite ameliorations in many well-being indicators over the past decades, Latin America is surely the most unequal one, where the gap between rich and destitute is most glaring (López-Calva and Lustig 2010). Land reform, free basic education, the expansion of social protection or the creation of conditional cash transfer programs have all made dents on inequality, but the overall shape of the distribution of household income in Latin America is stubbornly persistent (De Ferranti 2004; Sanchez Ancochea 2020). Inequalities are further reinforced by racism and the discrimination of indigenous peoples and Afro-descendants, who are the ones who suffer most from obstacles limiting opportunities for social mobility (Monroy-Gómez-Franco 2022; Campos-Vazquez and Medina-Cortina 2019; Dixon and Telles 2017; Tellez 2014).

Democracy in the region has been consolidated and democratic values have taken hold (Smith and Sells 2016). But populist threats lurk almost everywhere (Kaltwasser et al. 2017). Under democracy, people's lives in the region have indeed improved, as reflected, for example, in fast changes in literacy and life expectancy. Protections are in place to save precious lives from the risks of premature death through sophisticated public health systems and various forms of social protection. Yet, despite the undeniable capacity of the Latin American and Caribbean public health systems, countries in the region failed to avoid hundreds of thousands of preventable deaths during the COVID-19 pandemic. Unequal access to health services disproportionately impacted indigenous and Afro-Latin American populations; and the lack of trust in government, generated by decades of political polarization and the recent emergence of populist leaders probably exacerbated the failures in public health responses (Bosancianu et al. 2020; Garcia Jaramillo 2020; Ibarra-Nava et al. 2021).

Latin American and the Caribbean public education systems, gradually expanded over the course of two centuries (Paglayan 2021), have finally achieved almost universal coverage in basic education. But quality of learning remains low, and in some countries it is deplorable. The transition to high school and university enrollment is a formidable challenge

for students from poor backgrounds as well as member of indigenous and Afro-descendant communities. And the COVID-19 pandemic only made gaps in student achievement and inequalities in learning even more pronounced (World Bank 2021).

In terms of geopolitics, the Western Hemisphere is a peaceful neighborhood. But in reality, Latin America and the Caribbean are the most violent regions in the world (Economist 2018). In Latin America, the Caribbean and one might add, the United States, young men die in their prime, wounded by firearms, usually connected with criminal violence and the drug trade. The challenge of violence is hemispheric (Chioda 2017). Women and children in the Americas are also often victims of gang and drug-related violence. The homicide capitals of the world are almost all in the Americas. And the last two decades have witnessed massive human displacements. While in other regions of the world such displacements are usually associated with civil war, in Latin America they are due to a combination of catastrophic failures, including economic collapse and the incapacity of governments to provide human security.

In sum, Latin America remains a region that is not prosperous enough for a large majority; and remains troublesomely violent. In the aftermath of the longest colonial experience, and with two centuries of independent experience as nation-states, countries in the Americas have, for the most part, not succeeded in their developmental aspirations. And yet, development experts, scholars, policymakers and social activists in the region remain deeply “biased for hope” (Hirschman 1985). Most of us tend to believe that destitution and poverty can be overcome, and that the region has a prosperous future ahead of it—if only a set of conditions and policies could be put in place.

Ideological differences render specific programmatic prescriptions regarding “what is to be done” at odds between proponents to the left and the right of the political spectrum, but even with increased polarization and the constant bickering among politicians and policymakers, certain consensus does exist among scholars, stakeholders and decision-makers in the region that development is, indeed, possible. But the consensus stops short from a call to action. There is no agreement as to how to understand and interpret what has been achieved so far, and the way in which future progress can still be made. The chapters studying 16 countries in this book convince me even more than ever that we are collectively advancing in a quest for new knowledge and insights in the research agenda on the development of Latin America and the Caribbean.

Compared to half a century ago, we know much more about how historical processes and conditions hinder or facilitate economic growth, social mobility and human well-being.

The twenty chapters in this book also suggest to me that we must go beyond conventional approaches to the scholarship on development in Latin America: neither resurgent *dependencia* approaches, emphasizing declining terms of trade in international markets or late industrialization (see compilation in Frieden 2018); nor a tired optimism of modernization theories, suggesting that it is just a matter of time and more physical and human capital investment for development to, at last, take hold (see Fukuyama 2011); nor an all too quick neoliberal recipe of one size fits all, prescribing the triad of trade liberalization, privatization and deregulation (see Williamson 2009); nor a naïve institutionalist perspective, suggesting that markets will respond to a better crafting of incentives through self-enforcing rules and clear institutional crafting by the State (see Acemoglu and Robinson 2020) can help guide policy prescriptions anymore. These “grand” approaches, as developmental paradigms, have largely failed, and to a larger or lesser degree, they have become “a hindrance to understanding” (Hirschman 1970).

Instead of paradigmatic development theorizing, the papers included in this volume address an array of specific questions leveraging more modest theoretical tools. All the questions are fascinating, as well as their answers: Did educational expansion efforts targeted to poor indigenous communities or former plantation workers succeed in creating human capital (Peres-Cajías on Bolivia; and Curtis and Uribe-Castro on Puerto Rico)? What is the developmental impact of international immigration (Droller, Fiszbein and Pérez on Argentina; and Lanza, Maniar and Musacchio on Brazil)? What was the impact of plantation economies and the enslavement of workers (Méndez-Chacón and Van Patten on Costa Rica; and de Jong, Kooijmans and Koudijs in Surinam)? What was the legacy of haciendas and the labor regimes involved in their organization of production (Rivadeneira on Ecuador)? Did the breakup of haciendas and land reform improve peasant conditions (Montero on El Salvador)?

Was an early democratic experience, or a solid authoritarian past, responsible for enhanced conflict—or even civil war (Fergusson and Vargas on Colombia; and González and Prem on Chile)? Did war and conflict contribute to the retention or loss of indigenous identities (Valencia Caicedo and Pedrozo on Paraguay)? Which conflicts have been more damaging to economic stability and growth, between masses

and the elites or within elites (Kronick and Rodríguez on Venezuela)? Under what conditions can entrepreneurship opportunities be open to a large and diverse enough group of society, instead of being blocked by a minority? And what size of firms has a better chance at generating opportunities for gainful employment and social mobility (Mejía on Colombia)?

Is it possible to create sustainable development with economies based on agricultural products and natural resources (Bértola and Ocampo on the LAC region)? What was the role of religious orders and religious practice and competition as conditions for development (McCleary on Guatemala)? Were the historical political jurisdictions that configured countries and their subnational units conducive to successfully capturing the advantages of trade and specialization (Arteaga on Mexico)? Were those political units merely forms of effective rent-seeking that was ultimately detrimental to growth (Guardado on Peru)? Did the urban configuration of concentration and centralization in some capital cities undermine development (Travieso and Herranz-Loncán on Uruguay)?

The readers of this book will have learned an enormous amount about Latin America and the Caribbean. The cumulation of knowledge in the chapters contained in this book comes from the way questions have been carefully poised in answerable manners. Questions are asked with profound knowledge of each country or case, and they become nuanced by the requirement of making tenable claims that can withstand scrutiny with modern empirical methods and historical data. They are still grounded on well-established theoretical frameworks and in rather common-sensical hypotheses.

The papers are not tied to a single theoretical understanding of how social and economic processes work. They do share, however, a common approach in tracing the hindrances and blockages to development in the historical past, and in the notion that formal and informal institutions can make historical legacies relatively persistent. They also share an understanding of social, economic and political processes being primarily driven by human agency, rather than functionalist or structuralist frameworks. In this sense, they are not delving on some historical predetermination or inevitability, but instead consider the possibility of alternative scenarios (counterfactuals) that are rigorously tested with data.



## 2 THE QUEST TO BRING HISTORICAL DATA TO COMMON-SENSE THEORETICAL IDEAS

Thus, I would argue that the emerging body of work on political economy of development in Latin America from the past decades suggests that some of the most challenging social scientific problems to understand development processes must be broken into manageable small questions that can be answered with some degree of precision and confidence, gradually advancing by providing additional answers to other small parts of the puzzle. Overarching theories are still necessary as a compass, as heuristics and interpretative lenses that allow researchers to put some discipline in their thoughts about how to approach a diverse, complex and sometimes even chaotic reality. How to poise the questions or mechanisms is inspired by the insight of theories regarding economic growth, capital accumulation, trade, political equilibria or economic competition. But in the end, the papers are motivated by real cases rather than theory.

The specific questions are addressed usually inspired by the lived experience of the agents of economic change. This can be from colonial bureaucrats to the residents of a small indigenous village. But such inspiration is informed historically by visiting archives, and painstakingly assembling datasets from hitherto unexplored historical documents, including letters, title deeds, tax records or public reports. These smaller, carefully formulated questions are answered with detailed historical data, powerful statistical methods and with the guidance of theory, used not as a straitjacket, but as a tool for disciplining the formulation of hypotheses and possible mechanisms underlying an explanation.

I would argue there are four distinctive features that are quite prominent in the current wave on scholarship on the political economy of Latin America and the Caribbean, as clearly illustrated by the authors in this volume. They are the following:

1. A quest for microdata. The scholars of the current generation, at least in economics and political science, are no longer contented with mid-range theorizing about the way in which process tracing and path dependence may be described by historical studies. With the advantage of enormous advances in both technologies and methods for data extraction, management and analysis, the studies seek to provide large-N statistical evidence of any claim made (Giuliano and Matranga 2021). This often requires countless

weeks and months doing direct archival research, assembling rather complex datasets from many sources and records, and finding the correct methodology to analyze them.

2. The discipline of statistical methods. The scholarship being produced has embraced, full force, the identification revolution coming from labor and development economics, that requires a mindset of counterfactuals and “potential outcomes”, rather than naïve empiricism or just displaying correlations (Bisin 2021; Valencia Caicedo 2021). These empirical efforts at identification also create a common language and discourse, allowing for the presentation of research findings in public seminars and the review processes in specialized journals, making any single contribution highly cautious about confounders, and methodologically tighter in terms of including robustness checks, seeking to gain greater statistical confidence in the findings.
3. A shared epistemology. Although the scholars do not have a single shared theory about how economic development comes about, they share an understanding of the cultural, social, political and economic reality from what many would decry as a “positivist” perspective, but I would rather describe as falling within the Popperian tradition of the theory of knowledge (Popper 1959). They have not given up on the possibility of gaining an understanding of complex societal problems that is objective, and not open to whimsical interpretations from argumentative discourses that, through hermeneutic efforts, often end up destroying tenable claims to scientific knowledge. While the hermeneutic turn and methodological relativism, if not outright hostility to positivist approaches using the scientific method, has been increasingly prevalent in anthropology and other social sciences, the contributions from development economists and political scientists continue to have a shared faith in a scientific enterprise based on observation, hypothesis testing, and when possible, the use of the experimental method, or at least a logic of inference implicit in it through natural experiments (Cantoni and Yuchtman 2021; Besley and Case 2000).
4. Country specificity. The profound embeddedness of the contributions allows scholars to understand each country in the specificity of each particular path of development. This is a virtue, not a shortcoming of the current scholarship. Even though the mechanisms of social, economic and political development should be seen as

generalizable, within a logic of scientific inquiry, the specific circumstances, temporal junctures and circumstances are indeed unique to each country.

Perhaps the main challenge in doing this kind of social science research, that takes a long historical scope, as the chapters contained in this volume, is that the quest quickly becomes overly ambitious. Providing an account of processes unfolding over time, with long-lasting legacies and consequences, while also offering explanations for the path taken and those not taken, using empirical evidence, requires an enormous amount of work. This is not just process tracing and an analysis of the data, but a requirement of thinking carefully about counterfactuals, in order to make causal claims (Callis et al. n.d.). This standard, permeated by the “potential outcomes” understanding of economic, political and social reality, is extremely well executed by the chapters in this book.

Historians all too frequently use naïve, simplistic or outdated social-scientific theoretical frameworks. Social scientists possess powerful theoretical frameworks, but they, on the other hand, have often ignored the nuances of historical processes and a critical outlook to the biases in the generation of the surviving historical data. Since contemporary data is always more readily available (nowadays in electronic form), this allows for testing hypotheses without the prior requirement of creating usable datasets drawing from the rich archives and various sources of historical evidence. Regardless of whether the theoretical predictions or explanations prove to be false, a great deal of knowledge has already been generated by the process of inquiry involved in the construction of comprehensive historical datasets. Thanks to these efforts we now know much more about *how* and sometimes even *why* Latin America and the Caribbean arrived to the current circumstances, further enabling future researchers, in a collective enterprise, to advance knowledge even further. The success of research projects like those contained in this book, that trace development to past historical processes that must be unearthed, systematized and documented, does therefore not depend solely on whether the hypotheses tested prove to be true (or publishable in an academic journal).

These papers also share a quest for causal explanation, as a problem that requires understanding the world as a place characterized by “potential outcomes”. This shifts attention toward counterfactuals, natural

experiments and extreme attention to the ever present challenges of endogeneity (Pearl and Mackenzie 2018). Once counterfactuals are taken seriously, one begins questioning not just outcomes that could have varied in a path-dependent manner, typical of the historical sociology process tracing tradition, but it is possible to think in terms of the main threat to inference, which is to accept something which is wrong as though it were true.

Could an outcome be different had a particularly important variable been different? This is the critical question in the current political economy scholarship. It enables researchers to ask, for example, much more specific questions, such as the effect of the duration of the *encomienda* regime on modern labor relations; or the configuration of plantation production for world markets having specific impacts on schooling or health today. It is now possible to ask whether the establishment of autonomous forms of governance in *pueblos de indios* determined representation and democratic practices in the twenty-first century. One can wonder how innovations in fiscal extraction during the Bourbon reforms may have produced particular effects on the administrative capacity of municipal governments during the independent period. These are no longer just issues of historical interest to document what happened, but they are inferential questions made possible by a mindset that privileges understanding the effects of the causes.

The papers in this book demonstrate that the puzzle of development in Latin America and the Caribbean cannot be reduced to a single one. There are many puzzles. There are variations across countries and within regions and territories even within the same country for the same puzzle. And variations in lived experiences of different individuals and groups of peoples within the Latin American and Caribbean societies.

Inspired by the contributions in this volume, I do want to sketch out two basic building blocks or elements that, in my view, need to be better elucidated if we are to forward in the quest to understand the possibilities for long range development in Latin America and the Caribbean. Specifying these two elements better may perhaps provide novel answers to existing puzzles of development not only in Western Hemisphere, but throughout the developing world. My discussion of these building blocks speculative and open-ended, requiring new hypotheses that should be tested, with new empirical data and evidence, if we are to further advance in the historical political economy research agenda.

The next two sections discuss, first, a plea for providing a better understanding of the diversity of the identitarian makeup of the Latin American and Caribbean individual actors and peoples. Second, I make a suggestion to take greater care in assessing the research units of analysis, beyond an emphasis on contemporary nation-states. When discussing Latin American development strategies and their impact on various peoples, it is crucial to always specify a “for whom”, given the diversity of Latin American peoples. And when we discuss variation between and within national countries experiences, we should pay far more attention to whether the analysis of data is done at the appropriate level of disaggregation.

### 3 THE MAKEUP OF THE LATIN AMERICAN AND CARIBBEAN PEOPLES

We urgently need as scholars to have a better appreciation of the processes that created the diverse identities of the inhabitants, the residents of what we call today Latin America and the Caribbean. For starters, we need to understand better the legacies of the Columbian shock for the original settlers of the American landmass, and more specifically to provide deeper insights into aspects of governance in pre-Columbian political, social and economic institutions that preceded the arrival of the European invaders. We then need to move further, understanding the process of survival, genetic admixture and *mestizaje*, not just of those original peoples, but also of enslaved peoples brought from the African continent. And in contrast to the prior occupants of the territories and those brought against their will, we should also provide a better understanding of the various waves of voluntary immigration, both within the colonial period and afterward. Not just immigrants from regions in Europe—including, but not limited to the Iberian Peninsula, but also from Asia and the rest of the world—the early migrations from the Philippine islands, the Chinese and Japanese settlement in the process of railroad construction or the flow of indentured South Asians brought to the Americas by the British, to name some examples. These complex processes configure the makeup of diverse identities of the peoples who now inhabit Latin America.

A crucial element in this rethinking involves abandoning once and for all the implicit prejudices that conceive indigenous peoples in the Americas and the Caribbean as “backward” or “savage”, as opposed to the European “advanced” or “civilized” societies. Although probably no scholar expresses those prejudices in such outright explicit and racist

form as they were voiced in nineteenth-century scholarship, the biases are still present in much of the Eurocentric and North American-centric conception of pre-conquest societies. The original peoples of the Americas possessed complex forms of cultural, social, political and economic organizations. It is our ignorance of those forms that makes them obscure to a “Western” perspective, not their simplicity.

As an illustrative example, one might note that the fiscal systems in place in the empires of the Americas have been surmised unto the notion of “tribute”, when in fact they were probably sophisticated agricultural arrangements that included land rents, risk-sharing in staple crops given the climatic uncertainties, as well as taxes proper (Smith 2015). A similar bias is found in the understanding of the status of enslaved original peoples and agricultural producers cultivating the land of their pre-conquest indigenous lords. European conceptions of slavery or serfdom are probably not very helpful to understand how these social arrangements worked before the contact with the Europeans (Berdan and Smith 2020; Smith and Hicks 2017).

A third example is the misunderstanding of the complex networks of city states, the rivalry between them and the ebb and flow of larger political units conforming, at the time of the contact with the Europeans, the large Empires of the Colhua-Mexica, the P’urepecha and the Inca, as well as many other smaller polities, which are only beginning to be understood (Smith 2008; Gutiérrez 2017). Large trade networks, both maritime and through land, that extended over vast distances have only recently been charted (Favila Vázquez 2016, 2020; Lugo and Alatristero-Contreras 2019). In short, scientific knowledge regarding the existing polities, economies and societies at the time of the contact is still quite deficient, to some extent because the colonial chronicles and stories have been accepted rather uncritically at face value, instead of searching the trove of surviving records from indigenous sources, providing a different and more sophisticated and nuanced perspective.

Furthermore, we do not know enough about how the indigenous survivor elites interacted with colonial administrators, inter-marrying and sometimes surviving as powerful agents well into the period of independence. Some noble lineages are well understood at the local level in specific *pueblos*, and some aristocratic families kept their nobility titles. But just the same way as we do not fully understand the social hierarchies and economic inequalities that characterized pre-Hispanic societies, we do not know much about how social mobility and stratification worked,

in spite of the dramatic demographic decline of the sixteenth century into the later part of the colonial period.

An additional complex component, of course, is the fate of the enslaved peoples that were brought to the Western Hemisphere during the early globalization fueled by plantation economies producing commodities for world markets. Escaped peoples formed the *quilombo* and *cimarrón* communities, which thrived often for decades if not centuries. Many of the enslaved Africans bequeathed freedom to their children by marrying them to indigenous spouses. In general the process of mestizaje among the Afro-descendants is poorly understood (Vinson 2017).

The European processes of what is sometimes referred to as “settler colonialism” or other immigration processes from Europe are, in my view, not well understood either. There were several distinct waves of European movement across the Atlantic, so that the initial *conquistadores* or the first missionaries were quite different from the colonists arriving in the seventeenth century or those coming into the newly independent nations in the nineteenth century. Within the European immigration, there were also stark social differences that have only been documented and studied quite recently (Abad and Sánchez-Alonso 2018). And yet, European descendants are often conflated today into a single group, presumably a creole elite, which happens to be at the top of the social hierarchy and income distribution in virtually all the countries in Latin America. Skin tone and color differences in phenotypes are only recently being studied, as well as the genetic makeup of various populations, enabling publics and scholars alike to rethink what it means for Latin Americans to claim a European ancestry (Loveman 2014; Tellez 2014).

The Asian influence in Latin America and the Caribbean is barely understood as a significant process. From the first Asians coming in the Manila Galleon, settling in Peru and Mexico, and bringing distillation methods and the cultural influences in ornamentation and the aesthetics of furniture and decorative arts, with the flow of ceramics, silks and other objects remaining in the Americas in the trade through the Pacific lasting centuries. Indentured servants brought from South Asia are still clearly visible in the English-speaking Caribbean and Guyana, with significant Moslem population. The more recent influx after independence of Japanese, Korean and Chinese immigrants was fundamental

components of the social fabric of Sao Paulo and Lima and of many territories throughout Latin America, where they settled in more concentrated numbers.

In short, we are still missing a deep scholarly understanding of the ethnic diversity as well as the social hierarchies and income inequalities that have been inherited by the countries of Latin America from the time when they were colonial possessions of the European imperial powers—not just Spain but also the other competitors and late arrivals to the scramble for the Caribbean or the peculiar process of state formation in Brazil from a colony to the space where the Portuguese Crown took refuge after 1808—to their formation as nascent nations in the nineteenth century. Historians have, of course, documented and reconstructed many of these phenomena in some excellent monographic studies (see Rappaport 2014; Twinam 2015; Vinson 2001, 2017; Restall 2014, among others). But social scientists have mostly lagged behind in paying attention to diverse identities.

#### 4 THE PROBLEMATIC CHARACTER OF THE NATION-STATE AS A UNIT OF ANALYSIS

In the intellectual endeavor of what I may characterize as a new historical political economy of Latin America, the structure of a “case” or a “country” is not reified into a single process or an analytic space that considers the whole political units (a colony, province, country or nation-state). Instead, units of analysis are usually an *n*, a number (large enough to provide statistical power) of independently distributed observations: *encomiendas* geocoded in specific locations; independent plantations from different owners administered in more or less exploitative ways; *pueblos de indios* understood as single political republics dotting the territorial landscape; administrative units such as *corregimientos* and *alcaldias mayores*, with different sale prices, salaries and revenue values; *quilombo* communities of formerly enslaved people escaping to freedom.

With a logic of inference based on a potential outcomes framework (Bisin and Moro 2021), events or occurrences are then coded for the purpose of statistical analysis as single villages, towns, cities, jurisdictions. Very often these units are the modern jurisdictions in the form of municipalities or states; sometimes they are some historical divisions that predate



the independent period, such as *Alcaldías Mayores* or *corregimientos*. And sometimes they are grids of artificial units drawn from a territorial division of the geography into squares or hexagons of an arbitrary size (Michalopoulos and Papaioannou 2013).

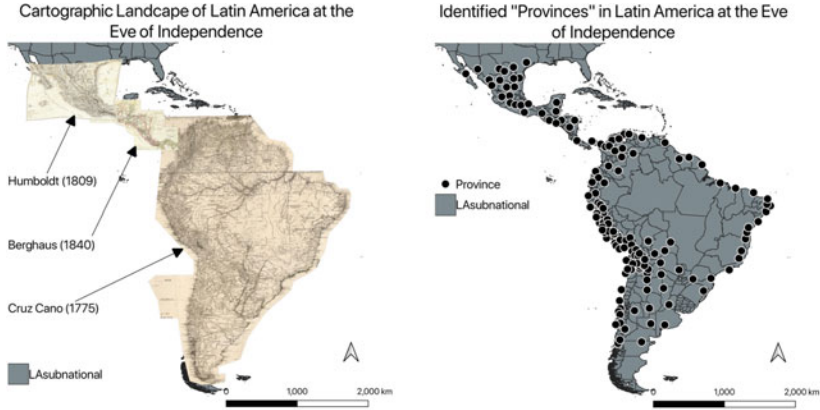
Countries studied today as political units, within a world in which sovereign nations determine the fate of citizens who live within their borders, are usually quite different from the political units that preceded them. Even the units from the late colonial period are quite different from those established in the sixteenth century. An important legacy of the imperial political and administrative order, and in particular, the Bourbon reforms at the end of the colonial period, is that the units seem natural, and scholars often take the existing jurisdictions found in later administrative periods such as the time of independence as valid units for historical analysis. I believe that progress in the historical political economy of Latin America agenda requires greater attention to the intrinsic problem (and endogeneity) of these units of analysis.

To understand the landscape of settlements of Latin America, one can do a historical visualization. In an extreme form, one can imagine a fictitious collaboration between Jesuit mapmaker Juan de la Cruz Cano y Olmedilla, and Alexander von Humboldt, in which a single map covering all the Americas could be produced, without distinguishing any interior borders. In such map, there would be three types of places: cities, that often became provincial or regional centers of power and capital accumulation; a very large number of indigenous towns (*pueblos de indios*), dotting the landscape of rural and semi-urban peripheries, with relatively similar and well-understood structures for the control of land, the local territory and autonomy over resources; and a very vast area of perhaps legible spaces (from the point of view of the imperial Spanish and Portuguese states) inhabited sometimes by surviving nomadic original peoples, the ones resisting the onslaught of the conquest and the subsequent colonial period, other times settled agriculturalists that successfully escaped the control on the colonial metropolis, including indigenous groups in the remote regions of refuge (Aguirre Beltrán 1972), “uncontacted” human groups in the rainforests and the semi-arid regions, as well as non-indigenous African origin settlers who survived the middle passage and escaped from their enslavement organizing themselves into *quilombos*.

The decimation of indigenous societies by the combination of disease and mistreatment probably created territorial landscapes where intense human migrations and movements occurred, particularly during the

sixteenth century, but by the end of the colonial period the pictures that emerge from these maps of Cruz Cano and Humboldt are quite compelling in that they exhibit something very different from a European landscape of proto-nation-states: principalities, autonomous cities of burghers or increasingly more powerful absolutist states. What would eventually become the countries that social scientists study in Latin America were not predictable from that initial configuration. Would a country's extent be determined by the administrative units created by the Spanish bureaucracies and the demarcation of the Tordesillas line? That would have created four main nation-states, New Spain, Tierra Firme, Peru and Brazil, and some peripheral political units in the margins. The Caribbean could have been conformed as a region with some hegemonic power exercised perhaps by a greater Cuba, but the imperial competition of the many European empires including the French and the British, as well as the Dutch and others would have perhaps not allowed for much expansion of the spheres of influence of the Spanish-speaking Caribbean.

At other extreme, one could have a visualization of something like 200 political units, each one centered on the provincial capital. All countries in the region would be something like Uruguay's, or the pattern of nation-states that emerged from the dissolution of the Central American Federation. Instead of *Tierra Firme* dissolving into Colombia, Ecuador and Venezuela, there would have been as many countries as states and departments. Such artificial "Latin America" is depicted in a second map, which shows the *Delegaciones* that were created by the Bourbon Reforms as the politically relevant units of Latin America.



The Creole nation-builders and political entrepreneurs who succeeded in the creation of Latin American independent nations created something that is somewhat similar to the second landscape of provincial capitals, but not quite. They did not create truly inclusive democracies, in that much of the hinterlands of those capitals were not included in the national project of inhabitants of the cities or powerful landed elites. And the tensions between the urban centers that concentrated economic and political power often brought significant tensions and instability, often to the point of civil wars such as those pitting centralists or unitarian national projects vs. federalist or more decentralized visions of state-building. Understanding the legacy of the initial institutions created at the time of independence and their effects on contemporary politics in Latin America probably requires a better understanding of the process formation of the contemporary units, including applying insights regarding the causes behind the size of nations (Alesina and Spolaore 2003; Gallego et al. 2021). And as these processes are better understood, we might be able to shed light on the limits of broadcasted power from the provincial capitals, and how this configured different state capacities both for coercion and extraction as well as participation and political accountability. And the greater awareness of the conditions for communities outside of those provincial urban centers might allow for a better understanding of the current conditions of exclusion and discrimination for Afro-descendants and indigenous communities.

## 5 THE PROMISE OF A LATIN AMERICAN UTOPIA AND HISTORICAL POLITICAL ECONOMY

This book provides profound answers to carefully formulated questions listed at the beginning of this chapter. I am a scholar whose work has primarily concentrated in one country, Mexico. I am challenged when thinking about the problems posed by the authors in this volume, in that there is only one country chapter dealing with “my” country. I would like to know the answers to the pressing questions of historical development in many realms, but as they apply to the specific case of Mexico. As a scholar immersed in a comparative approach to political economy, I also want to see analyses of how each of the questions addressed in this book may have different answers in each of the countries in the Americas and the Caribbean.

Such enterprise would entail, if its scope does not include the small leeward islands of the Caribbean (but including the larger islands of Cuba, Puerto Rico, Haiti-Dominican Republic, Jamaica, Trinidad and Tobago, as well as the three Guyanas, Belize, Canada and the United States)—a book to be written about 29 countries multiplied by 20 topics... that is, 580 chapters! And the number could be further multiplied, in keeping with the previous discussion, if we were to recognize that the territories of what we often consider a single country have as much variance as those that are sovereign nations (adding perhaps one hundred state, departmental or provincial “cases”; thousands of municipal ones).

The good news, however, is that with each chapter in this book we are provided with a template for how scholars in remaining countries in the hemisphere could pursue further research. This gives me ground for optimism in the scholarly front: we are not going to run out of research questions. There is plenty of space for novel research waiting to be done within this scholarly agenda.

What might be missing from the Latin American (and Caribbean)-focused political economy contained in this book? One may seek for inspiration in work done elsewhere, in other regions in the world. On the one hand, the Europeanist political science literature has been obsessed with understanding how political polarization works in the context of deindustrialization, the uncertain future of work and the compensatory mechanisms the state provides. European advanced democracies are under stress as the processes of globalization and liberalism made it increasingly difficult to pay for the welfare state. This was compounded by an added

fear related to the way political systems processed citizen attitudes and beliefs related to immigration and the construction by citizens of how they conceive the imagined community of who belongs in Europe.

On the other hand, political economy scholarship on Africa has made huge strides in revisiting the impact of colonial extraction and the way in which the legacy of the institutional forms brought by European powers is still present today, as independent nations attempt to construct stronger states, autonomous and professional bureaucracies and modes of interaction among groups that are ethnically divided producing powerful cleavages organizing the political arena. In Asia the extremely fast economic growth of the past decades, fueled by precisely the same processes of globalization feared by many Europeans, might be slowing down, as China casts a large shadow on the geopolitics of the region.

Latin American political economists have not neglected these topics, considering for example, the impact of China as both competitor and investor, the emergence of ethnic and in particular indigenous cleavages as divisive forces within the configuration of political coalitions, or the conundrum of how to pay for a truncated but increasingly more expensive welfare state in the region. But issues such as global politics focused on the Pacific, the multidimensional or intersectional construction of ethnicity, or the understanding of public strains on welfare institutions and social solidarity, particularly from a long-term perspective, are in my opinion comparatively less understood in Latin America and the Caribbean than in other regions of the world.

In closing, I want to finish by noting that these chapters convince me that most of us, scholars of development in Latin America, still hope for a better future. Latin American Utopias are not new. They are as old as the moment of contact between the “old” and the “new” world, when Europeans, Indigenous Americans and Africans clashed, survived and eventually accommodated to each other. Utopias in Latin America and the Caribbean continue and become reinvented all the time. The first translation into Spanish of Thomas More’s *Utopia* was recently found in Manuscript 1087 of the Real Biblioteca del Palacio Real in Madrid (Lillo Castañ 2022). The translation was made very early in the colonial period, in 1535, by none other than Vasco de Quiroga, known as Tata Vasco among the Pur’epicha indigenous peoples of Western Mexico. Tata Vasco initiated an ambitious project of social, political and economic development centered around two hospitals of the Holy Faith, Santa Fe, one next to México-Tenochtitlan founded in 1532, and the other one, with

the same name, founded in 1533 in the shores of Lake Pátzcuaro. The utopian hospital towns were established in the immediate vicinity of the imperial capitals of the two Empires that had dominated, at that time of the conquest, what today is called Mexico.

To this day, the towns in the shores of Lake Pátzcuaro in Michoacán have a development model originally conceived by Vasco de Quiroga, inspired by the humanist ideas of Erasmus and More, combined with the indigenous values of protection of the territory and assertion of political autonomy through traditional governance institutions. The villages and towns have specialized in highly skill crafts, producing and trading not only regionally, but internationally. And they have succeeded in preserving their ancestral cultural traits.

The other Santa Fe, next to Mexico City, had a different fate, soon failing as a hospital of Indians early in the sixteenth century, eventually falling in disrepair, leaving virtually no trace, except for some decayed buildings. Mines in the area provided building materials for the growing city, and in the 1958 the city government used the eroded canyons as landfills, with thousands of extreme poor families living among the waste, recovering any useful items they could sell. At the end of the twentieth century, Santa Fe was transformed into a different utopia: it became the location of banks, corporate offices, malls, hotels and restaurants, serving the international community booming after the North American Free Trade Agreement (NAFTA). The Santa Fe next to Mexico City is an urban development established for the rich professionals working in the global economy, the top 1% of Mexican society, with a lifestyle that resembles more that of Houston, rather than any historical Latin American urban space.

Thomas More Utopia hence inspired two Santa Fe hospitals, each with dramatically different legacies. These tensions were present in the Latin American landscape since the very beginning, when considering not just the somewhat romanticized story of Vasco de Quiroga, but the other individual involved in bringing European utopian thoughts to the Americas. The copy of Utopia that Vasco de Quiroga used for the recently discovered translation was most likely brought to the Americas by none other than Fray Juan de Zumárraga, the “protector of the Indians”, founder of schools for indigenous boys and girls, the introducer of the first printing press in the Americas, but also the bearer of the Inquisition to New Spain and a defender of *encomenderos*, who convinced the King to suspend the

progressive New Laws of 1542 that were meant to vindicate the human rights advocacy of Fray Bartolome de las Casas.

That copy is kept at the library of the University of Texas, and includes annotations penned by the Archbishop, highlighting the absurd quest for gold, and ideas regarding the organization of work and industry. His notes include communitarian ideas about work and the collectivity, such as: “nobody remains idle” and “30 families eat together” (cited in Kubler 1948). Zumárraga neatly summarizes the profound contradictions of the colonial enterprise in the Americas: a political project that could have included the indigenous peoples and some of the most advanced ideas circulating in Europe, weighted by the profound contradictions of individual colonists vested in an exploitative colonial order with extractive and rent-seeking imperatives. Such contradictions have survived, in the many different utopias presented by political leaders in Latin America today. Meanwhile, the utopias of the surviving original peoples, the indigenous communities stubbornly defying the center from the peripheries or the brave Africans who escaped their captors, and the complex intermingling of all these peoples with the rich and the poor settlers from European origin and the later waves of Asian settlers are barely heard, but they do exist.

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# Correction to: Political Conflict and Economic Growth in Post-independence Venezuela

*Dorothy Kronick and Francisco Rodríguez*

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The original version of the chapter was inadvertently published with missing details in Figure 2 of Chapter 11, which has now been corrected. The chapter has been updated with the changes.

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