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LSE-Stanford-Universidad de los Andes Conference on Long-Run Development in Latin  
America, London School of Economics and Political Science, 16-17 May 2018

# Justice as Checks and Balances: Indigenous Claims in the Courts of Colonial Mexico

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Prepared for the Stanford-LSE-UniAndes conference on long-run development at the  
London School of Economics and Political Science

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May 11, 2018

## Abstract

During three centuries of colonial ruling, the Indigenous communities of the Spanish Empire sent thousands of claims and legal complaints against European settlers and corrupt local officials to the courts administered by the Spanish crown. In many cases, the Indigenous communities were granted official protection. In this paper, I explore the incentives of the crown to protect the Indigenous people and their communal lands. I advance a theory to explain an institutional framework designed to protect the exploited group in an extractive setting. In this theory, I predict that the ruler will provide legal protection to the Indigenous claimants when local elites threaten its power and the productivity of the colony, thus creating de facto checks and balances. To test the predictions of this theory, I analyze the question of when the crown granted protection to the Indigenous groups or ignored their claims. Combining machine learning and paleographic techniques, I provide evidence of a textual analysis of 30,000+ indigenous claims in colonial Mexico from 1597 to 1820. I argue that, although extractive in nature, the colonial institutional framework recognized indigenous property rights and access to justice. The disappearance of this 'weapon of the weak' after the independence wars perhaps made the indigenous communities more vulnerable to extraction from the political and economic elite.

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\*This paper has benefited from comments by Lisa Blaydes, Steve Haber, Lindsay Hundley, Saumitra Jha, David Laitin, Beatriz Magaloni, Emily Sellars, Shea Streeter, Jeremy Weinstein, and participants at the Latin American Working Group at Stanford. I am particularly grateful to Alberto Diaz Cayeros for sharing data and his vast knowledge on colonial Mexico. I thank Linda Arnold for pointing me out to the AGN dataset. I am also thankful to the classifying team (Aline Aragón, Belén Barcenas, Daniela Díaz, Karina Gómez, David Jaurrieta, Paloma Lever, Quetzali Ramírez, Sofía Rogers, Luciano Rodríguez, Fernando Ruiloba, Iván Zamorano) for creating the labels used in the machine learning algorithm and Alondra Rodríguez for coordinating the training workshop. I thank Eduardo Monroy for the paleographic transcription of the documents and for his insights on Mexican history. I also thank the staff of the Bancroft Library at Berkeley for their assistance in locating the Borah-Simpson files. This project benefited from funding from the DDRO.

# 1 Introduction

In the eve of 1640, a delegation of Indians from the village of San Miguel Mesquitic entered Mexico City after a two week trip with the mission of seeking help against a Spaniard who was invading their communal land. These Indians were only one of the many who channeled their grievances to the General Indian Court (*Juzgado General de Indios*) established in 1592 to protect Indigenous communities and their lands against abuses by the local elite.<sup>1</sup> In colonial Mexico, Indigenous communities were well aware of the inner functioning of the courts. The Indians of San Miguel Mesquitic, for example, had already in mind the name of a public defendant to represent them, as well as a previous case to serve as a precedent for their own claim.<sup>2</sup> In this paper, I address the incentives of a colonial power to establish and maintain an institution devoted to protect its more vulnerable subjects. By doing so, I also explore why the Indians of colonial Mexico used the Spanish court to seek protection against abuses by landholders and corrupt local officials.

Colonial institutions have an important place in the study of economic and political development (Acemoglu et al., 2001, 2002; Dell, 2010; Lawrence, 2007). However, our understanding of how these institutions worked and how they shaped the incentives in the long-run of the different actors involved is still limited. In the case of Latin America, most of the current research is still obscured by assumptions with an origin in the so called *Black Legend*, a historical interpretation that highlights the cruelty of intolerance of the Spanish empire.<sup>3</sup> Moreover, the sparsity of data and the difficulty to obtain reliable datasets makes it hard to make empirical-based claims. At first, the existence of an institution like the

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<sup>1</sup>The court operated until the end of the colonial period and processed thousands of claims regarding land invasions, physical abuses, forced labor, unfair taxation, among many others. For a historical analysis on this court see Borah (1985)

<sup>2</sup> This case is presented in full detail by (Owensby, 2008, p. 50-52) based on AGNI 12.47.190v-192v (40).

<sup>3</sup> According to Lockhart (1992) the Black Legend or *Leyenda Negra* "builds upon the record of deliberate sadism. It flourishes in an atmosphere of indignation which removes the issue from the category of objective understanding. It is insufficient in its understanding of institutions of colonial history." Recent work has debunked some of the claims from the black legend. For example, in the contexts of the Spanish Inquisition by building an archival dataset Contreras and Henningsen (1986) show that there were actually very few killings; Vidal-Robert et al. (2013) shows that the main motivation for the crow was to control rebellion rather than impose religion or extract wealth from minorities.

General Indian Court and the systematic use of it by Indigenous communities seems puzzling because it contradicts the paradigm of extractive institutions in which elites maximize their profit by exploiting the rest of the population. I argue that the Spanish crown provided legal protection to Indians as a mechanism to balance the distribution of power in the colonies. By allowing indigenous claimants to bring their grievances to the court, Indigenous villages became an instrument to keep the local powers in check. In line with recent historiographic work, I recognize that, although extractive in nature, “the caste system of the New World deliberately weakened the grip of local conquerors and magnates on the underlying indigenous population”, and guaranteed access to land to the indigenous population (Coatsworth and Tortella-Casares, 2002). Moreover, I claim that although exploitation defined colonization in many ways, the legal tools to resist land invasions, ruthless working conditions, and arbitrary imprisonment also shaped the political, economic, and social landscape of modern Latin America.

In this paper, I maintain that providing legal tools to the Indians was an institutional innovation to solve a principal-agent dilemma faced by the Spanish crown. Spanish settlers and local caciques were in charge of collecting revenue in the colony via Indian labor.<sup>4</sup> These agents also had the incentives to increase their own wealth by appropriating Indian communal lands and over-exploiting Indian labor. Confronted with the potential of losing control of the colony to the local elite (by land concentration), and challenged by the threat of demographic decline of Indian labor, the crown allowed –and even encouraged– Indigenous claimants to present their grievances to the representatives of the king. High monitoring costs meant that a more centralized legal system was simply untenable.<sup>5</sup> Under those circumstances, the Spanish crown had to balance two competing goals: i) increasing revenue through extraction of Indian labor and, ii) protecting the indigenous groups from abuses of the local elite.

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<sup>4</sup>Over time, the crown increased the bureaucratic apparatus and transitioned to direct ruling. However, I argue that given the incentives of local bureaucrats to partner with the landed elite this process had a little impact in the underlying problem faced by the crown and the Indigenous population.

<sup>5</sup>The centralization of the bureaucratic system only started until the arrival of the Bourbon house to power in the eighteenth century. Although there is a general decline of claims by Indian communities in that period, the system was maintained.

When was the crown more likely to side with the Indians and when with the elites? In this paper, I formalize this question with a principal-agent model with three actors: i) the crown, ii) the local elites and, iii) the Indian communities. In the model, I assume that the crown would tolerate elite's abuses as long as the productivity of the Indian population is sustainable and the probability of land concentration is low. The main prediction of the model is that the crown will engage in legal protection to the Indigenous communities when Indian population is low and the power of the local elites is perceived as a threat to the crown. In cases where local elites are powerful but Indian population is not under demographic pressure, the crown will avoid engagement by resorting to a local balance of powers. To provide empirical evidence of these claims I combine quantitative and qualitative techniques, using a novel dataset of over 30,000 court cases from the 16<sup>th</sup> to the 19<sup>th</sup> centuries, and paleographic transcriptions from a number of documents.<sup>6</sup> In general, the empirical evidence supports the hypothesis that more protection to Indians happens when the local elite is powerful and the Indian population is under decline.

The main source of information used in this paper are the thousands of documents stored in the Mexican National Archives (*Archivo General de la Nacion*, or AGN) under the Indians sub-archive, and processed by the General Indian Court between 1592 and 1820. Despite the vast number of records documenting the legal activity within the colony in general, and the Indian involvement in particular, this source remains widely understudied.<sup>7</sup> To explore the breadth of these documents I employ text analysis techniques to analyze the content of the entire corpus. The unit of analysis is the archivist summary of the claim which contains the basic information regarding a particular file, that is, the year of the case, the claimant, and a main elements of the case. Using these summaries, I identify cases with a high probability of granting protection to indigenous groups. In the period of study, 18 percent of the cases used protection-related language. These cases tend to be associated with land conflicts and settings where abuses to the

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<sup>6</sup>Paleography refers to the study and transcription of ancient writing (Silva Prada 2001). In particular, I follow the concept of diplomatic paleography, which includes the meta-analysis of a document (seals, paper usage, etc.).

<sup>7</sup>Owensby (2008) [p.3] points out to the “mismatch between the volume of legal documentation involving Indians and the attention historians have paid to the process they represent”.

Indian population were more likely (e.g. mining districts).

To explore the depth of these cases I complement my findings by a direct transcription of a number of cases using paleographic techniques.<sup>8</sup> These transcriptions allow me to provide more texture to the cases by understanding the intricacies of the Indian Court and the incentives of each actor as stated in their own words.

In this paper, I focus on the case of colonial Mexico, but with an eye towards I assume to be a wider phenomenon. Across history, autocratic rulers created protective systems to their subjects and offered concessions in order to constrain local elites.<sup>9</sup> Max Weber famously argued that states have some functions that are not necessarily aligned with particular social groups.<sup>10</sup> The literature in political economy has focused on concessions to the middle class and the poor in detriment of the elites in times of revolutionary threat (Acemoglu and Robinson, 2005) or massed conscription (Scheve and Stasavage, 2010). In this paper I contribute to this debate providing an alternative explanation of the strategic logic of the rulers and the poor to create a coalition against local elites. This paper also provides an explanation of the establishment of a legal system.

This paper also contributes to the literature on colonial governance. Scholars have used abstract categories to differentiate distinct forms of colonization. In particular, there is a broad literature exploring the differences between ‘extractive’ and ‘inclusive’ forms of colonization. Under these theoretical lenses, New Spain would fall in the extractive category. In contrast, in recent work, historians have provided evidence of the Indian agency and capacity to resist, survive and adapt colonization (Van Deusen, 2015; Yannakakis, 2012). In this paper, I provide evidence of the existence of a legal system which, if not perfectly, offered access to justice to the Indians. At the same time, I show how Indians appropriated the legal language of the Spaniards. The number, detail and language of the claims presented to the Spanish courts over 250 years show how these

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<sup>9</sup>For example the Poor Laws in Tudor and Elizabethan England (Boyer, 2006), or royal petitions in medieval Europe (Ormrod et al., 2009).

<sup>10</sup>See Weber’s discussion on the conditions in East-Prussia and the Junker class.

groups internalized the ruling system of the colonizer. In James Scott’s words, the legal system of the Spanish Empire became a “weapon of the weak”. I argue that through their community-wide efforts of bringing claims to the courts, these groups were instrumental to the state-building process.

In the next section, I advance a theory of the principal agent dilemma faced by the ruler in a colonial setting. I illustrate this dilemma with the case of colonial Mexico by introducing the general background that gave origin to the General Indian Court, and by providing qualitative evidence from particular court cases.

## 2 A Principal-Agent Dilemma and Coalition Incentives in Colonial Mexico

### 2.1 The Origins of the Indian Court

The conquest of Mexico began with the arrival of a group of Spanish soldiers under the command of Hernan Cortes in 1519. This group of less than 1,000 men was a motley assortment of professional soldiers, adventurers and friars. Early on, Cortes learned that the Aztec Empire controlled the territory and marched towards Aztec capital, Tenochtitlan. Thanks to a combination of alliances with Aztec’s enemies, military skills and luck Cortes’ army managed to defeat the Aztecs. During the first years of the colony, the territory was scattered among Cortes’ men in private landholdings called *encomiendas*. An *encomendero* had the right to demand tribute and labor from the Indian inhabitants in a given territory, sending part of the revenue to the crown.

The abusive nature of the *encomienda* system, combined with a series of epidemics, caused a catastrophic collapse of the Indian population. From 1518 to 1622, the Indigenous population dwindled from 22 million to less than a million (Acuna-Soto et al., 2002). During this period, the crown started a transition towards direct ruling with the establishment of a network of bureaucrats (Sellars and Garfias, 2017). Between 1531 and 1535, the *corregimientos*, a fourteenth century Iberian institution were established in New Spain. The *corregidores* acted as crown administrators, magistrates, tribute collec-

tors and constables on a local level. This institutional design also relied heavily on the structure of indigenous governance, delegating tax collection and local order to Indian notables, known as *caciques*. Although these bureaucrats were supposed to act as agents of the crown, in many cases they deviated from its objectives when they were captured by the local elite with the objective of capturing rent. Corruption of the local bureaucracy, was thus a major concern for the crown.

The demographic collapse of the Indian population and the complaints raised by the church and the Indians themselves on their mistreatment by *encomenderos*, *caciques* or local bureaucrats fueled a vibrant philosophical and legal debate about the responsibilities of the crown towards the Indians. The Spanish legal body at the time of the contact with the Americas in the 16th century had its roots in Roman Law. One of the milestones of this legal theory was the so called *Ius Gentium* (Law of Nations), which established that different nations could have their own customary laws as long as these do not contradict Christian morals and the natural law. The *Ius Gentium* provided a philosophical foundation for the first regulations of the New Spain, published in 1530. These regulations established that to protect the Indian population a physical separation between them and Spanish was required. The two populations should then live in two separate “republics” under the same king. The laws of 1530 also established the right of the Indians to appeal to the local bureaucracy for legal restitution. Although during the first part of the sixteenth century the Indians were subject to *encomienda*, by law at least their land could not be taken, and after 1550, they could not be enslaved.

The system of local justice was problematic because local bureaucrats had strong incentives to favor local elites (Borah, 1970). Moreover, because the language of the processes was in Spanish, many Indians had to hire translators and legal aid, incurring in high expenses. Despite these limitations, the number of legal cases increased in three categories: civil, criminal, and administrative. Although this system integrated the Indians within the Spanish legal system and offered them a way to solve disputes, it was also an increasing burden for Indigenous communities. The process also was inefficient as some cases extended unnecessarily while others were disregarded. The crown then



established the institution of the Public Defendant of Indians (*Procurador General de Indios*), a salaried bureaucrat with the mandate to advise Indians in legal matters. The second step to take away the final verdict from local judges was inspired in the network of judges, public defendants and notaries from the viceroyalty of Peru. This network was funded by a local tax with no additional costs for the Indians. In New Spain, this system was replicated with the difference that the viceroy also had the jurisdiction to investigate abuses by local governors, judges, and local bureaucrats. The institution was then a powerful tool to limit abuses not only by the local elite, but also by the bureaucrats. The Juzgado had its first session in 1592 and continued operating over the next two centuries.<sup>11</sup>

## 2.2 The Functioning of the Court

The legal protection granted to the Indian communities of New Spain could only work with the direct involvement of the Indians. The thousands of claims sent to the Indian Court illustrate how the Indians became part of the Spanish legal system. The Indians communities understood that the law was a real opportunity for restitution and justice and they were willing to pay the costs associated to bringing a claim to the court. Although the functionaries of the court received a salary from the local Indian tax, there were organizational costs involving community-wide efforts for funding a delegation to travel to Mexico City. In some cases, many communities had to come together to present a single claim. Presenting a claim could also involve additional costs such as paying translators and bringing witnesses to the Court. At the same time, local elites could exert additional pressure to the claimants to drop the case. Finally, since the claims could extend for months and even years, Indian communities needed maintain these efforts. From a strategic point of view, Indian communities only could incur in such investment if there was a possibility of retribution.

Through centuries of contact with the law as a mechanism for conflict resolution,

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<sup>11</sup>Borah (1970) refers to this system as ‘justice by insurance’ since Indian communities had the incentives to pay the local tax to support the court because they assumed they might needed one day.

Indian petitioners claimed the legal vocabulary and made it their own. Indian claims are filled with terms such as “help us and protect us”, “the powerful hand of the king”, and “we are poor tributaries”. These words connected them to the distant figure of the Spanish king and reaffirmed their vulnerability. It is impossible to understand the rise of Indian claims and the relevance of the Indian court without recognizing the mutual benefit it brought to the Indians and the crown. In some sense, ordinary Indians were the first line of enforcement for the king’s laws and viceroy’s orders (Owensby, 2008).

Colonial Mexico was an agrarian society, as such, land and labor were the two main sources of conflict. Local elites required Indians to work their lands, build their cities, and –in general- maintain a continuous production. Productive land was also a scarce resource, and there was a constant struggle to define the boundaries between Indian towns and neighboring haciendas. Building on paleographic transcriptions of full cases, I illustrate how the Juzgado solved clashes between Indians and local elites under different circumstances, resulting in diverse outcomes.

### **2.2.1 Protecting Land**

Even before the arrival of the Spaniards land was a constant source of struggle among Indigenous communities (Lockhart, 1992). The conquest and the arrival of new comers increased the conflicts over land ownership. With the publishing of the Indian Laws of 1542 the crown denied de facto property of Indian land to the encomenderos with the objective of preventing the emergence of a landed aristocracy. The encomienda system allowed control of Indian labor of a given territory, but not ownership of their lands. Yet Spaniards found ways to gain control over land property. Demographic decline during the mid-sixteenth century allowed encomenderos and new comers to claim possession over vacant lands. By granting land ownership to Spaniards the crown ensured agricultural production, but also increased the possibilities of mistreatment of Indians and the rising of a landed elite. As the Indian population started to recover, as well as land value increased, legal battles over land ownership gained significance. Indigenous communities reclaimed their lands and complained against invasions by Spaniards. Thus, providing

protection to these Indian communal lands might mean perhaps lower production but also the survival of the Indian population and the limiting of the landed elite. Again, the crown and the royal courts saw themselves trying to balance the competing goals of maintaining a productive colony and protecting the Indian population.

Between 1550 and 1820 there were at least 3,550 land related cases. In several occasions these cases included detailed painted maps submitted as evidence (Figure 1), but from the most part there are formal legal documents with a complete awareness of the legal language and procedures. Spanish settlers resorted to all kind of tactics to increase their property, from blatant violence to subverted corruption. In a world where their only ally seem to be a distant king and their representatives in Mexico City, Indian communities challenged land grabs in court, even though there was never a complete certainty that the law would be on their side. To provide further texture to the struggle of land in colonial Mexico, I present two cases of land conflict, one with a positive outcome to the Indians and one with a negative outcome.

- **Metepéc 1680.-** In 1677, the Indians of the community of San Miguel Almoloya in the province of Metepéc received a license allowing them to repopulate their ancient lands in the abandoned town of Santa María Nativitas. The town probably was abandoned due to the cocolitzi plague of 1642, or one of the many aftershocks in the following years (Gerhard, 1972). Three years later, as the Indians were rebuilding the town a group of men invaded the town in the middle of the night, lit their precarious houses on fire, stole some religious images from the church, and assaulted the residents. The Indians presented a claim to the Juzgado which started a proper investigation of the case.

During the investigation, it came to light that the men who invaded the town were under the orders of the Count of Santiago, a Spaniard nobleman who claimed possession. Finally, the viceroy himself sent a decree granting property to the Indians. Moreover, the viceroy ordered a receptor (a court bureaucrat) to enforce the decree and travel to the area to “restitute possession” of the land.

Figure 1: Mapping a land claim



Techialoyan land records San Juan Tolcayuca Mexico. Aztec, seventeenth century Manuscript map on amate (fig tree bark) paper Jay I. Kislak Collection Rare Book and Special Collections Division, Library of Congress (7.1)

- **Tesayuca 1691.-** In June 1691, the residents and leaders of the Indian town of Tesayuca, Texcoco, arrived to Mexico City to present a claim in the Juzgado. They complained that a Spanish farmer, Gerónimo de Guzmán, had invaded and taken a piece of land called Tetitlan. They presented two documents, a vicerregal order from 1552 and an amparo from 1641.<sup>12</sup> At first, the viceroy and the judges issued a statement protecting the Indian property but Guzman filed a motion to suspend the order.

The local officer (alcalde mayor) was refusing to cooperate with the Juzgado until a second order was sent in July 21. The alcalde finally sent his lieutenant who found that Guzman was cultivating the land. The alcalde then claimed that this was a proof that Guzman was the rightful owner. Not happy with this result, Tesayuca residents and leaders went again to the Juzgado to continue the lawsuit. From thereof arguments started to heat on: Tesayuca Indians claimed that the more than century year old order of 1552 proved that they have possessed the Tetitlan land “from time immemorial”; Guzman responded claiming that the order referred to a piece of land called Etetitlan and not Tetitlan, he also presented some of his workers as witnesses to prove that the land was productive; in 1693 the audiencia ruled in favor of Guzman but granted both parties access to water; in the face of this loss Tesayuca hired a new lawyer who called Guzman’s move “repugnant to all reason”; Guzman replied again asking to reverse access to water to the Indians. The Juzgado confirmed its original decision but Tesayuca continued pressing the matter. Finally, in 1695 the audiencia imposed a final closing to the case. Tesayuca had lost.

The cases presented above are only two of the many brought to the Indian court. They coincide in the initial taking of land by a Spaniard and the legal response by the Indians. In both cases the Indians put together a small embassy to make the trip to Mexico City, they hired a procurador to defend them in court, legal documentation was plentiful and well kept. Both provinces are about the same distance from Mexico City. There are, however, some subtle differences. Whereas the Indians of Metepec had just

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<sup>12</sup>The amparo is a legal document issued by the Juzgado, usually directed to local officials.

been recovering from a devastating epidemics, population concerns do not appear in the Tesayuca case. Metepec appears also to be a case with a lack of local authority since a local bureaucrat such as an *alcalde mayor* or a *corregidor* is never mentioned. The Count of Santiago seems to be a powerful nobleman with no restraint of using hired thugs to harass the Indians. On the contrary, in Tesayuca the local authority plays an important role. Although the *alcalde mayor* inevitably sides with Guzman on the land issue, it follows the orders from the *Juzgado* to provide water rights to the Indians of Tesayuca.

It is impossible be sure if the Count of Santiago returned the lands to the Indians of Metepec, or that the bureaucrat sent by the viceroy followed his orders thoroughly. We do know, however, that the village of Santa Maria Nativitas still existed in 1800 with a population of 414 Indians<sup>13</sup> and it continues existing today with more than 3,500 people.<sup>14</sup> Perhaps, without a positive resolution by the *Juzgado* the destiny of the town would have been very different. Perhaps it would have ended up like Tetitlan for which there is no further register.

### 2.2.2 Protecting People

Demographic history of colonial Mexico is marked by constant epidemics. Gerhard (1972) registers at least 33 episodes between 1520 and 1800. Entire areas were depopulated particularly between 1520 and 1600, when demographic recovery started with local exceptions. This posed a threat to the entire colony since agricultural productivity relied on Indian labor. At the end of the sixteenth century the crown started a program to resettle the remaining Indian population in towns with traditional Spanish grid patterns. These Indian villages remained separated from the Spanish population who lived in compact cities and haciendas. The history of labor in New Spain has two main stages. The first one is the *encomienda* system during the sixteen century in which *encomenderos* had the right to demand labor from the local population. The second one is the so called *repartimiento*, in which Spanish settlers, churchmen, officials or Indian *caciques* would be given a number of indigenous workers (usually 4% of taxpayers) to work in agricul-

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<sup>13</sup>According to data by Dorothy Tanck de Estrada

<sup>14</sup>INEGI

ture, construction or household chores. The Juzgado gave the Indians a mechanism to complain against abuses perpetrated against them. Here I illustrate two cases in which the Indians brought their claims to the Juzgado regarding labor, each with a different outcome for the Indians.

- **Tlapan 1785.-** In May of 1784 Hipolito Villaorel arrived to New Spain. He had been appointed adviser to the audiencia and alcalde mayor of Tlapan. A few months later he was accused of corruption and misappropriation of resources. In particular, the Indians of Tlapan argued that he did not pay them their respective salaries for their work at a textile factory. Mr. Villaroel replied that he was keeping the money to protect the Indians since they were likely to spend that money on alcohol.

The local priests testified against Villaroel, claiming that he and his henchmen inflicted physical abuses to the Indians. Moreover, he was keeping to himself the funds earmarked for hiring a teacher. The Juzgado ruled against Villaroel and issued two fines, one for seven thousand pesos and one for 972 pesos, although he avoided prison. Interestingly, the King himself revised and approved the sentence against Villaroel.

- **Meztitlan 1783.-** In April of 1783, the Indians of San Francisco Tlahuelompa in the Meztitlan province presented a complaint against the local alcalde mayor, the priest and the Indian governor. The Indians argued that the local priest was pressing them to work in the head town and to provide hay to neighboring localities. The main concern of the Indians is that these are involuntary services and that they have to travel long distances to perform them.

The Juzgado questioned the local priest who gave his own account against the Indians, accusing them of being "disobedient and lazy". The Juzgado also sent some supervisors to question local residents but only three actually declared against the priest. Moreover, the priest was backed up by the archbishop. In November of 1783 the Juzgado came together again with the collected evidence and claimed that the Indians have the obligation to perform those services to the priest who has only treated them "in a soft and paternal manner" then closing the case.

Again, these cases have several similarities: the strategic use of the court by the Indians, the careful legal procedure and the nature of the claim. However, they differ in their outcome. The Indians of Tlapan succeeded and received a financial retribution. A plausible reason is that the local *alcalde*, Villaroel, was a powerful Spaniard using his authority to increase his wealth at the expense of the Indians. There was a general agreement between the Indians and the local church that Villaroel's actions were disrupting daily life. On the contrary, in Meztitlan local power was not a threat to the crown. The local priests' actions seemed to be innocuous enough to the point that only three members of the community declared against him.

The qualitative evidence from these cases points out to some patterns in the functioning of the Indian court. Although the legal system offered some possibilities of retribution there was always a chance that the balance would tip in favor of the local elites. To have better understanding of the strategic logic behind those decisions, I offer a formal approach of when and where it was more profitable for the crown to side with the Indians than with the local elite.

### **2.3 The strategic logic of redistributive justice**

Although the spirit of this paper is empirical, I find it useful to explain the strategic logic that leads to the establishment of a court using game theory. In the following section, I layout the structure and intuition of the model, leaving some specifics for the appendix. The first part of the model explains the emergence of an institution created to protect the Indigenous people—not to achieve justice, but to reach optimal exploitation. In the second part, I turn to performance variation of this institution.

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### 2.3.1 Players and actions

The model has three actors: 1) The Settler-Bureaucrat coalition identified as Settlers (S);<sup>15</sup> 2) the ruler identified here as the Crown (C), and, 3) the Indigenous People (IP). The model assumes that in a previous period S colonized indigenous lands for C, and that, in return, C grants the right to seize a proportion  $\theta$  of the revenue produced by IP. C keeps a proportion  $\lambda$  for itself, and IP might get a remainder  $1 - \theta - \lambda \geq 0$ .

The reasons why S decided to remain loyal to C in this initial period instead of taking the new land for themselves are unmodeled, but we could argue that respecting the Crown's legitimacy operated as a kind of insurance for the settlers in the event they needed to return to their homeland. It is also arguable that S internalization of this legitimacy bounded its actions.<sup>16</sup> S can, however, over-extract IP's resources, which is not within C's interest. An underlying assumption is that, contrary to S, C is a long-term optimizer, and knows that if IP is over-extracted the population would be decimated, thus eliminating future revenue. In other words, there are different optimal levels of extraction preferred by C and S.

The assumption of different time discount rates for S and C is not particularly strong. Even if local landlords were relatively forward looking, they were probably internalizing the profits of one or two generations, at most. On the other hand, with the Church as a role model, the Crown probably saw a time horizon spanning for centuries or millennia.

### 2.3.2 Reaching an institutional solution

First, the strategic logic of setting up an institution must be explained. The sequence of the game is as follows:

1. In the first stage, C decides whether to establish an institution to control S's over-

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<sup>15</sup>Here, it is important to note that I reduce two actors (settlers and bureaucrats) into a single one because I assume they share the same interests, at least for the purposes of this model. Although a plausible extension for the model is that bureaucrats might vary in their degree of loyalty to the Crown, here I assume all bureaucrats would choose to side with the settlers.

<sup>16</sup>This assumption is in line with colonial history. After arriving at a new territory, one of the settlers' first official acts was granting the land to the Crown, who had no means to monitor or punish them. In the later colonial period, although settlers contested the Crown's policies, the idea of disrespecting the King/Queen was off limits.

- extractive behavior. This institution gives C the instruments to punish S's behavior.
2. After observing C's actions, S decides to over-extract or extract at an optimal level. Over-extraction implies getting an extra cut  $\bar{\theta}$ , which comes from both S and IP revenue.
  3. A. If S decides to extract at an optimal level, the IP has the option to either rebel or do nothing. An Indigenous rebellion is costly to both S and C. There is a probability  $Pr(\mu)$  that IP wins the rebellion, which is known by all actors, thus the game ends with a costly lottery. If IP decide to do nothing, the game ends mechanically.
  - B. If S decides to over-extract, IP again has the option of rebellion or passivity, but, if C established institutions in the previous stage, a third option arises: to bring its complaint against S to court and get relief via a redistributive payment with probability  $Pr(h)$ .

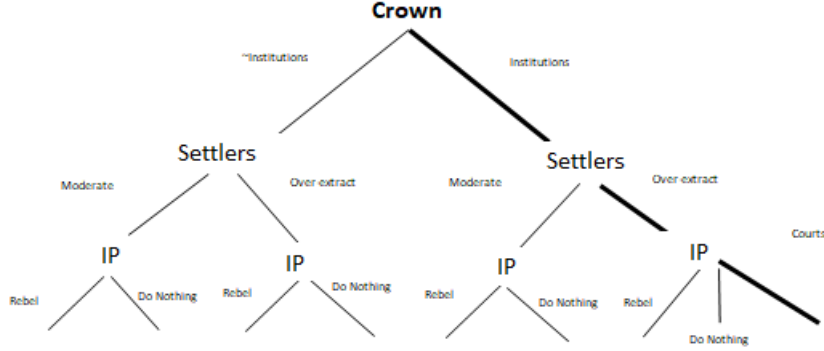
Figure 1 illustrates this sequence visually with a tree. The specific preferences and the solution appear in Appendix 1.1. Assuming that S decides to over-extract, we obtain:

**Proposition 1** *For a ruler, an institutional solution is optimal if their relative costs setting up an institution are lower than the potential benefit of defeating an indigenous rebellion plus the losses of over extraction. In other words, a rational ruler would chose to accept over extraction as long as the probability of a successful indigenous rebellion is low enough.*

**Lemma 2** *If the potential benefits for the settlers with over-extraction are larger than the potential benefits of defeating the indigenous group in a rebellion, they will chose to over-extract.*

**Lemma 3** *For the indigenous group, under over-extraction, they will chose to go to court if their costs of collective action are low enough.*

Figure 2: Decision Tree for Institutional Solution Game



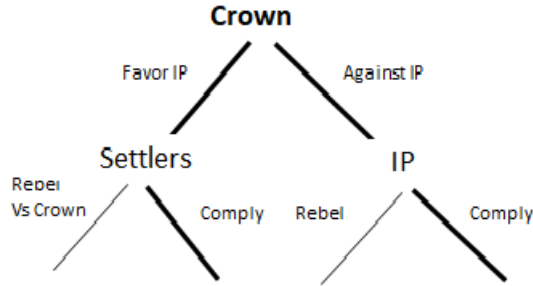
### 2.3.3 The variation of court rulings

At this point, the model explains why C decides to set up institutions. However, if we are interested also in the variation of the decision of C to punish or not to punish S (equivalently, protect or not protect IP), we can extend the game, and assume that, in the equilibrium path, IP already decided to bring its complaint to court. Then, instead of assuming that the solution of the case follows a stochastic process, we can reassign this decision to C. In this case, the game continues as follows:

1. Once the claim reaches the court, C can decide to rule in favor or against IP.
2. A. If C rules in favor of IP, S has the option of complying with or rebelling against the Crown. In the first case, S loses  $\bar{\theta}$ , and the game ends mechanically. If there is a rebellion, S wins with probability  $Pr(x)$ .
  - B. If C rules against IP, they have the option of complying with or rebelling against both S and C. Again, in the case of compliance, the game ends mechanically. In the case of rebellion, there is a  $Pr(\mu)$  of success for IP.

Figure 2 illustrates the sequence of this game. Again, the preferences and the solution appear in Appendix 1.2. The main insight is:

Figure 3: Decision Tree for Court Ruling Game



**Proposition 4** *If the probability of success of a settler’s rebellion is low enough so they always comply with the Crown’s ruling, the Crown would always prefer to rule in favor of the indigenous population. At the same time, the Crown could purposefully reduce its own gains ( $\lambda$ ) in order to reduce the potential of a settler’s rebellion.*

In this model, I have shown that a traditionally ‘rational’ ruler (i.e. one that maximizes material payoffs) is incentivized to set up costly institutions to protect the Indigenous population. In this framework, both the settlers and the Indigenous population prefer to use this institutional channel rather than violent rebellion. As a result, the equilibrium is optimal extraction (for the Crown).

### 3 Data

The *Archivo General de la Nacion (AGN)* in Mexico City keeps a large corpus of documents from the colonial period. The core data for this paper are the archivists’ descriptions of around 600,000 documents, covering a range of subjects, from the Inquisition trials to personal letters. Table 1 shows the distribution of topics across time. For example, we see that inquisition files are 7% of total documents and that this topic peaked between 1600 and 1650. Among the corpus of files, I selected those that are very likely to record a conflict between Indians and the Spanish. Most of these documents are contained within the *Indios* sub-archive, although there is a high number in other sub-archives. Af-

ter parsing through the metadata of each description and using the condition that was produced by the *Juzgado*, I recovered a total of 30,504 documents that record a conflict between Indians and the Spanish, and between Indians. As such, these documents were the jurisdiction of the *Juzgado*. Figure 4 illustrates the temporal distribution of the total documents produced over time; as expected, this figure increases with the presence of the colonial state. The documents related to Indios do not, however, follow the same trend. In Figure 5 we can see how the amount of these documents stays relatively stable, despite the increasing Indian population after the demographic recovery in the eighteenth century, actually decreases by the end of the colonial period.

Table 1: Documents by topic and period

	before 1550 (%)	1550-1600 (%)	1600-1650 (%)	1650-1700 (%)	1700-1750 (%)	1750-1800 (%)	1800-1820 (%)	Total (%)
Church	8 (0.33)	200 (0.63)	478 (0.86)	166 (0.29)	371 (0.45)	1,414 (0.67)	713 (0.49)	3,350 (0.57)
%	0.24	5.97	14.27	4.96	11.07	42.21	21.28	100
Crime	11 (0.45)	46 (0.15)	171 (0.31)	118 (0.2)	1,221(1.48)	4,284(2.03)	5,154(3.57)	11,005(1.88)
%	0.10	0.42	1.55	1.07	11.09	38.93	46.83	100
Indians	27(1.1)	7,319(23.2)	4,031(7.21)	6,992 (12.05)	5,942(7.21)	4,892(2.31)	990(0.69)	30,193 (5.15)
%	0.09	24.24	13.35	23.16	19.68	16.20	3.28	100
Inquisition	351 (14.32)	3,047 (9.66)	6,718(12.02)	4,457(7.68)	8,049(9.76)	12,258(5.8)	6,121(4.24)	41,001(7)
%	0.86	7.43	16.38	10.87	19.63	29.90	14.93	100
Lands	1,355 (55.28)	8,947(28.36)	7,795(13.95)	4,136(7.13)	8,148(9.88)	8,155(3.86)	2,537(1.76)	41,073(7.01)
%	3.30	21.78	18.98	10.07	19.84	19.85	6.18	100
Letters	0 (0.00)	0(0.00)	0 (0.00)	0 (0.00)	2 (0.00)	10,997 (5.2)	411(0.28)	11,410 (1.95)
%	0.00	0.00	0.00	0.00	0.02	96.38	3.60	100
Local governments	0 (0.00)	0(0.00)	0 (0.00)	1 (0.00)	12(0.01)	2,797 (1.32)	222(0.15)	3,032(0.52)
%	0.00	0.00	0.00	0.03	0.40	92.25	7.32	100
Mines	1(0.04)	1(0.00)	9(0.02)	9 (0.02)	262(0.32)	1,070(0.51)	233(0.16)	1,585(0.27)
%0.06	0.06	0.57	0.57	16.53	67.51	14.70	100	
Royal decrees	196(8)	1,854 (5.88)	9,980 (17.86)	15,719(27.09)	5,683(6.89)	25,714(12.17)	12,694(8.8)	71,840(12.26)
%	0.27	2.58	13.89	21.88	7.91	35.79	17.67	100
Taxes and finance	82(3.35)	802(2.54)	2,920 (5.23)	4,779(8.24)	9,182(11.13)	18,312(8.66)	10,937(7.58)	47,014(8.02)
%	0.17	1.71	6.21	10.17	19.53	38.95	23.26	100
Others	420(17.14)	9,329(29.57)	23,772(42.55)	21,651(37.31)	43,595(52.86)	121,481(57.47)	104,264(72.27)	324,512(55.38)
%	0.13	2.87	7.33	6.67	13.43	37.43	32.13	100
Total	2,451 (100)	31,545(100)	55,874(100)	58,028(100)	82,467(100)	211,374 (100)	144,276 (100)	586,015 (100)
%	0.42	5.38	9.53	9.90	14.07	36.07	24.62	100

NOTE: Distribution of documents in the colonial archives by date and topic. Percentage of documents by topic for each period in parentheses. Percentage of documents by period for each topic below totals.

The pattern of Indigenous rebellion during the last century of colonial rule might explain why the number of total documents decreased over time. Between 1700 and 1819, there were 137 village riots and uprisings in New Spain (Coastworth, 1988). Tensions between settlers and Indigenous villages increased with population growth and limited available lands. At some point, the court system clearly became incapable of solving local disputes. However, even when violence erupted, court mediation prevailed (Tutino, 1988).

A next step for the construction of the dataset was linking each text entry to a geographic location. Using the province division described in Gerhard's three volume encyclopedia (Gerhard, 1972), I identified the main location from the text. I allowed for different variations of the province names to account for the changing language in the documents.<sup>17</sup> Figure illustrates the spatial variation of the percentage of documents from each province that are Indios-related.<sup>18</sup> Interestingly, although in many areas with a large Indigenous population we also see a high concentration of Indian-related files, the size of the Indian population in a province and the percentage of Indian-related documents have a relatively low correlation ( $p=0.21$ ). Factors such as the collective action capacity of the Indigenous population of a province and distance to Mexico City might be useful in explaining this variance.

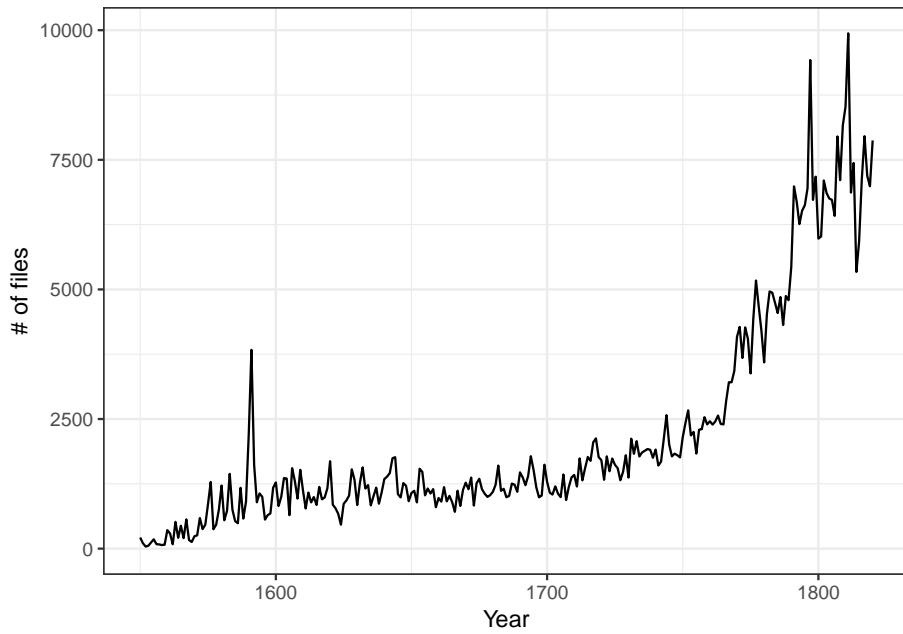
I validate the labeling of the 30,504 Indios-related files by reading a sample of the archivists' descriptions. Moreover, I compare some of these descriptions with entire documents (*legajos*). These documents have a median of 132 pages (*fojas*), and contain the different stages of the case, usually starting with the claim from the Indigenous community or the Spanish settler. Figure 7 shows an example of these documents. In this case, a claim made by an Indian community of San Agustin de Almoloya in the Province of Zaculapa in 1798 complaining about the local bureaucrat (*teniente*). In this document, the community describes how their communal lands are being reduced, and their local

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<sup>17</sup>For example, Guanajuato can also be found as Guanaxuato.

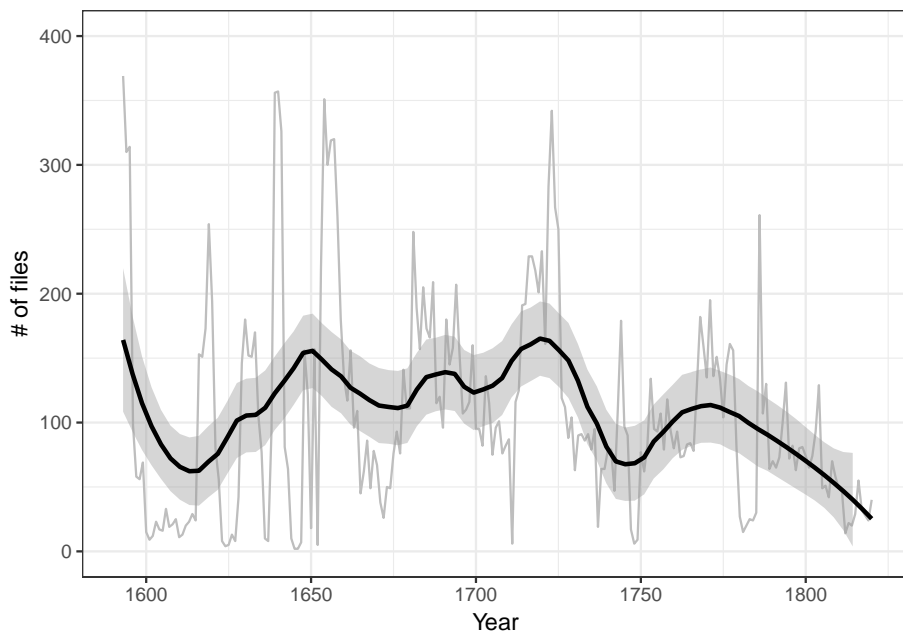
<sup>18</sup>I thank Emily Sellars and Francisco Garfias for the map in shapefile form. This map was originally produced for the paper Labor Scarcity, Land Tenure, and Historical Legacy: Evidence from Mexico (Sellars and Alix-Garcia, 2017).

Figure 4: Total Files in the Archives (1550-1820)



NOTE: This plot shows the temporal distribution of all documents from the colonial period in the Archivo General de la Nacion (AGN), Mexico.

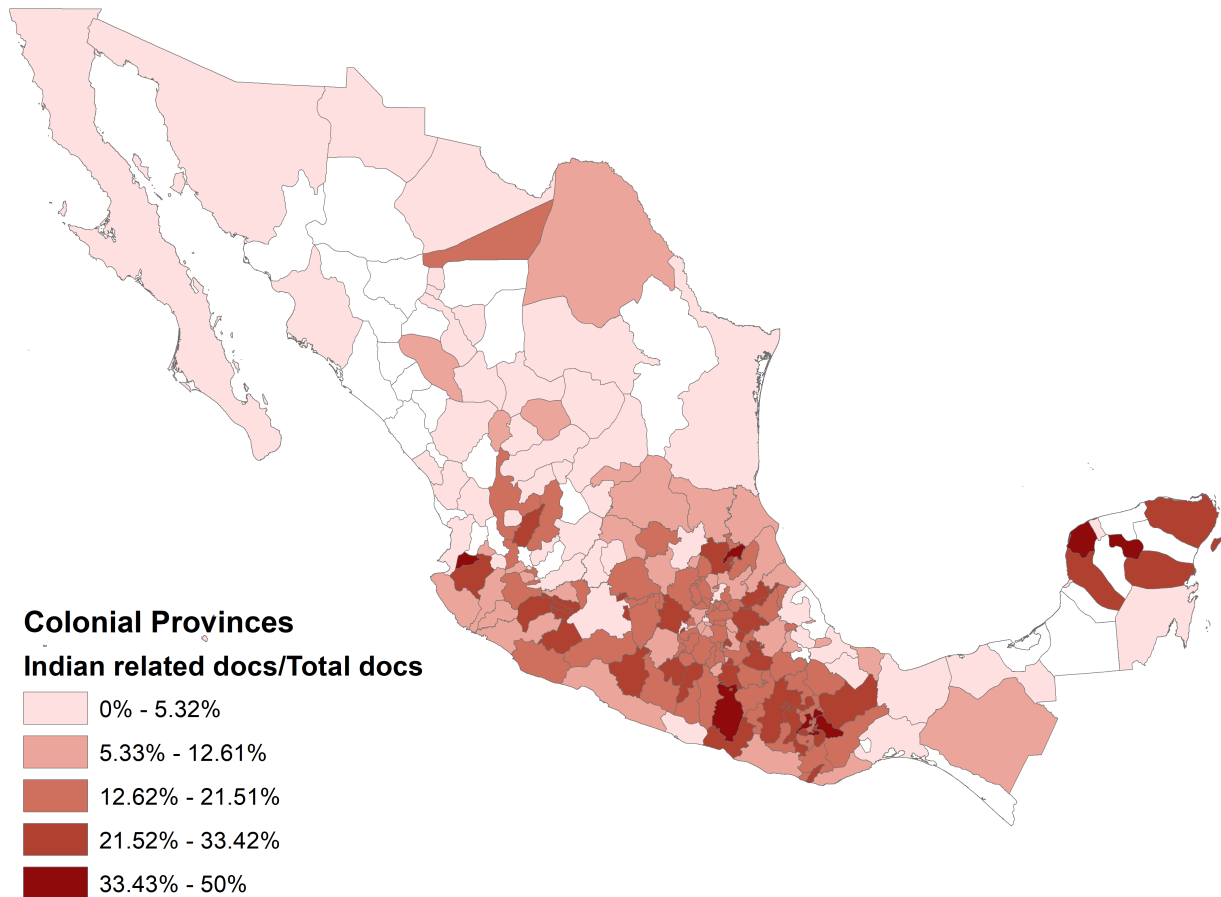
Figure 5: Files related to Indians (1550-1820)



NOTE: This plot illustrates the temporal trend of documents related to the Indian population (Indios) within the colonial archive. The solid black line is a lowess smoothing.

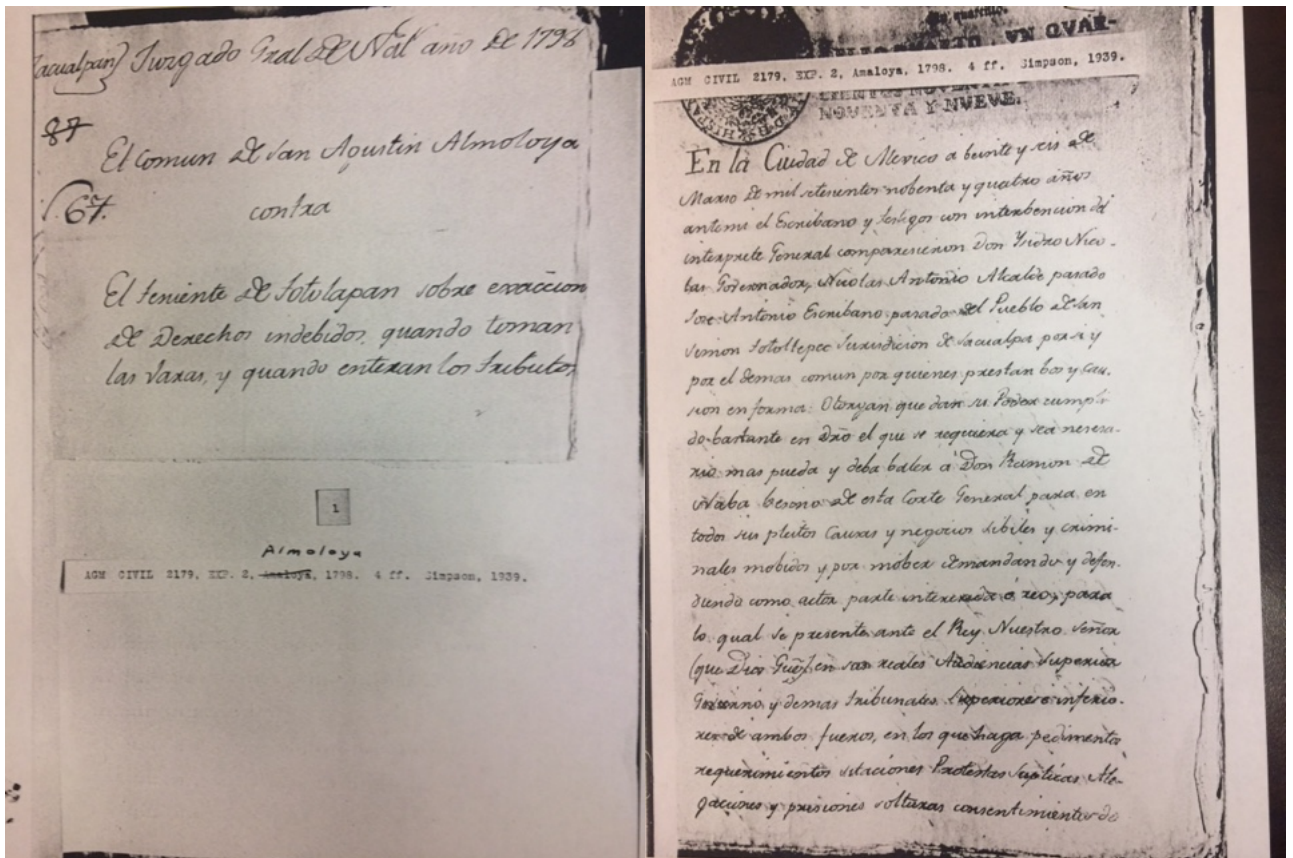


Figure 6: Spatial Distribution of Indian-Related Documents



NOTE: This map shows the colonial provinces of the New Spain. The scale, illustrates the proportion of protection related files within the Indios archive.

Figure 7: Example of a Juzgado document



NOTE: Two first pages of a *Juzgado* document filed by the village of Almoloya in the province of Tacualpan, 1798. A copy of this particular document is located in the Bancroft Library, Berkeley.

taxes inflated by purposeful miscalculation. The last page is a resolution by the *Juzgado* to protect this community. Interestingly, the Indian village is described as 'el comun', the commons, highlighting the communitarian enterprise of these claims.

Next, I exemplify some of the archival descriptions of each individual document. The following descriptions illustrate a claim from a Spanish settler:

1526. The doctor Luis de Villanueva Zapata complains that the indians from Agala do not provide service to his haciendas as is required; they also disobey the Gobernador Cristoval de Jacobo.<sup>19</sup>

<sup>19</sup>AGN, Indios 502. Año 1596. El doctor Luis de Villanueva Zapata se queja porque los naturales del pueblo de Agala no le dan el servicio y socorro a sus haciendas que normalmente se le ha dado y desobedecen al gobernador Cristoval Jacobo.

1604. Claim made by Juan Diaz Pacheco to obtain Indian labor to work in the mines of his hacienda. Chichicapa.<sup>20</sup>

The files also take the form of resolutions by the *Juzgado* from a given case:

1596. Permit granted to Juan de Salazar, a farmer, by the Viceroy Gaspar de Zuniga, to obtain the necessary Indians to work in his hacienda because he is losing his crops because of the lack of labor force. Mexico.<sup>21</sup>

Or direct orders:

1596. Requiring that the governors and principals of Iamatlan force the Indians to pay taxes and go to church. Iamatlan. Veracruz.<sup>22</sup>

These succinct descriptions provide information about the general topic, date, and the place of origin of these claims. The four documents illustrated above describe cases that align with the model of extractive institutions in a colonial setting. However, the objective of the *Juzgado* was to provide a legal resolution for conflicts, and many of those resolutions favored the Indians. For example, the file below illustrates how the Indians of Tlaxcala received a favorable resolution on a tax-related claim.

1618. Requiring to the Governor of Tlaxcala to inform what the naturals of that city are requesting so they are charged four reales instead of five to pay the new service.<sup>23</sup>

There are also a number of orders directed to the local bureaucrats:

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<sup>20</sup>AGN, IV, caja 3447, exp. 003. Año. 1604. Indios 3447 exp. 003 1. Juzgado General de Indios. Solicitud de Juan Díaz Pacheco para que se le otorgue repartimiento de indios para trabajar en las minas de su Hacienda, Chichicapa.

<sup>21</sup>AGN, Indiferente Virreinal, caja-exp.: 6549-099. Indios. Año: 1596, fs. 2. Productor: Juzgado General de Indios. Traslado concedido a Juan de Salazar, labrador por el virrey Gaspar de Zuñiga, para que se le otorguen los indios necesarios para que trabajen en su hacienda, ya que por no contar con la gente necesaria su cosecha de trigo se está perdiendo. Mexico.

<sup>22</sup>AGN. Indios. Vol 6. Exp 1152. fs 316 VTA. Año 1596. GD097. INDIOS. Para que los gobernadores y principales de dicho pueblo compelen a los naturales a pagar el tributo y acudir a la doctrina. Veracruz. Iamatlan

<sup>23</sup>AGN, Novohispano, Vol. 9, Exp 98, Año 1618. INDIOS. Para que el gobernador de Tlaxcala informe lo que piden los naturales de dicha ciudad y que no se cobre de ellos cinco reales más de los cuatro que pagan del nuevo servicio. Tlaxcala, Tlaxcala.

1582. To the Alcalde Mayor of Zapotlan, so he does not force the Indians to work road construction more than they can.<sup>24</sup>

1687. To the Alcaldes Mayores of Taxco and Cuernavaca: An order to not force the Indians of San Francisco Amacusac to work in the local mines.<sup>25</sup>

These descriptions of the files that reached the *Juzgado* are the main source for this paper. An obvious concern in this case is how thorough these descriptions might be. According to functionaries of the AGN, these abstracts are a valid representation of the spirit of the documents which, in many cases, contain unnecessary repetition and verbosity associated with the legal language of the time.<sup>26</sup>

### 3.1 Dependent Variable

The main variable of interest is the probability that a document reflects a resolution to protect the Indians. To create the dependent variable, I identify the presence of a set of unigrams and bigrams commonly related to protection.<sup>27</sup> Although an imperfect measure, the presence of these words increases the probability that a document was intended to provide protection against settler abuses. On average, around 18 percent of the documents between 1592 and 1820 contain some of these words. Again, I validated this selection with a qualitative analysis of these texts. Overall, we can see an interesting temporal variation of the documents related to protection. Figure 8 shows how that the average of protection-like documents during the seventeenth century was much higher (44 percent) than during the eighteenth century (9 percent). There is also less variance during the eighteenth century when the number of protection-related files seems to have reached a plateau.

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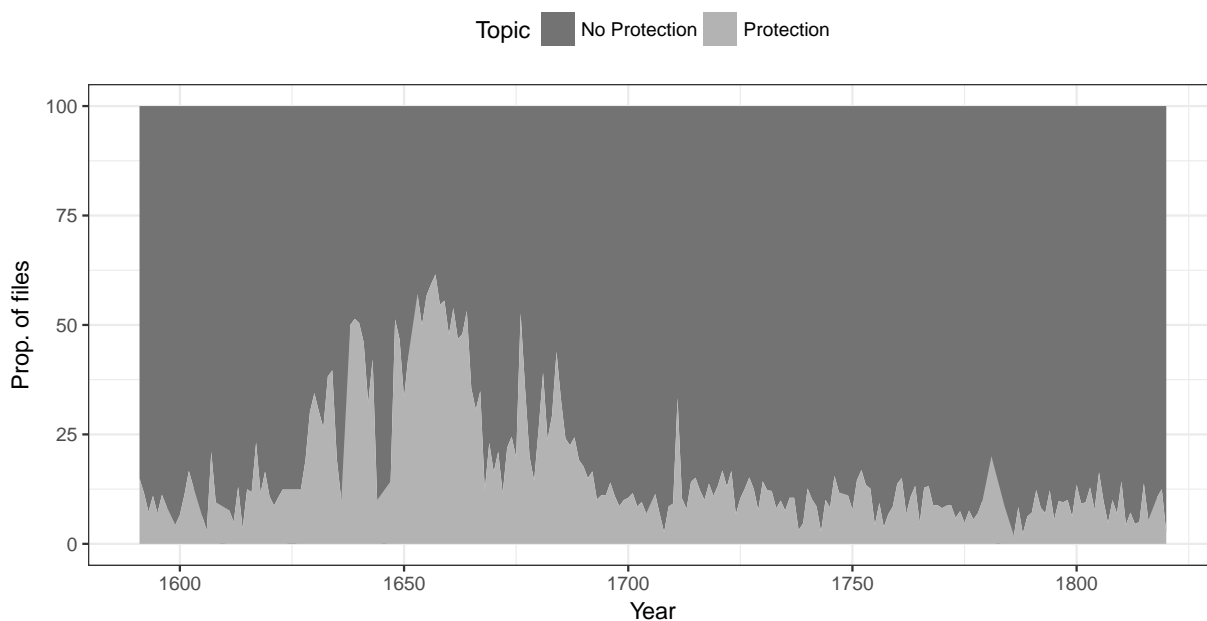
<sup>24</sup>AGN, Indios. Vol.2. GD097. Al alcalde mayor de Zapotlan para que no obligue a los naturales a trabajar en los caminos mas de lo que pudieren hacer. Jalisco. Zapotlan.

<sup>25</sup>AGN. 1687. Vol 29. GD097. Se ordena los alcaldes mayores del real y minas de Cuernavaca y Taxco no obliguen los naturales del pueblo de san francisco Amacusac dar de repartimiento para dichas minas. Morelos.

<sup>26</sup>Personal interview with the former director of the AGN.

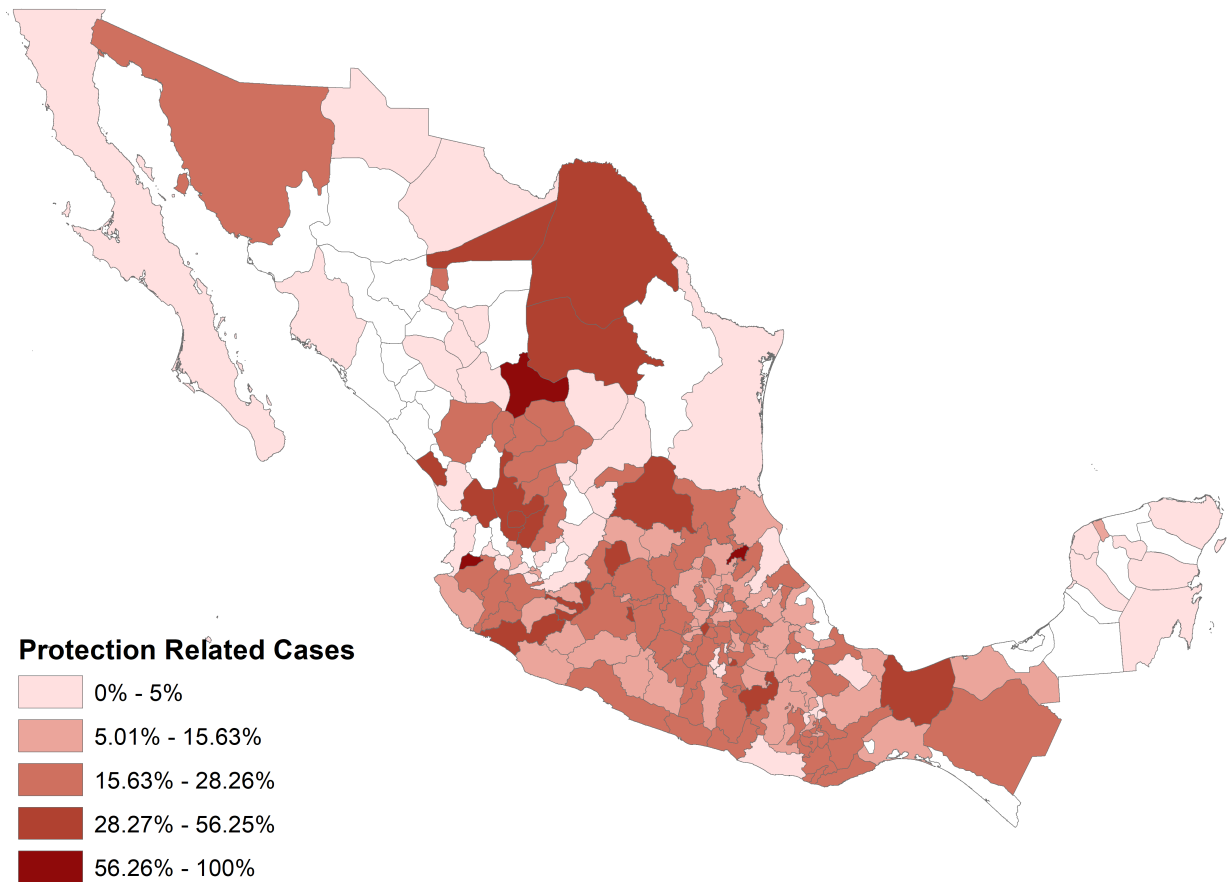
<sup>27</sup>The unigrams are: Proteja, Ampare, Cuide, Mejore, Satisfaga; the bigrams are No moleste, No perjudique, No obligue, No Impida. I also included the whole phrase ‘administre justicia a los indios.’

Figure 8: Proportion of Documents with Protective Outcome (1590-1820)



NOTE: Temporal distribution of documents within the Indians sub-archive with a protective outcome. The documents with a protective outcome are those that contain the terms: "no moleste" (do not disturb), "no maltrate" (do not mistreat), "no perjudique" (do not harm), "no obligue" (do not force), "no impida" (do not limit), "proteja" (protect), "ampare" (support), "cuide" (to take care of), "mejore" (improve), "administre justicia a los indios" (give justice to the indians), "moderacion" (moderation), "satisfaga" (satisfy), "bien gobernados" (well governed).

Figure 9: Spatial Distribution of Protective Outcomes



NOTE: This map shows the colonial provinces of the New Spain. Proportion of protection-related documents within each province. The protection related documents contain unigrams and bigrams associated with protection to the indigenous population.

The percentage of files related to the protection of Indians also varies spatially. Figure 9 displays a map with the proportion of protection-related cases by province. Here, we observe a larger concentration of protection-related files in the central plateau with other hot spots in Northern Jalisco. It should be noted that some cases with a large percentage of protection-related files are provinces with very few documents; for this reason, this spatial distribution should be considered cautiously.

To understand the characteristics of the cases with a protective outcome, for each document I computed a dictionary value for seven topics: land conflicts, taxes, physical

abuse, church, community issues,<sup>28</sup> settler-related issues,<sup>29</sup> and mines. In concrete form, a document receives a score according to the number of topic-related words that it contains. For example, the 'land conflicts' topic measures the prevalence of two words, 'Tierras,' and 'Solares' (lot of ground). Each score is the sum of the number of topic-related terms normalized by the total number of topic-related terms in the document. That is, if the document contains both terms mentioned above its land conflicts score is 1, if it contains only one its score is 0.5, and 0 if it has none of this terms. An advantage of this method is that it allows a document to be part of several categories at the same time.

Table 2 shows the logistic regression of the documents against their dictionary scores. The dependent variable is a binary indicator that takes the value of one when the document is classified as protective. The results show that protective-related files are more likely to be associated with land conflicts, physical abuse, and mines, and contain references to Spanish settlers. On the contrary, the documents are less likely to provide protection to the Indians when they refer to taxation, the church, community issues, or complain against their local cacique.<sup>30</sup>

The second column of Table 2 shows the results once a period indicator is included. In this case, the 'physical abuse' topic is not significant. The inclusion of the length of the document in column 3 intends to measure the attention the *Juzgado* gives to individual cases, under the assumption that longer cases are analyzed more carefully. In general, there is a positive correlation between the length of the document and the probability these provide a protective outcome.

In column 4, I run the model with province characteristics. In particular, I include: i) a binary variable indicating if the province was geographically fragmented (non-continuous boundaries), under the assumption that this would increase the collective action costs for

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<sup>28</sup>Local elections and indigenous government.

<sup>29</sup>Containing the words: Hacienda, españoles.

<sup>30</sup>An obvious limitation of this approach is that it does not discriminate between documents with negative outcomes for the Indians and files with a neutral outcome. In a future iteration of this paper, I will include such classifications, as well as other approaches to model topic clustering. To discriminate between neutral and negative cases I selected a sample of 3,000 documents that were read by a team of human coders. Each document was read twice and classified in several dimensions, such as nature of the complain, outcome, producer among others.

the indigenous communities; ii) the quality of the settlement as it appears in the *Yndize comprehensibo de todos los Gobiernos, corregimientos y alcaldias mayores que contiene la governacion del Virreynato de Mexico* (Anonymous, 1777), a seventeenth century manual that codifies the extractive potential of each province, which might predict the disposition of the Crown to protect the Indigenous labor force; iii) a binary variable indicating if the main mendicant order of the province was the Franciscan order coded from Gerhard (1972), which might predict a larger disposition to protect the Indigenous group, because this order was allegedly more committed to Indian rights, and, iv) a binary variable indicating if the province was multilingual, because this might increase the collective action costs of the Indigenous communities. Here, there is some evidence that the crown provided more protection to provinces with higher extractive potential. As expected, the multilingual configuration of a province decrease the likelihood of receiving protection. On the contrary, Franciscan provinces show lower likelihood for receiving protection, which is a result that calls for further exploration.

### 3.2 Assessing sampling bias

Before measuring the elements determining how a case can result in a positive or negative outcome for the claimants, it is necessary to determine how these documents arrived to the court in the first place. The concern here is that besides grievances there might be many elements behind the existence of a case such as access to institutions or perceived benefits for bringing the case to court.<sup>31</sup> The main objective of this exercise is to determine if a large number of cases is actually correlated with the existence of grievances. A plausible alternative explanation would be that a small number of cases might be signaling that indigenous claimants have few expectations of success in courts, or that local elites might be blocking their access to court by coercion. It is also likely that a more remote province might confront higher costs for bringing their cases to the court in Mexico City.

To test if the number of documents is correlated with grievances at a local level, I run the following model:

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<sup>31</sup>I thank Emily Sellars for pointing out to this potential bias



Table 2: Correlates of Protection to Indians

	<i>Dependent variable:</i>			
	Protection to indians			
	(1)	(2)	(3)	(4)
Land Conflicts	1.157*** (0.090)	1.003*** (0.095)	0.987*** (0.095)	0.887*** (0.119)
Taxes	-1.786*** (0.351)	-1.568*** (0.361)	-1.566*** (0.361)	-1.832*** (0.446)
Physical abuses	0.787*** (0.218)	0.015 (0.224)	0.026 (0.225)	-0.213 (0.289)
Church	-2.652*** (0.408)	-3.306*** (0.421)	-3.308*** (0.421)	-3.315*** (0.509)
Community	-3.151*** (0.277)	-3.098*** (0.288)	-3.124*** (0.288)	-3.728*** (0.366)
Settlers	0.547*** (0.135)	0.492*** (0.141)	0.494*** (0.141)	0.459*** (0.165)
Mines	0.431*** (0.123)	0.360*** (0.129)	0.362*** (0.129)	0.367** (0.160)
Cacique	-0.175** (0.086)	-0.342*** (0.090)	-0.347*** (0.090)	-0.212* (0.112)
Length			0.0005*** (0.0002)	0.0004** (0.0002)
Fragmented				0.041 (0.052)
Category				0.169** (0.078)
Franciscans				-0.099** (0.049)
Multilingual				-0.099** (0.048)
Time FE	N	Y	Y	Y
Observations	24,153	24,135	24,126	15,889
Log Likelihood	-11,611.000	-10,579.900	-10,570.600	-7,048.711

*Note:*

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

Logistic regressions. The unit of analysis is the document, which is coded as protective if contains terms related to the protection of the Indians. The IVs are the scores for each topic obtained by the dictionary method. Category is a binary variable taking the value of 1 if the province is considered as "high value" according to the guide published in 1777. A province is considered under Franciscan rule if only that order was present in the jurisdiction. A province is fragmented if it comprises two or more separate territorial units. A province is multilingual if two or more languages coexist in the region.

$$\begin{aligned} \log(y_{i,t}) = & \beta S_{i,t} + \rho Cat_i + \mu \log(Pop_{i,t}) + \alpha Frag_i + \\ & \nu Fran_i + \lambda Multil_i + \tau Distance_i + \theta_t + \epsilon_{i,t} \end{aligned} \tag{1}$$

Where the dependent variable is the number of cases in a given province  $i$  during a specified time window  $t$ . For the sake of comparison, I define as dependent variable the total number of documents produced in a given province, the documents related to Indians and the total number of cases related to Spaniards. For the most part, the cases related to Indians are those which arrived to the Indian court. The coefficients of interest are those related to the existence of grievances in a given province, in particular  $\beta$  and  $\rho$ , measuring settlers' power and the extractive potential of the province respectively. The model controls for the Indian population of the province, its geographic configuration, the religious order in charge of the jurisdiction, the linguistic composition of the province, and distance to Mexico City.

Table 3 shows the results of this model. In particular, we observe that the main determinant for the existence of documentation in a province is its extractive potential. Provinces with more extractive potential have a larger number of documents, including Indian related cases. If we assume that, due to extractive activities, those provinces will also be the ones with more grievances, then the existence of cases is a good measure of grievances. On the other hand, settlers' power does not seem to have an effect on the number of cases of any kind. This result suggests that stronger local elites might not be blocking access to court.

At the same time, we observe that, not surprisingly, provinces with a larger Indian population present more cases to court. Multilingual provinces are less likely to present cases to court, which suggests a coordination problem in contexts where two cultures might be forced to coexist.<sup>32</sup> Finally, provinces farther away from Mexico City present a smaller number of documents, thus suggesting that transportation costs did matter.

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<sup>32</sup>This is in line with evidence from Indian reservations in the US

Table 3: Determinants of Files

	<i>Dependent variable:</i>		
	Total files (log) (1)	Indian related files (log) (2)	Settlers' related files (log) (3)
Settlers' power	0.164 (0.224)	-0.056 (0.203)	0.141 (0.228)
Category	1.285*** (0.179)	0.670*** (0.162)	1.327*** (0.181)
Indian pop. (log)	0.116 (0.084)	0.218*** (0.076)	0.033 (0.086)
Fragmented	0.020 (0.182)	0.150 (0.165)	0.255 (0.184)
Franciscans	0.262* (0.147)	0.111 (0.133)	0.251* (0.150)
Multilingual	-0.287* (0.147)	-0.254* (0.133)	-0.068 (0.149)
Distance to Mexico City	-0.044*** (0.006)	-0.032*** (0.005)	-0.046*** (0.006)
Time FE	Y	Y	Y
Observations	312	312	255
R <sup>2</sup>	0.445	0.352	0.468

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Linear regressions. The dependent variable is the number of total documents within each category at a given province in a specific time window. Settlers' power is measured as the percentage of land within the territory under encomienda system. Category is a binary variable taking the value of 1 if the province is considered as "high value" according to the guide (yndize) published in 1777. A province is fragmented if it comprises two or more separate territorial units. A province is considered under Franciscan rule if only that order was present in the jurisdiction. A province is multilingual if two or more languages coexist in the region. Distance to Mexico City is measured in km/10000.

### 3.3 Independent Variable

At this point, it is important to remember the insights from the theoretical model. First, because settlers were incentivized to over-extract, the crown had the option to offer relief to the Indigenous population through legal protection to avoid rebellion. This scenario is more likely if the Crown had lower ability to monitor the settlers directly. For this reason, the relative power of the settler in a given province is measured as the percentage of population under *encomienda*. The assumption, here, is that these settlers are more likely to capture the local bureaucracy than settlers in areas under direct rule.

The second insight of the model is that the main objective of the Crown is to warranty an optimal extraction and to avoid population collapse. Then, we should expect a larger amount of protection-related cases in places with smaller populations. To test these implications, I coded the population of a province in a given period. The data for the colonial period is sparse. Gerhard (1972) provides population data from the *Relaciones Geograficas* for each province. The *Relaciones* were a census-like data collection that served as a basis to calculate taxes. Not all provinces contain information for every population count, however, for most of them, I was able to record a population record for 1550, 1570, 1600, 1645, 1745, 1789, and 1808. For the purposes of this paper, I coded the data of the 129 provinces of New Spain; although data on the southern and northern provinces is also available, most of the files related to Indians concentrate in this central region. The data provided by Gerhard usually relates to Indian tax payers (tributarios). Following Cook and Borah (1960), I multiplied these figures by 2.8 to obtain the total population.

Gerhard's monographs also provide information about the encomiendas in each province and the year of escheatment. Following Sellars and Garfias (2017), I then computed the population percentage at a given period under encomienda ruling. Contrary to these authors, I do not assume a homogenous distribution of the population across localities within a province. In order to provide a more accurate representation of within-province distribution, I use the data of localities in the *Suma de Visitas* of 1568 (Borah and Cook,

1960). Here, I identify all localities listed by Gerhard in a given province and record its percentage contribution to the total population of the province. Then, I use each of the periods as a cut-off, and the date of escheatment to determine the percentage of a population living under *encomienda* during that period. Although this method assumes that the distribution of population within-province does not change across time, it does differently weight larger localities, thus providing a more granular representation of the transition to direct rule.

Although the encomienda system had a huge influence on the distribution of power in colonial Mexico, its importance was limited to the early colonial period. By the seventeenth century most of the encomiendas disappeared or lost their relevance. For this reason, I propose a second measure of settlers' power using the documents produced by Spaniards.<sup>33</sup> The number of Spaniards-related documents is a proxy for the presence of this group in a given province, and their prevalence in economic and political activities. Figure 10 shows the trend of these kind of documents across time showing the step increase of European presence in the sixteen century and its gradual increase afterwards. I argue that this measure can be used to measure the influence of local elites in a given jurisdiction.

## 4 Empirical Strategy and Results

In order to measure the effect of population and local elite's relative power on the probability that an Indigenous claim receives a positive resolution, I computed the following model:

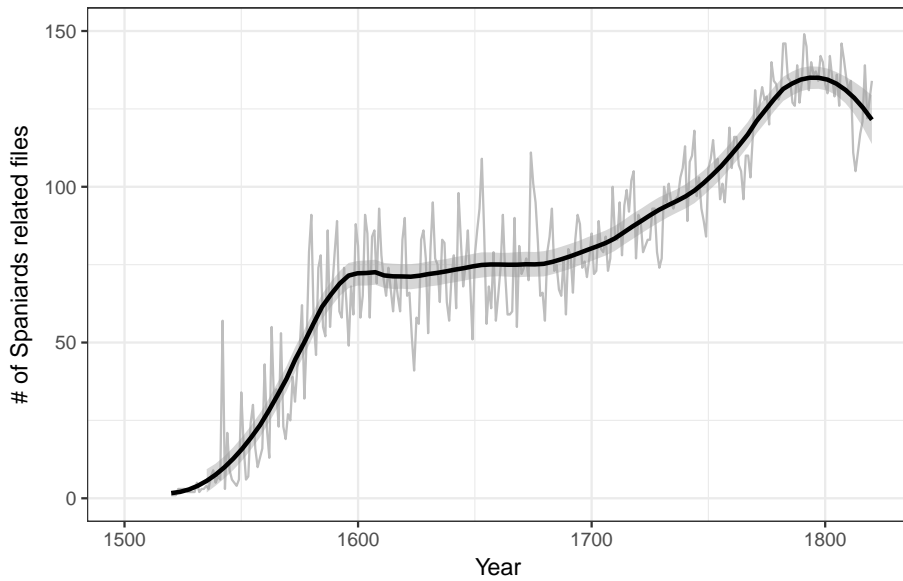
$$y_{i,t} = \beta S_{i,t} + \mu Pop_{i,t} + \alpha Docs_{i,t} + \gamma_i + \theta_t + \epsilon_{i,t} \quad (2)$$

Where the variable  $y$  is the number of protection-related files in a province  $i$  at time  $t$ . The independent variable  $S$  is a proxy for settlers' relative power measured in two ways: 1) the percentage of population under encomienda and 2) the total number of files

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<sup>33</sup>In particular, those documents mentioning "españoles", "español", "haciendas", "encomiendas", "encomendaros"

Figure 10: Settlers' presence



NOTE: This plot illustrates the temporal trend of documents related to the Spanish population (settlers) in Mexico within the colonial archive. This includes documents with the words "hacienda", "hacendado(s)", "español(es)", "encomienda". The solid black line is a lowess smoothing.

mentioning Spaniards.  $Pop$  is a logarithmic transformation of the Indian population at a given province at time  $t$ .  $\gamma_i$  are province-fixed effects, and  $\theta_t$  are time-fixed effects. The inclusion of province-fixed effects allows us to control for time-invariant characteristics at province-level, such as geographical or climatic features. Including time-fixed effects allows us to control for common shocks at a given period. The model controls for the total number of documents issued in that province ( $Docs$ ). I run the model excluding the province of Mexico, which is an outlier in the number of documents produced.<sup>34</sup>

Estimation in this model is challenging. The response variable is a count variable, and the available observations vary considerably across provinces. To have a better idea of the distribution of the data, Figure 9 shows the number of total Indian-related documents, and the protection-related documents for two provinces. In the upper panel, we observe the province of Antequera, now in central Oaxaca. A large percentage of

<sup>34</sup>Because many of the cases that do not occur in Mexico City are classified within this province it is plausible to assume that is being misrepresented. This province was an urban administrative center and home to a large number of Spanish and creoles. There are many reasons to believe that the dynamics of the Indian-settlers relations differed in the city, therefore it is convenient to analyze the data without this outlier.

the population of this province lived under *encomienda* until 1600, when three large *encomiendas* escheated (the dashed line represents the population under *encomienda*). Here, we see a large number of cases captured by the 1600 ten-year window. The number of cases reduces significantly by the eighteenth century when the province was under the Crown's jurisdiction. The province of Celaya appears in the lower panel. Now located in the modern state of Guanajuato, this province was entirely taken by the Crown by the end of the seventeenth century. In the figure, we see that, although the general cases increase by the eighteenth century, the actual proportion of cases granting protection diminishes.

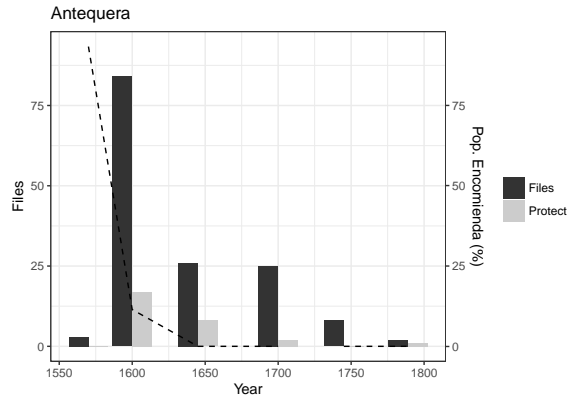
To account for the nuances of the data distribution, I use a panel count regression model which assumes a Poisson distribution for the response variable. It should be noted that, in this model, over-dispersion and zero-inflation are still not accounted for. Table 2 displays the main results for the whole sample whereas Table 4 shows the results. In column 1, we see that settlers' power measured as the percentage of population under *encomienda* has a positive correlation with the number of protection-related cases. In other words, the crown offered more protection to Indians when they live in provinces with more powerful settlers.

The population of the province is negatively correlated with the protective-related cases. This result suggests that the Crown had more incentives to protect the Indigenous population when they were more at risk of demographic collapse. Places with more files also have more protection-related cases, which makes sense from the point of view of the Indigenous communities using the legal system to obtain relief from settler abuses. Column 3 includes an interaction term of the population and settlers' relative power in the province. Here, we see that provinces under *encomienda* and large populations receive less protection. From the perspective of the crown, this implies that, for these provinces, the concern of demographic decline is less salient. Finally, in column 4 I run the interactive model but using a different measure of settlers' power, in this case the number of files issued by Spaniards in a given jurisdiction. Over all, the results hold.

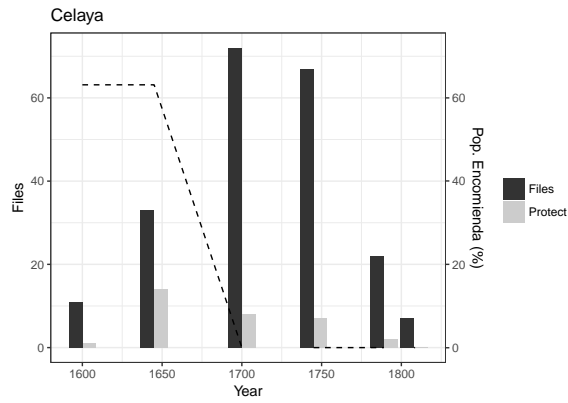
A valid critique for this empirical strategy is the endogenous nature of the relationship

Figure 11: Examples of Variable Distribution Across Provinces

(a) Antequera



(b) Celaya



NOTE: Examples of temporal distribution of total documents related to Indians (black bar) and protection related documents within provinces (light grey bar). The dashed line represents the percentage of indigenous population living under *encomienda* in each province. The 1700 period appears here only for illustrative purposes, since there is no available population data for this period this is not part of the panel dataset.



Table 4: Protection to Indians and Local Elites

	<i>Dependent variable:</i>			
	Cases of Protection			
	(1)	(2)	(3)	(4)
Settlers' power (encomienda)	0.575*** (0.165)	-0.160 (0.252)	5.538*** (1.869)	
Settlers' power2 (document inensity)				0.017*** (0.004)
Pop. (log)		-1.461*** (0.087)	-1.120*** (0.111)	-1.173*** (0.082)
Total files		0.002*** (0.0001)	0.003*** (0.0003)	0.003*** (0.0003)
Settlers' power x Pop. (log)			-0.612*** (0.207)	
Settlers' power 2x Pop. (log)				-0.002*** (0.0005)
Province FE	Y	Y	Y	Y
Time FE	Y	Y	Y	Y
Observations	438	348	352	376

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Poisson regression. The dependent variable is the number of protection-related cases in a given province during a time window. Settlers' power is measured as: 1) Percentage of population living under encomienda, and 2) Total number of settler related files. All models include province and time fixed effects.

between protection and settlers' power. Perhaps it was the protection granted to the Indigenous population the cause of the reduction of *encomienda* concentration and not the other way around. Further analysis could include an instrumental variable for settlers' power. Recent research on the climate conditions of the period provides information about the impact of drought on population collapse (Acuna-Soto et al., 2002; Burns et al., 2014). Sellars and Garfias (2017) argue that the crown had a higher ability to extend direct ruling in places that experienced faster decline. In this case, I could instrument my independent variable with climatic data to provide a clearer causal relationship between the variables of interest.

## 5 Discussion and Further Research

Institutional historians have often argued that most of the inequality in contemporary Latin America is a product of the institutions designed to protect white elites during the colonial period (Sokoloff and Engerman, 2000; Acemoglu et al., 2001; Dell, 2010). Although the caste system's differential treatment of Indians, Europeans, and Creoles was clearly a limitation of factor mobility, we should also recognize that this was one of the few tools the Indigenous population could use to protect their lands and their communities. The *Juzgado* exemplifies how the existence of a mediator state was a rational solution for all actors. The legal mechanisms provided by the *Juzgado* and the legal apparatus provided an alternative to violent rebellion. As a result, the colonial period in New Spain was relatively peaceful, and, perhaps paradoxically, more equal (Coatsworth and Tortella-Casares, 2002).

An institution like the *Juzgado*, and the existence of Indigenous claims calls for a reevaluation of the mechanisms through which Latin America fell behind economically. Mexican independence represented a critical period of transition in which a set of Liberalism-inspired institutions replaced the colonial order. At the core of this philosophy was the idea that all individuals are equal in front of the law. In other words, the division between the Spanish and the Indian Republic that defined the colonial period disappeared.

Although theoretically and morally appealing, this new ideal was confronted by the reality of the unequal balance of power between these two groups. Stripped from the right to present their claims to the ruler and to control their local governments, the former Indian republics faced the risk of a higher level of extraction than during the colonial period. As a result, Indigenous rural communities resorted to violence from Chalco in Mexico (Tutino, 1988) to Pasto, Colombia (Ramos, 2007). The motivation of many of the violent struggles of nineteenth century rural Latin America was in fact the desire of rural communities to restore the former colonial order of community landholding. On the other hand, it is not surprising that one of the strategies used by the Second Empire of Maximilian in the second half the 19<sup>th</sup> century was the legal restitution of the Indian communal lands and the creation of the *Junta Protectora de las Clases Menesterosas*, an institution inspired in the colonial Indian Court (Escobar 1993).

After the formation of the new independent republic, many of the former local governments (*cabildos*) in which only the Indigenous local population had representation during the colonial period were captured by a state-backed elite from neighboring localities. During the 1820s, several new municipalities were created using criterion that stipulated populations of 1000 or more qualified as an independent municipality. A total of 632 municipalities appeared in this first wave (Tutino, 1995). As a result of this policy, several former Indian republics were integrated as dependents of the municipal head town. In a further exploration of this process, I propose to use this exogenous cutoff as an identification strategy to determine the effects of legal integration under an environment with deep economic inequalities.

The system of redistributive justice presented here has implications beyond New Spain. A natural extension of this paper would be to study the experience in other Spanish colonies. In the viceroyalty of Peru, for example, the *Juzgado* took a very different form. Instead of a special court of first instance for Indian cases, as it was in New Spain, Peru was mostly an extension of local judges. According to Borah (1970), ‘the prior existence of special Indian tribunals and a prior structure of Indian protectors and defenders, heading up in a staff at the viceregal court and *Audiencia*, probably precluded a development

of jurisdiction like that in Mexico.’ The consequences of this differentiated institutional approach on Indigenous communities and land conflicts with the Spanish elite is a topic of further research.

In this paper, I explore the strategic logic of creating an institution designed to protect the Indigenous population of a colonial setting, the *Juzgado General de Indios* of the New Spain. My main argument is that the Spanish crown established this institution to control settlers’ increasing power in the colonies, and limit the risks of demographic decline. The incentives of the crown to establish this court were not merely humanitarian, but grounded in economic rationality. On the other hand, Indigenous groups played an active role by internalizing the legal language of the conquerors and using it in their favor. Using a large number of Indigenous claims, I present preliminary evidence that supports the hypothesis of a coalition between the ruler and the Indigenous groups. One of the effects of this mediator role of the crown was the social order that characterized colonial Mexico. Understanding the dynamics of an institution like the *Juzgado* and the consequences of its disappearance is a crucial element in the institutional history of the region, and in the political economy of rural communities elsewhere.

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## Appendix



# A1 Modelling Institutional Solutions to Rebellion and Over-Extraction

## A1.1 Institutional Solution

### A1.1.1 Preferences

- **The Crown:**

Define the utility function of C as follows:

$$U^c = \lambda - \bar{\theta}^c + \pi - C^I + B^w - \beta c \quad (3)$$

Where  $\lambda \geq 0$  is the share of total revenue ( $\theta + \lambda + \hat{\theta} \leq 1$ ) corresponding to the Crown. The parameter  $\theta^c$  represents the cut took by the Settlers from an original  $\lambda$ . When S is fined for over-extraction C receives  $\pi$ . For simplicity I do not include indicator variables, but its should be noticed that parameters are activated depending on the location within the tree.

The costs of an indigenous rebellion are defined by  $c$ . Here,  $\beta$  are the costs faced by the C whereas  $\alpha$  are the costs faced by S (see below). Note that  $\beta + \alpha = 1$ . The parameter  $B^w$  is what is the benefit of wining against an indigenous rebellion.

Since  $Pr(\mu)$  is the probability that IP wins the rebellion, the expected utility for C in case of an indigenous rebellion is:

$$E(U_r^c) = Pr(\mu)(\lambda - \bar{\theta}^c + \pi - C^I - \beta c) + (1 - Pr(\mu))(\lambda - \bar{\theta}^c + \pi - C^I - B^w - \beta c) \quad (4)$$

If IP decides to go to court they win with probability  $P(h)$ . In this case, C receives an indirect benefit since they get back the over-extraction share taken by S. Then, the expected utility in case the IP decides to go to court is:

$$E(U_c^c) = Pr(h)(\lambda + \bar{\theta}^c - C^I) + (1 - Pr(h))(\lambda - C^I) \quad (5)$$

- **The Settlers:**

Define the utility function of S as follows:

$$U^S = \theta + \bar{\theta} + B^W - \alpha c - \pi \quad (6)$$

Where  $\theta \geq 0$  is the share of total revenue ( $\theta + \lambda + \bar{\theta} \leq 1$ ) seized by the settlers. Over extraction happens when  $\bar{\theta} > 0$ . Note that  $\theta \geq \bar{\theta}$ . Let's define  $\bar{\theta}$  as  $\bar{\theta}^C + \bar{\theta}^I$ , which simply means that the over extraction share is a sum taken from both C and IP. This makes sense since S is in charge of extracting resources from IP and send a share to C. In other words, when over extraction happens S decides to take advantage from both C and IP.

The parameter  $\alpha$  represents the Settlers' share of the costs of an indigenous rebellion, presented by  $c$ . While  $B^w$  are the benefits of defeating IP. These could be, for example, taking extra lands from IP.

Finally,  $0 \leq \pi \leq 1$  are the costs of being punished by the Crown for over-extraction when institutions are in place, since these cannot be negative settlers cannot be rewarded for over-extraction. Let's think about these costs as a fine imposed by the Crown.

Since  $Pr(\mu)$  is the probability that IP wins the rebellion, the expected utility of S is:

$$E(U_r^S) = Pr(\mu)(\lambda + \bar{\theta} - \alpha c - \pi) + (1 - Pr(\mu))(\lambda + \bar{\theta} + B^w - \alpha c - \pi) \quad (7)$$

In the case of a court solution another stochastic process takes place in which S basically gambles its over-extraction rents.

$$E(U_c^S) = Pr(h)(\theta) + (1 - Pr(h))(\theta + \bar{\theta}) \quad (8)$$

- **Indigenous Groups:** Define the utility function for IP as:

$$U^I = (1 - \theta - \lambda - \bar{\theta}^I) + B^w - C^w - C^{ca} \quad (9)$$

The indigenous group receives the remainder of the revenue after S and C take their share. The parameter  $\bar{\theta}^I$  represents the cut took by the Settlers from IP's original share.  $C^{ca}$  represent the costs of collective action of making a claim.

If the indigenous group rebels, they pay a cost of  $C^w$  and receive a benefit of  $B^w$ . Again, this benefit could imply getting more lands.

Since the IP wins the rebellion with probability  $Pr(\mu)$ , the expected utility for IP is:

$$E(U^I) = P(\mu)((1 - \theta - \lambda - \bar{\theta}^I) + B^w - C^w) + (1 - P(\mu))((1 - \theta - \lambda - \bar{\theta}^I) - C^w) \quad (10)$$

And the expected utility for going to court for IP:

$$E(U^I) = P(h)((1 - \theta - \lambda - \bar{\theta}^I) + B^w - C^{ca}) + (1 - P(h))((1 - \theta - \lambda - \bar{\theta}^I) - C^{ca}) \quad (11)$$

#### A1.1.2 Solution

Solving for  $Pr(h)$  by backwards induction we start with setting up the conditions under which **IP** prefers going to court. In this case, the expected utility of going to court should be larger than the expected utility of rebellion:

$$\begin{aligned} E(U_c^I) &\geq E(U_r^I) \\ (1 - \theta - \lambda - \bar{\theta}^I) + P(h)\bar{\theta}^I &\geq (1 - \theta - \lambda - \bar{\theta}^I) + B^w - C^w + Pr(\mu)B^w \\ Pr(h)\bar{\theta}^I - C^{ca} &\geq Pr(\mu)B^w - C^w \end{aligned}$$

And the expected utility of going to court should be larger than doing nothing:

$$\begin{aligned} E(U_c^I) &\geq E(U_n^I) \\ (1 - \theta - \lambda - \bar{\theta}^I) + P(h)\bar{\theta}^I &\geq (1 - \theta - \lambda - \bar{\theta}^I) \\ Pr(h)\bar{\theta}^I &\geq Pr(\mu)c^{ca} \end{aligned}$$

If we assume that the costs of going to war for IP are larger than the potential benefit

$(Pr(\mu)B^w - C^w \geq 0)$ , we simply need:

$$Pr(h) \geq \frac{C^{ca}}{\bar{\theta}^I}$$

Then, the utility for **S** under over-extraction should be larger than the expected utility under moderation for the IP rebellion scenario:

$$\begin{aligned} E(U_c^S) &\geq E(U_{r,m}^S) \\ (\theta + \bar{\theta}) - Pr(h)\bar{\theta} &\geq (\theta + B^W - \alpha c) - Pr(\mu)B^W \\ Pr(h) &\leq \frac{-B^w + \alpha c + \bar{\theta} + Pr(\mu)B^w}{\bar{\theta}} \end{aligned}$$

And when IP decides to do nothing:

$$\begin{aligned} E(U_c^S) &\geq E(U_{n,m}^S) \\ (\theta + \bar{\theta}) - Pr(h)\bar{\theta} &\geq \theta \\ Pr(h) &\leq 1 \end{aligned}$$

The second inequality is trivial.

Finally, **C** would need to have a larger expected utility under an institutional solution:

$$\begin{aligned} E(U_c^C) &\geq E(U_{m,ni}^C) \\ Pr(h)\bar{\theta}^c &\geq C^I \\ Pr(h) &\geq \frac{C^I}{\bar{\theta}^C} \end{aligned}$$

And:

$$\begin{aligned}
E(U_c^C) &\geq E(U_{oe,no}^C) \\
(\lambda - C^I) + Pr(h)\bar{\theta} &\geq C^I - \bar{\theta}^c \\
Pr(h) &\geq \frac{(C^I - \bar{\theta}^c)}{\bar{\theta}^c}
\end{aligned}$$

Since  $\bar{\theta}^C \geq 0$ :

$$Pr(h) \geq \frac{C^I}{\bar{\theta}^c}$$

Thus:

$$\frac{C^{ca}}{\bar{\theta}^I} \leq Pr(h) \leq \frac{-B^w + \alpha c + \bar{\theta} + Pr(\mu)B^w}{\bar{\theta}}$$

And:

$$\frac{C^I}{\bar{\theta}^c} \leq Pr(h) \leq \frac{-B^w + \alpha c + \bar{\theta} + Pr(\mu)B^w}{\bar{\theta}}$$

We can simplify these inequalities by assuming that  $\bar{\theta}^C = \bar{\theta}^I$  and that  $B^w = \alpha c$ :

Thus:

$$2C^{ca} \leq Pr(h) \leq \bar{\theta} + Pr(\mu)B^w$$

And:

$$2C^I \leq Pr(h) \leq \bar{\theta} + Pr(\mu)B^w$$

**Proposition 1** *For a ruler, an institutional solution is optimal if their relative costs setting up an institution are lower than the potential benefit of defeating an indigenous rebellion plus the losses from over extraction. In other words, a rational ruler would chose to accept over extraction as long the probability of a successful indigenous rebellion is low enough.*

**Lemma 2** *If the potential earnings for the settlers with over-extraction are larger than the potential earnings of defeating the indigenous group in a rebellion, they will chose to over-extract.*

**Lemma 3** *For the indigenous group, under over-extraction, they will chose to go to court if their costs of collective action are low enough.*

## A1.2 Court outcomes

### A1.2.1 Preferences

- **The Crown:**

Define the utility function of C as follows:

$$U^c = \lambda - \bar{\theta}^c + B^w - \beta c - V + \theta \quad (12)$$

The utility function for C is similar than the one for the previous game with the exception that we can ignore the costs of setting up the institution and the potential fine since those are not parameters of decision. In turn, the parameter V defines the costs of fighting the settlers and theta represents the potential gains of defeating the settlers. In other words, if C wins against S it takes S's share.

Define the probability that the settlers win a rebellion against the crown as  $Pr(x)$ .

In this case, the expected probability for the crown is:

$$E(U_{sr}^c) = Pr(x)(-V) + (1 - Pr(x))(\lambda + \theta - V) \quad (13)$$

Note that if C loses the S takes all revenue for themselves.

Define the probability of an indigenous rebellion as  $Pr(\mu)$ , then the expected utility is:

$$E(U_{ir}^c) = Pr(\mu)(\lambda - \bar{\theta}^c - B^w - \beta c) + (1 - Pr(\mu))(\lambda - \bar{\theta}^c + B^w - \beta c) \quad (14)$$

- Settlers:

Define the utility function of S as follows:

$$U^s = \theta + \bar{\theta} + B^w - \alpha c - V + \lambda \quad (15)$$

S's utility is defined by the shares theta and over-extraction shares, plus the marginal benefit of either fighting IP or C. Define the probability that the settlers win a rebellion against the crown as  $Pr(x)$ . In this case, the expected for S probability is:

$$E(U_{sr}^s) = Pr(x)(\theta + \bar{\theta} - V + \lambda) + (1 - Pr(x))(-V) \quad (16)$$

Define the probability of an indigenous rebellion as  $P(\mu)$ , then the expected utility is:

$$E(U_{ir}^s) = Pr(\mu)(\theta + \bar{\theta} - \alpha c) + (1 - Pr(\mu))(\theta + \bar{\theta} + B^w - \alpha c) \quad (17)$$

- **Indigenous Groups:** Define the utility function for IP as:

$$U^I = (1 - \theta - \lambda - \bar{\theta}^I) + B^w - C^w \quad (18)$$

The indigenous group receives the remainder of the revenue after S and C take their

share. The parameter  $\bar{\theta}^I$  represents the cut took by the Settlers from IP's original share.  $C^{ca}$  represent the costs of collective action of making a claim.

If the indigenous group rebels, they pay a cost of  $C^w$  and receive a benefit of  $B^w$ . Again, this benefit could imply getting more lands.

Since the IP wins the rebellion with probability  $Pr(\mu)$ , the expected utility for IP is:

$$E(U^I) = P(\mu)((1 - \theta - \lambda - \bar{\theta}^I) + B^w - C^w) + (1 - P(\mu))((1 - \theta - \lambda - \bar{\theta}^I) - C^w) \quad (19)$$

### A1.2.2 Solution

The objective of this game is to find the conditions that guarantee that in the case of a negative outcome both S and IP will comply.

First, for IP:

$$\begin{aligned} U_{comply}^I &\geq E(U_r^I) \\ (1 - \theta - \lambda - \bar{\theta}^I) + B &\geq (1 - \theta - \lambda - \bar{\theta}^I) + Pr(\mu)B^W \\ \frac{C^w}{B^w} &\geq Pr(\mu) \end{aligned}$$

And for S:

$$\begin{aligned} U_{comply}^S &\geq E(U_r^S) \\ \theta &\geq P(x)(\theta + \bar{\theta} - V + \lambda) + (1 - P(x))(-V) \\ \frac{\theta + V}{(\theta + \bar{\theta} + \lambda)} &\geq Pr(x) \end{aligned}$$

**Proposition 4** *If the probability of success of a settler's rebellion is low enough so they always comply with the crown's ruling, the crown would always prefer to rule in favor of the indigenous population. At the same time, the crown could purposefully reduce its own gains ( $\lambda$ ) in order to reduce the potential of a settler's rebellion.*