The Role of Personal Connections in the Spanish Empire

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Abstract

States vary greatly in their quality of governance, and the individuals who execute government functions and their social networks are a key determinant of performance. Personal connections were a key factor in the Spanish Empire's governance strategy. Rulers maximized links between colonial officials and their superiors, and they restricted social ties between them and local elites. Both policies were beneficial in terms of revenue raised. To provide evidence, I build a novel biographical dataset of Spanish Empire bureaucrats, comprising high-ranking colonial officials (audiencia ministers) and their superiors in Spain (councilors of the Indies) from 1708 to 1808. I use entries and exits from the Council as within-minister shocks to connections in order to estimate their effect on promotions and performance. I find that more connected ministers were more likely to be promoted and raised more revenue. On the other hand, ministers with more links to local elites raised less revenue. These patterns are explained by personal connections, defined as sustained in-person interactions during their early careers. Conversely, a mere similarity in backgrounds does not predict promotions or higher revenues, which suggests that my results are driven by trust and not by homophily or elitism. Indeed, I show that personal connections are a much better predictor of friendships than other measures of connections used in the literature. These findings prove that the personal loyalties of high-ranking officials can help overcome agency problems and that the Spanish Empire took advantage of this fact by shaping their social networks.

1 Introduction

The Spanish Empire was one of the largest in history, and it lasted for more than three centuries without territorial losses. More than half a billion people currently live in terri-

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tories colonized by Spain. It left a huge legacy for them, evidenced by the fact that the overwhelming majority speak Spanish and profess Roman Catholicism.

The empire faced a formidable governance problem. All formal authority resided with the king in Madrid, but the huge distances made direct rule impractical. Letters from Spain took up to four and eight months to reach Mexico and Lima, respectively (Haring 1963, p. 113, Sellers-Garcia 2013). Central rulers in Spain always had the last word, but they could not rule the colonies directly. De facto decentralization is evident in an institutional practice commonly referred to as *"obedezco pero no cumplo"* (I obey but I do not comply): If a colonial official considered a royal order to be unjust or impractical, they were allowed to shelve it and write back to Spain with an explanation.[1]

Therefore, principals in Spain depended on their agents in the Americas to implement policy. Monitoring their actions was also hindered by the cost and lag in communications. I will show that they appointed agents whom they could trust (because they had previous relationships with them) and restricted connections between the officials and the colonial elite. By partially solving the agency problem, these practices increased the revenue extracted from the colonies.

I focus on the interaction between two institutions: The Council of the Indies and the colonial audiencias. The Council was the most important administrative body of the Spanish Empire. It drafted all legislation, it was the court of last resort, and it proposed candidates to the king for all important positions in the colonies. In summary, it was the highest authority after the king for all colonial matters. The audiencias were collegiate bodies located in the colonies[2]. They were the highest courts of appeal in their districts and they advised the viceroy or governor on all legislation. They were also important checks on executive officials and they were instrumental in maintaining royal authority.

[1]This principle was made explicit in royal decrees from 1528, 1564, 1620 and 1622 (Recopilación de Leyes de Indias libro II, título 1, leyes 22-24). Two of the most prominent contemporary jurists justified the practice by arguing that in provinces so remote and isolated from their kings, their mandates may be foolish or without warrant (Solórzano 1648) and that decrees issued contrary to justice should be presumed to be foreign to the intention of the ruler (Castillo de Bobadilla 1595). Both cited by Haring (1963, p. 114).

[2]There were fourteen audiencias during the eighteenth century: Santo Domingo, Mexico, Panama, Guatemala, Lima, Guadalajara, Santa Fe, Charcas, Quito, Chile, Manila, Buenos Aires, Cuzco, and Caracas.

Using biographical data, I show that shaping the audiencia ministers' social networks was an important part of the Empire's personnel policy in two ways. First, the policy used a set of restrictions to minimize ties between officers and the colony in which they served. For example, district natives were discriminated against, and marriage and holding property within the district were forbidden. Second, I show that the policy maximized connections to the principals in the Council. I exploit plausibly exogenous turnover in the Council of the Indies (in Spain) to establish that personal connections were a major factor in promotions. I estimate that being connected to one more councilor (0.73 standard deviations) increased the promotion probability of audiencia members by 3.4 percentage points (the average probability was 20%). I also find that this result is explained by confirmed personal connections and not by shared backgrounds or distant family ties.

Identifying variation comes from changes in the Council composition. This turnover generates within-minister shocks to personal connections. My specifications include minister-job fixed effects that control for time-invariant unobserved characteristics, such as minister ability. Moreover, entries and exits from the Council were decided in Madrid and were unrelated to the performance or behavior of individual colonial officers.

Next, I use yearly revenue data to show that the emphasis on connections was instrumental in helping central rulers achieve at least one goal: extracting revenue from the colonies. First, I show that districts with more connections raised more revenue. To identify this effect, I also use variation in the Council composition. Since my strategy holds audiencia composition intact, these results are unlikely to be driven by the identity of audiencia ministers (which rules out selection or favoritism as possible explanations). Therefore, this result suggests that connected subordinates were more likely to act in their superiors' best interests and that the policy may have contributed to the empire's success. I also show that districts with more shared backgrounds or distant family ties did not raise more revenue.

Second, I show that districts in which the audiencia ministers had more connections to the colonies raised less revenue. Since I do not have a source of exogenous variation, this result should be interpreted as a correlation. However, it is robust to controlling for the

most likely confounding variables (ministers' places of birth, whether they bought the office, and connections to the Council). This fact helps to understand why restrictions on social ties were such a salient feature of the personnel policy.

In sum, the governance strategy of the Spanish Empire took loyalties into account. I define loyalty as a strategy that privileges partners with whom the agent interacted in the past. In other words, councilors of Indies (principals, in Spain) were loyal to their friends by promoting them more often, and audiencia ministers (agents, in the colonies) were loyal because they performed better when their friends were in office. By contrast, ministers with social ties in the Americas may have been lax collecting taxes from their friends, and therefore rulers avoided hiring them.

Previous literature on connections has found both positive and negative effects of connections on bureaucratic performance (for example, Xu (2018) and Voth and Xu (2020)). Perhaps more surprisingly, different papers found both positive and negative effects of connections on promotions (for example, Fisman et al. (2020) and Shih et al. (2012)). A key difference between this paper and previous work on connections is that I distinguish between *confirmed personal ties* and *likely ties*.

Two individuals have a confirmed personal tie if the historical evidence corroborates (with an acceptable degree of certainty, see section 3.1) that they interacted in person in a sustained way. In this paper, I classify two individuals as connected if they attended the same university or college, practiced law before the same tribunals, or served as ministers in the same audiencia. For all three, I also require that they coincide in time. In section 3.1, I explain why all these links satisfy my definition of confirmed personal ties. Likely ties are shared personal characteristics that increase the probability that the two met or had friends in common. Two individuals have a likely tie if they attended the same university or college, or practiced law before the same tribunal, regardless of whether they coincided in time or not. I also classify them as a likely tie if they are distant relatives.

Why highlight the difference between personal connections and likely ties? Social ties not only capture relationships but also shared characteristics, such as elite membership

and educational level. My identification strategy controls for personal characteristics by comparing the same individuals (with fixed characteristics) before and after they gain or lose a connection. However, it is impossible to disentangle the effect of a relationship from the effect of sharing a characteristic. For example, an elitist principal may only promote subordinates who went to top schools or belong to the upper class. For likely ties, the probability of an actual relationship is low, and the estimates may mostly capture the effect of sharing a characteristic, due to homophily or elitism.

In this paper, I show that favoritism in the Spanish Empire promotion ladder was driven by relationships and not by homophily. I find no effect of likely ties on the probability of promotions. Moreover, the effect of personal connections on promotions remains significant even after controlling for likely ties. In addition, while personal connections to the Council are associated with higher audiencia revenue, likely ties are not. This implies that the strategy of rewarding relationships with the Council paid off and that promotions driven by homophily would not have had the same effect.

In order to verify that my measures of connections are actually capturing relationships of trust and reciprocity, I document that connected individuals were more likely to be friends or allies. I merge my data into an action-level dataset (Actoz, Dedieu 2011). Each observation in the dataset is a documented action by an individual on a given date. Some of these actions are relational, and therefore they help me uncover friendships between individuals in my data. I use three types of relational actions to identify alliances or friendships. First, I use references in job applications. Second, I use co-parenthood (being godparents to each other's children) and best men at weddings, which historians describe as "ritualized friendships" or "spiritual kinship" (Lynch, 1986, Rosenmuller 2008). The last category includes individuals who hired or procured a job for each other. I find that a councilor-minister pair with a personal connection is five times more likely to be classified as friends than the average pair. In comparison, a pair with a likely connection is only twice as likely to be classified as friends.

The audiencias and the Council offer a unique opportunity to study the role of personal connections and loyalty in governance. Most of the council and audiencia members were

part of a specialized bureaucracy, with a very structured career path. They usually studied law at one of a handful of universities. Moreover, serving in the audiencias was a relatively common stepping stone to the Council: 25% of its members also served in the audiencias (38% of those with a background in law). They usually stayed in their audiencia or Council jobs until retirement or death. This setting presents two advantages: First, they frequently run into each other at different steps of the promotion ladder, and therefore their network was dense (see descriptive statistics in section 5.1). A dense network allows me to observe enough variation in personal connections. Second, the structured career path implies that most of their professional lives are accounted for in the historical record, and therefore I can measure personal ties with reasonable accuracy.

The remainder of the paper is organized as follows. The next section provides a theoretical framework to understand the role of social ties from an economic point of view. Section 3 reviews the literature on connections and recent political economy work about the Spanish Empire. Section 4 provides historical background by describing the Spanish Empire in general, and the Council and the audiencias in particular. I also summarize some of the historical literature on connections in the colonial bureaucracy. Section 5 describes the data on connections, promotions, friendships, and fiscal performance. Section 6 shows the results for the effect of connections in promotions. Section 7 describes the relationship between connections and friendships. Section 8 presents the results on fiscal performance. Section 9 concludes.

2 Theoretical framework

Long-term relationships are one way to sustain cooperative equilibria in settings with profitable short-term deviations. The theoretical literature offers at least two mechanisms. First, barriers to entry to form new relationships may discourage individuals from defaulting and starting and a new relationship (see, for example, Kranton (1996), Sobel (2006), Board (2011), and Athey, Calvano and Jha (2019)). These barriers to entry can be characterized as investments in relationships, and they may take the form of gift exchange or time

spent together. Second, in a context with heterogeneous types, where some are trustworthy and some are not, previous interactions reduce uncertainty and improve selection (see, for example, Watson 1999 and Ghosh and Ray 1996).

Based on the arguments above, I expect more cooperation between councilors and ministers when they are connected. I find that when audiencia ministers gain (lose) connections to the Council, they are more (less) likely to get promoted. However, cooperation between supervisors and subordinates can be harmful or beneficial to the organization, depending on whether or not the supervisor's incentives are aligned with the organization's (see, for example, Tirole 1986 on collusion in hierarchies). If they are not aligned, the connected supervisor and subordinate may collude to exert less effort or to extract rents. If the incentives are aligned, the connected supervisor may have an easier time getting the subordinate to act in the organization's best interests. I find that when connected individuals enter (exit) the Council, their connected audiencias collect more (less) taxes. This second result implies that cooperation between councilors and ministers was beneficial for Spain.

The barriers to entry mechanism may explain my results. Councilors of Indies may have preferred audiencia ministers whom they knew personally because they had already invested in the relationship, and they can expect cooperation from them. Also, it was hard to make that kind of investment across the Atlantic, so they had to rely on their previous networks. Likewise, connected audiencia ministers may have chosen policies more favorable to Spain because they had invested in relationships with councilors, and it was not profitable to deviate from a cooperative equilibrium. I cannot conclusively rule out the role of connections as sources of information (second mechanism). The Council may have favored connected ministers because they had a more precise signal about their type. However, the performance result only uses variation in entries and exits from the Council, suggesting that the result is not entirely driven by the type of agents selected and that ministers change their behavior when the composition of the Council changes.

3 Literature review

This paper contributes to a large literature in economics and sociology that studies how social incentives shape the allocation of effort and resources within an organization, and ultimately its performance. In a review of the literature, Ashraf and Bandiera (2018) argue that social incentives are a key determinant of employee motivation and that their effect can be positive or negative overall.

There is a growing political economy literature on connections, to which this paper contributes in three ways. First, I show the dual nature of the role of connections. While connections to superiors improved performance and were encouraged, connections to subjects were discouraged and decreased performance. Second, the papers either focus on what I defined above as "likely ties" or do not discuss the nature of the connections. My results suggest that we need to pay attention to the nature of the ties, in particular to understand whether we are capturing the effect of relationships or shared characteristics. Third, most of the literature focuses on the Chinese Communist Party. Despite sharing a context, these papers find both positive and negative effects of connections on promotions (see Fisman et al. (2020) and Shih et al. (2012))[3]. Much like the CCP, the Spanish Empire was a layered autocratic and bureaucratic organization with enormous influence over a significant portion of the world's population.

Xu (2018) is probably the closest paper to this one since it studies the relationship between colonial governors in the British Empire and the Secretary of State for the Colonies. He finds that governors are more likely to be promoted to bigger (and higher-paid) colonies when connected to their superior. At the same time, they provide more tax exemptions, generate less revenue, and invest less. The promotion and performance gaps disappear after the abolition of patronage appointments. The first difference with this paper is the sign of the estimated impact of connections on performance, which suggests that the effect may be context-dependent. The second difference is that Xu (2018) focuses on what I described

[3]Also on this literature: Jia, Kudamatsu, and Seim (2015), Francois, Trebbi and Xiao (2020), Persson and Zhuravskaya (2015), Cao (2020), Jia (2017), Jiang and Zhang (2020), Lorentzen and Lu (2018), among others.

above as *likely ties*. He classifies two individuals as connected if they have shared ancestry, if they are both members of the aristocracy, or if they both went to Eton, Oxford, or Cambridge (regardless of when they attended). For shared ancestry, he uses a cutoff of 16 degrees of separation (8th cousins). I see the two papers as complementary. Xu (2018) shows that favoritism for fellow elite members was detrimental to the British Empire's revenue. I show that a more narrow form of favoritism (towards fellow elite members with personal relationships with the principals) was beneficial for the Spanish Empire's revenue. In a different context, Voth and Xu (2020) find positive effects of patronage. They study the selection effects of patronage in the British Royal Navy. They compare the performance of promotees with and without family ties to the top of the naval hierarchy. They find that heterogeneity among the admirals in charge of promotions, suggesting some admirals used family ties to make better selections and some admirals used them to favor their kin. Because most admirals promoted on the basis of merit, the overall selection effect of patronage was positive. For family ties, they use the same definition as Xu (2018).

More generally, this paper contributes to a long-lived literature on bureaucracies. Starting with Weber (1922), most contributions suggests that bureaucracies are most effective when they are isolated from political influence (see Evans and Rauch (1999), Rauch and Evans (2000), Cingolani et al. 2015, Colonnelli et al., (2019), Barbosa and Ferreira (2019)). A notable exception is Toral (2020), who finds that Brazilian bureaucrats who are connected to politicians perform better. An important caveat is that while most of these papers focus on service providers (such as teachers or doctors) or street-level managers (such as school principals), my paper focuses on high-ranking decision makers.

This paper also contributes to a small but growing literature on the Spanish Empire in political science and political economy. The paper most relevant to this one is Guardado (2020), which focuses on the interaction between the Audiencia of Lima and a lower level of government, the corregidores (provincial governors). Using exogenous variation in Audiencia composition (due to deaths), she shows that the sale of audiencia positions led to a surge in prices of the provincial positions (which capture illicit returns from office) and an

increase in the likelihood of rebellions. Since in my sample audiencia ministers who bought their positions were both more connected to the district and less connected to the Council, Guardado (2020) shows one mechanism through which connections affected performance: through changes in the oversight behavior of the audiencia[4].

4 Background

The Spanish Empire expanded very quickly in the Americas in the early sixteenth century. They established settlements in the Caribbean right after Columbus' voyage in 1492, creating the Audiencia of Santo Domingo in 1511. During the 1520s and 1530s, the Spanish conquered the two most powerful polities in the Americas, the Aztec and Inca Empires. It gradually expanded in all directions, reaching current Argentina and Chile in the South and California and Texas in the North. During the sixteenth century, they also conquered the Philippines.

Unlike the British Empire, which expanded by granting charters to groups of settlers, the Spanish Empire had a unified administration and legal framework from the start. All territories in America and the Philippines (which the Spanish called the Indies) were incorporated into the Crown of Castile. It was administered by a layered bureaucracy, headed by the king and the Council of the Indies in Spain, and by viceroys and audiencias in the colonies. The legal framework was a succession of royal decrees compiled in 1680 in the Recopilación de Leyes de Indias. The Catholic Church was effectively a branch of government: the king appointed the bishops, its finances were intermingled with the Crown's, and the secular rulers shared its ultimate objective (the mass conversion of Native Americans to Catholicism). On paper, Native Americans were vassals of the king of Spain and protected against slavery and exploitation. In practice, colonists (and their descendants) were granted the right to forcibly extract labor from groups of people. The atrocities committed by the Spanish are well recorded, starting with Bartolome de las Casas' account from 1542.

The eighteenth century started with the replacement of the Habsburg dynasty for the

[4]Also, see Guardado (2018), Garfias and Sellars (2020), Garfias (2019), Franco-Vivanco (2020), Grafe and Irigoin (2006, 2008, 2012), Grafe (2018).

French Bourbon dynasty. Gradually throughout the century, The Bourbon kings engaged in a series of reforms intended to consolidate and centralize power. They limited the power of local elites by restricting the sale of offices and by appointing Spanish-born officials to both existing and new offices (such as audiencias and intendencias, respectively). There is a debate among historians about how effective the reforms were in consolidating royal authority. For example, Brading (1971) argues that Charles III (1759-1788) successfully wrestled power away from local elites by expanding the bureaucracy with mostly peninsular officials, ending trade monopolies, and raising tax revenue. On the other hand, Tutino (1976) argues that the reforms left Creoles' power mostly unchanged. There is also disagreement about when the reforms started and when royal authority reached its peak (see, for example, Lynch 1984).

The relevance of connections to the Council for promotions I observe is consistent with the centralizing and pro-peninsular nature of Bourbon policies. The restrictions on ties to the local elite predate the Bourbon reforms, but enforcement increased, and exemptions decreased during the eighteenth century. At least in terms of revenue raised, reformers seem to have accomplished their goal. Both total tax revenue and remittances to Spain increased gradually during the eighteenth century and reached their peak around 1795 (Marichal 2007).

For more than three centuries, the empire lost almost no territory (except the loss of Spanish Louisiana in 1763). After the Napoleonic invasion of Spain (1808) and the imprisonment of kings Charles IV and Ferdinand VII, some colonies opted for self-rule rather than recognizing the interim governments established in Spain during the Peninsular War, which led to numerous wars across the continent. Ferdinand VII was restored in 1814, but he did not manage to re-establish royal rule in the Americas. By 1821, most of the colonies were independent.

4.1 The Council of the Indies

The Council was established in 1524 by Charles V to administer the newly acquired colonies. It was located in Madrid and it had jurisdiction over the American colonies and the Philippines. Its powers encompassed every branch of government: legislative, judicial, military,

and religious (Haring 1963). It drafted all new legislation for the king to approve. It advised the king on appointments to every important office. The default appointment procedure for audiencia ministers was called *consulta*: the Council presented three candidates to the king, and he chose one. According to Herzog (2004, p. 63), the king often chose the first name on the list. From 1751 to 1791, 86% of audiencia appointments were by *consulta* (Burkholder and Chandler 1982, p. xvii). The remainder were appointed directly by the king (often because he sold the appointment).

The Council was also the highest court for the Americas. Criminal cases could not be appealed to the Council but civil cases above a certain sum could. In addition, the Council in charge of the performance reviews for every important officer called *residencias*. The *residencias* were judicial examinations that looked for irregularities or crimes committed in office. Common findings included: brutal treatment of Native Americans, allowing contraband, missing revenue, giving jobs to friends and family. Penalties included fines, jail time, and a ban on taking public jobs. A clean sheet from the previous job was required before moving up in the bureaucracy.

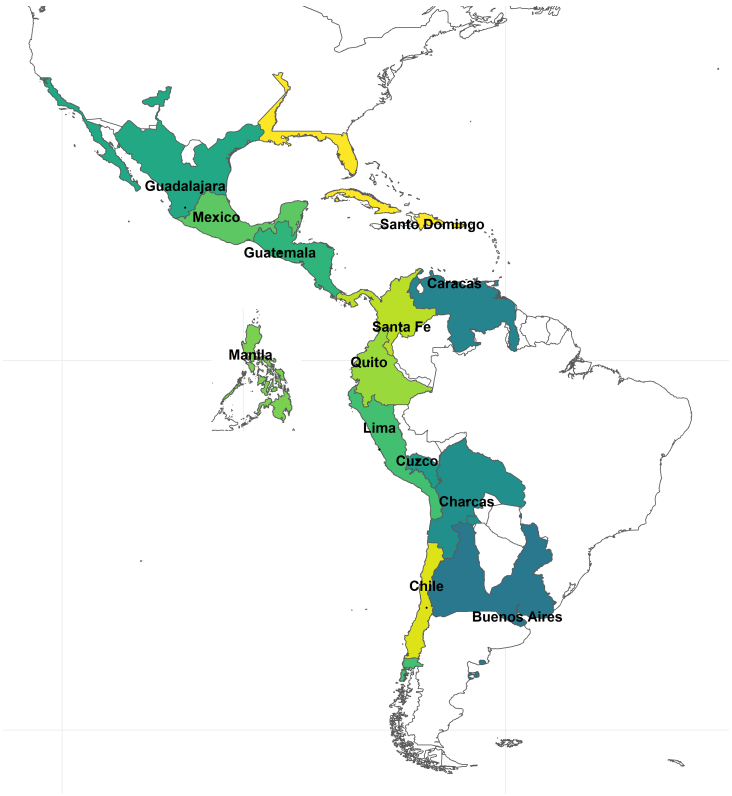
The number of councilors went from thirteen in 1717 to twenty-six in 1807. There were four roles in the Council. For example, in 1717, we observe one president, eight *ministros togados* (ministers of the robe), two *ministros de capa y espada* (ministers of cape and sword), and two *fiscales* (crown attorneys). The ministros togados and the fiscales always had an education in law, and 38% of them served in the audiencias (where a law degree was required). On the other hand, the *capa y espada* ministers had no legal training and often came from the nobility or had military experience. Therefore, 94% of the connections I identify come from links between fiscales or ministros togados and audiencia members.

4.2 The audiencias

The audiencias were key components of the Spanish Empire. Hamnet (2017, p. 27) describes them as "The principal judicial and administrative organ of Spanish royal authority was the audiencia, a high court that acted as an administrative and legislative organ as well". "More

than any other group, these men [audiencia ministers] were the real rulers of the Spanish Empire" (Phelan 1967, p. 126). As the highest courts in their districts, they had broad judicial powers. These powers included oversight over the fiscal bureaucracy and performance reviews of lower-ranking officials (mirroring the Council's role for higher-ranking officials).

Figure 1: Audiencias and their jurisdictions around 1795



This figure shows the thirteen audiencias and their jurisdictions before American Independence. Borders are approximate. The audiencia of Panama (also in sample) is missing from this map because it was abolished in 1751.

The audiencia's legislative and executive powers were limited in theory but significant in practice. Technically, all legislation had to be approved by the viceroy or governor, and the audiencia had no veto power. However, they were very influential for two reasons: First, audiencia ministers were allowed to correspond directly with Spain, and any of the viceroy's decisions could be overruled by the king or the Council. The government in Madrid effectively used the audiencias as a check on the executive. Second, viceroys and governors needed their technical and administrative skills to carry out government policy. Unlike executives, who

usually came from a military background, all audiencia members had legal training. Since colonial officials had to abide by two centuries of sometimes contradictory royal decrees, their legal expertise was valuable. Moreover, they had longer terms in office, so they were more likely to have the bureaucratic skills needed to get stuff done (viceroys and governors were usually limited to five years) (Haring 1963, Phelan 1967).

In summary, audiencia ministers were superficially similar to contemporary judges. They were lawyers, they wore robes, and their main powers were judicial in nature. But there was no separation of powers in the Spanish Empire, and the audiencias had considerable political authority. In the words of Hamnet (2017, p. 27): "Appreciation of the importance of the audiencia... is fundamental to any understanding of how the Hispanic Monarchy functioned overseas."

The ladder of advancement within the audiencia system was called the *ascenso*. First, there was a hierarchy inside the audiencias: The lowest was *fiscal del crimen* (crown attorney for criminal cases), then *fiscal civil* (same for civil cases), then *alcalde del crimen* (judge for criminal cases), then *oidor* (judge for civil cases), and lastly *regente* (chief judge). Second, some audiencias were more prestigious than others. Lima and Mexico were the most powerful and prestigious. The evidence also suggests that the other twelve were not equal. For example, Santo Domingo and Panama were usually destinations for newcomers, and Santa Fe and Guadalajara were more likely to be stepping stones to Mexico and Lima (Burkholder and Chandler 1977).

The size of the audiencias varied across time and place. In the early eighteenth century, the viceregal audiencias (Mexico and Lima) had fourteen members, and the rest had four or five members (usually one fiscal and four oidores). Mexico peaked in the late 1700s with up to twenty-four members, and Lima peaked in the mid-eighteenth century with twenty members. The remaining audiencias seldom had more than ten members.

4.3 Connections in the Spanish Empire

In this section, I first summarize historians' descriptions of the role of connections between audiencias and the Council, and then I describe the restrictions on ties between ministers and local elites.

Historians have noted the role of connections to the Council for appointment and promotion to the audiencias. Phelan stresses a dual role for qualifications and promotions, without specifying which one was more important: "The Council of the Indies stood its ground in insisting that candidates be academically qualified and that due weight be given to previous experience. But the influence of the powerful also played a role", and: "Without some influence it was difficult to secure an appointment to the professional bureaucracy. Yet the Council of the Indies often scuttled proposed appointments whose only recommendation was the naked use of influence" (Phelan 1967, p. 133).

Herzog writes about the pathway to a job or promotion in the audiencias: "The ability to activate social contacts and to establish a relationship either with the councilors of the Council of the Indies or with other influential members of the court was extremely helpful. Candidates had to convince these people that they merited reward, that they were worthy of trust, and that they would be helpful to them in the future... Royal allocation of offices thus depended on social and family relations." (Herzog 2004, p. 65). Hamnet (2017, p. 5) writes about the role of transatlantic connections in sustaining royal rule: "Personal and professional linkages, which often cut across royal institutions and specific territories, acted as long-term elements in binding metropoles and overseas dependencies together." Also, see Amadori (2013) and Portillo (2006) on this topic.

While connections to the court and the Council were a plus, connections to the district were a minus. First, no one was allowed to serve in their native district. Second, ministers (and their children) were banned from marrying within the district they ruled. Third, ministers were forbidden from being godfathers at baptisms or best men at weddings. These rituals were used to seal bonds of friendship and to upgrade them to "spiritual kinship" (Rosenmuller 2008, p. 5). They were even barred from attending weddings and funerals,

but it is unclear whether this regulation was enforced. Fourth, ministers were not allowed to hold property or run businesses within their districts [5].

The objective of these rules was to ensure that ministers would pursue the king's goals. The underlying assumption was that relationships between officers and local elites would bias decision-making. Of course, ministers lived in (and were part of) the societies they governed for decades, and links between them and the local communities were unavoidable. First, there are many cases of documented transgressions (see Herzog (2000) on the Audiencia of Quito). The fact that ministers were prosecuted and punished for these (often with fines or reprimands) implies that they were binding but not absolute. Second, ministers exploited grey areas, such as whether the ban against marrying within the district applied to women born, raised, or living there. Third, ministers could apply for exemptions (often in exchange for money). Lastly, many relationships could not be covered by the regulations, such as friendship and employment.

5 Data

This paper relies on three types of data. First, I use biographies of audiencia ministers and councilors of the Indies. My sources are Burkholder and Chandler (1982, 1977), Burkholder (1986), and the Spanish Biographical Dictionary[6]. By digitizing this data, I obtained promotions within the audiencia system and connections between councilors and ministers.

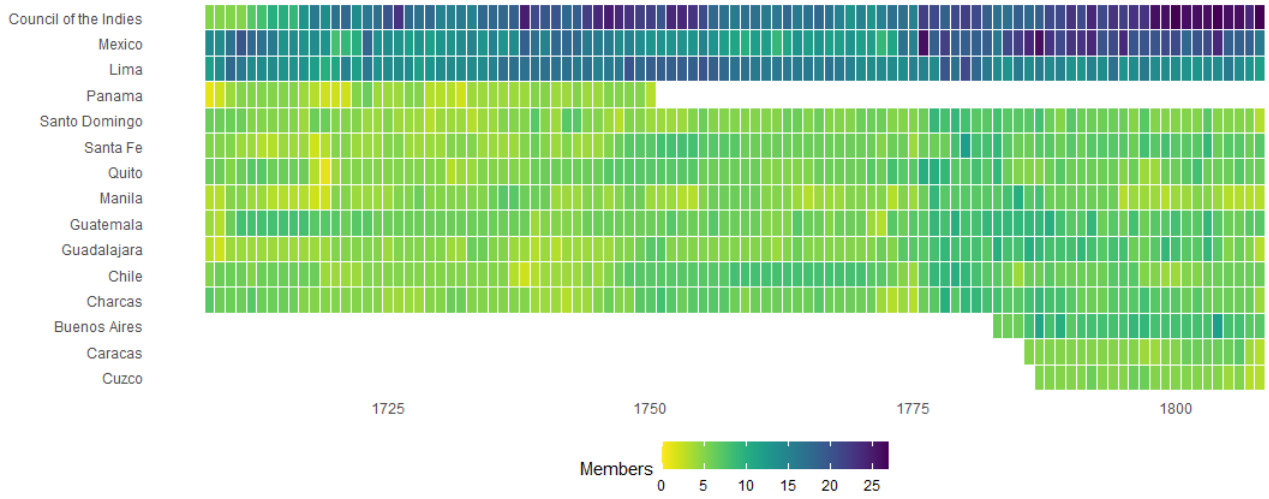
My novel dataset has biographical information for 159 councilors and 473 audiencia members. Because 39 audiencia members became councilors, there are 593 individuals in my data. Since ministers get promoted within the audiencia system, I observe 808 audiencia positions. The unit of observation is the audiencia minister-year. The main individual-level variables are year of birth, university and college attendance, and tribunals in which they were admitted to practice law. The main individual-year level variables are the institution

[5]These restrictions can be found in the Recopilacion de Leyes de Indias: libro 2, titulo 16, leyes 48-49 (godparents, weddings), 54-47 (property and business), 82-87 (marriage). Rosenmuller (2008, p 54) and Herzog (2000, p. 143) provide summaries and analysis.

[6]`http://dbe.rah.es`

in which they were serving that year (the Council or one of the fourteen audiencias) and the position. The main positions for audiencia members are: regent, oidor, alcalde del crimen, fiscal civil, and fiscal del crimen. Figure 1 shows the number of members in the Council and the audiencias by year, and two things are worth noticing. First, note that the Audiencia of Panama was abolished in 1751, and the audiencias of Buenos Aires, Caracas, and Cuzco were established in 1783, 1786, and 1787 respectively. Second, the audiencias of Mexico and Lima were always more numerous than the rest.

Figure 2: Number of members in the Council of Indies and the colonial audiencias by year (1708-1808)



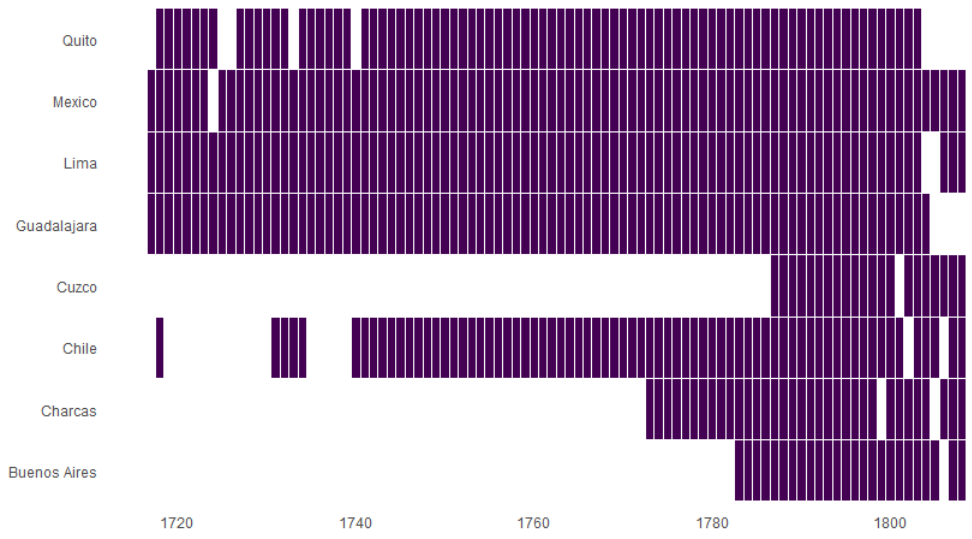
This figure shows the creation of the audiencias of Cuzco, Caracas, and Buenos Aires, and the abolition of the audiencia of Panama. It also shows that the viceregal audiencias, Mexico and Lima, were bigger than the rest. Last, it shows that the number of ministers was relatively stable, though it generally increased over time, especially in Mexico

The second type of data I use is an action-level dataset of Spanish bureaucrats and politicians (Dedieu 2011, 2014). The dataset is the product of a collective effort by historians, in particular the PAPE group (Dedieu 2017). There are many types of actions, but they generally correspond to the "paper trail" left by individuals (birth and death records, marriage certificates, job applications, judicial proceedings, etc.). Some of these actions are relational, and therefore they help me uncover friendships between individuals in my data. I use this dataset to validate my measure of connections between ministers and councilors and to mea-

sure connections between ministers and local elites. The Actoz dataset contains 582 out of the 593 ministers/councilors in my dataset (98%). There are 11,501 actions involving them (19.7 per individual on average), 27% of which a relational (they include another individual).

Third, use I yearly revenue data collected by TePaske and Klein (1982), which I use to measure audiencia performance. Unfortunately, TePaske and Klein only cover the Viceroyalties of New Spain, Peru, and Rio de la Plata. The territories of New Grenada, the Caribbean, and the Philippines are not covered. Therefore, I can only match eight of the fourteen audiencias to the fiscal data: Buenos Aires, Chile, Charcas, Cuzco, Lima, Quito, Guadalajara, and Mexico. I match each audiencia to the caja located in the same city. For the period 1708-1808 (period with available connections data), I only have 493 audiencia-year observations, mostly because some treasuries were established late in the sample (for example, Buenos Aires in 1783). Figure 2 shows the years with and without fiscal data for the eight available audiencias.

Figure 3: Years with fiscal data (1708-1808)



This figure shows the available fiscal data for each caja-audiencia. The cajas of Buenos Aires, Charcas, and Cuzco were created later.

My sample goes from 1708-1808, encompassing all of Bourbon Spain. It ends with the Napoleonic invasion of Spain and the beginning of the American Wars of Independence. It

starts in 1708 because my main source for Council members (Burkholder 1986) only starts in 1717. Since it includes all ministers serving in 1717, I could extend it to 1708 using the list in Schafer (1935) and the Spanish Biographical Dictionary, rounding up a century. The sample can be expanded by extending it backward. However, the lack of a comprehensive biographical dictionary for previous periods makes the data collection process more costly, and it increases measurement error. In the following sections, I describe in detail how I measure connections, promotions, and revenue.

5.1 Connections

For each audiencia member, I calculate how many Council members they were connected to in each year of their professional lives. For example, Miguel Acedo, oidor in Mexico, had six connections to the Council in 1783 and five in 1784. The decrease in connections was due to the death of Basilio Villarasa, who had worked with Acedo in the audiencia of Mexico from 1774 to 1779. He was replaced by Juan Francisco Gutierrez, who had never worked in Mexico (he had only worked in the audiencia of Santa Fe).

I measure two types of connections. First, I consider two individuals connected if they worked in the same audiencia in the same year. Service in the audiencias was one of the paths to the Council of Indies (25% of councilors in my sample). The audiencias were small (somewhere from five to twenty-four members), hard-working bodies (they met every day except on holidays). If two individuals worked together in an audiencia, even for only one year, they knew each other personally and interacted extensively.

I also measure connections established before service in the audiencias. For university, college, and tribunal connections, I only consider two individuals connected if they were born within five years of each other. I use dates of birth rather than directly using graduation dates for three reasons: First, graduation dates are often missing in the sources, and the biographies are generally ambiguous about whether they are referring to graduation or admittance dates. Second, in the eighteenth century everyone attended university at around the same age: "By the eighteenth century... age-mixing, as such, was regarded as evil; children and

adolescents were now thought to be very different from one another (as well as from adults), and, therefore, they were each in need of special attention, discipline, and care" (Kagan 1974, ch. 8). Third, for audiencia members, Burkholder and Chandler (1977) approximate missing dates of birth from university and college graduation and admittance to the practice law (three of my connection variables). This choice implies two things: dates of birth in my dataset may be measuring career timing better than actual birth, and Burkholder and Chandler also concluded that most people went through these career milestones at around the same age. Unfortunately, I do not know which dates are approximated and which are directly observed.

The size of universities in eighteenth-century Spain implies that it is extremely likely that two individuals with similar career aspirations knew each other personally. The average number of graduates in canon and civil law per year in Salamanca in the eighteenth century, Alcala, and Valladolid were 315, 347, and 326, respectively (Kagan 1974, appendix A). Colleges were residence halls within the university that provided room and board. They allowed students to remain in the university after they graduated with a salary, so they are also associated with post-graduate education. They covered a small subset of students. Kagan (1974) reports the number of students for a few of the most frequent colleges in my sample. For Arzobispo, Cuenca, Oviedo, and San Idelfonso in the eighteenth century, the number of students oscillates between 20 and 40 (Kagan 1974, ch. 7).

I also consider two individuals connected if they were admitted to practice law before the same tribunal. After being admitted, they were called *abogados*, which can be roughly translated to barrister. Again, a relatively small group of people were admitted. For example, in 1786, only 374 lawyers practiced law in the royal councils (the most frequent tribunal in my sample) (Guia de litigantes y pretendientes 1786).

Table 1 shows descriptive statistics at the audiencia minister-year level. We can see that the average audiencia minister was connected to 0.89 councilors in any given year. Connections in the audiencia system were as common as early life connections (0.48 and 0.46 average connections, respectively). Table 2 shows descriptive statistics at the individual

Table 1: Connections to the Council at the audiencia minister-year level

	variable	n	mean	sd	min	max
1	university connections	8440	0.29	0.69	0	7
2	college connections	8440	0.03	0.20	0	3
3	abogado connections	8440	0.21	0.67	0	5
4	early life (1+ 2+ 3)	8440	0.46	0.98	0	8
5	audiencia connections	8440	0.48	1.07	0	7
6	audiencia-year connections	8440	2.82	7.92	0	73
7	all connections (4 + 5)	8440	0.89	1.46	0	9

level for both audiencia ministers and councilors. The column *has data* counts the number of individuals for which we have information for the relevant variable. For example, we know where 422 (89%) ministers went to university. We only know where 50% of councilors went to university, which is expected since training in law was a requirement to get an audiencia job, but not to get a Council job. Note that 266 (56%) ministers were connected at some point in their careers. Again, connections in early life and through the audiencia system cover a similar number of ministers (38% and 41%, respectively).

Table 2: Connections at the individual level

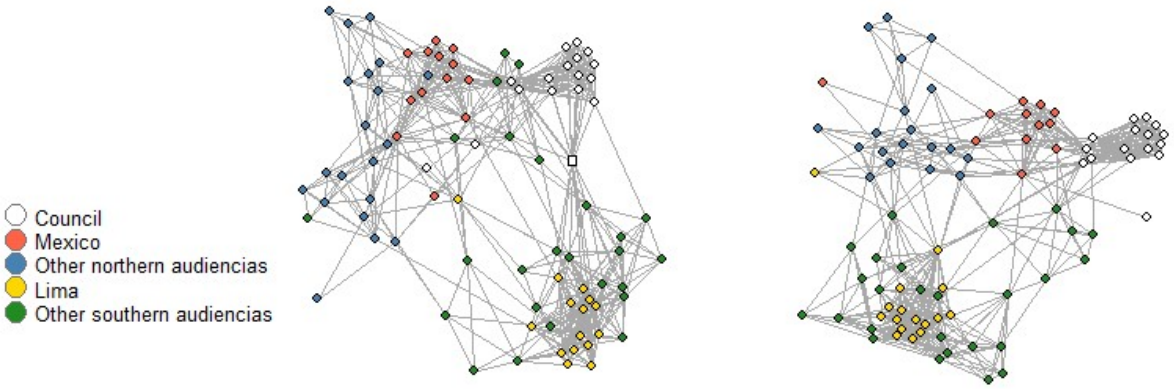
		Audiencia ministers			Council members		
	variable	n	has data	ever connected	n	has data	ever connected
1	university connections	473	422	145	159	79	76
2	college connections	473	150	24	159	49	47
3	abogado connections	473	277	102	159	45	45
4	early life (1+ 2+ 3)	473	441	179	159	98	95
5	audiencia connections	473	473	192	159	159	40
6	audiencia-year connections	473	473	192	159	159	40
7	all connections (4 + 5)	473	473	266	159	159	96

Figure 2 depicts the network of councilors and audiencia ministers for two years, 1766 and 1767. The nodes are individuals, and their color represents the institution they belonged to. The figure illustrates two key aspects of my dataset. First, it shows where variation comes from. Pedro de Leon y Escandon (represented in 1766 with a square) was promoted to the Council of Castile in 1767, and the ministers of Lima lost their main connection to the Council of the Indies. He was born in Spain but migrated to the Americas at age 15 following his uncle, the archbishop of Lima. He studied at the University of San Marcos

de Lima. At this time, the audiencia of Lima had an unusually high share of native-born members (product of office-selling during the Seven Years War), almost all of whom had attended San Marcos. Therefore, Leon y Escandon was connected to six out of fifteen Lima ministers. After his departure, the only connected audiencia minister was Antonio de Porlier, who had attended Salamanca with two councilors. The models in section 6 predict that those six ministers have a lower probability of being promoted in 1767 than in 1766. Also, the section 8 results imply an expected decline in the revenue collected in Lima after 1767.

Figure 4: Full Network of audiencia ministers and councilors

(a) 1766 (b) 1767



In this network, the nodes are Councilors of the Indies or audiencia ministers. The links are connections that could have been formed during audiencia service, in education, or during law practice. This graph illustrates the source of variation: in 1767 Lima lost its main connection to the Council when Pedro de Leon y Escandon (represented in 1766 with a square) was promoted to the Council of Castile.

Second, to classify two individuals as connected I use their entire careers up to the previous year. Therefore, everyone with more than one year of service is mechanically connected to everyone in their audiencia/council. It is not surprising then that we observe clusters corresponding to each colonial audiencia. For example, the five person cluster on the top part of the 1767 network is the audiencia of Guadalajara. South American audiencias are clustered around Lima because their ministers were often promoted there. Ministers in Central and North American audiencias were more often promoted to Mexico. These connections are not the object of study in this paper (since I only use connections to the Council), but they illustrate the promotions pattern.

To verify whether these connections are predictive of observed alliances and friendships, I merged my dataset to Actoz, the action-level dataset. I focus on the relational actions that reveal a relationship of trust and reciprocity between a minister and a councilor. I use three types of relational actions to identify alliances or friendships. First, I use references. They mostly come from job applications, where individuals had to provide a list of "witnesses" who could vouch for their character and qualifications, much like modern-day references. Second, I classify two individuals as friends or allies if they were *compadres* (literally, co-parents), which means that one of them was a godparent of the other one's children. Historians refer to these relationships as "ritualized friendships" or "spiritual kinship" (Lynch, 1986, Rosenmuller 2008). This relationship formalizes a pre-existing friendship and it results in a strong lifelong bond between compadres (Foster 1953). The last category includes individuals who hired or procured a job for each other. It includes direct appointments, job recommendations, and lobbying for someone to get a job.

In section 7, I use first, second, and third-degree friendships. First-degree friendships are direct links. To detect second and third-degree friendships, I built a network in which the nodes are every member of the Actoz dataset, and the vertices are the relationships listed above. A second-degree relationship is "a friend of a friend," and a third-degree one is "a friend of a friend of a friend".

I also use the action-level dataset to compute the number of connections between ministers and American elites. For each audiencia member, I select all their friends and allies (using the definition above). I then further select those with information on place of birth and classify them as either Spanish or American. I find friendships (with place of birth) for 293 audiencia ministers (out of 473).

5.2 Promotions

I also use the biographical dataset to record promotions within the audiencia system. I measure three types of promotions. The first two are designed deductively. First, I find individuals who got better jobs in the same audiencia (within audiencia). Second, I find

individuals who got jobs in a better audiencia. The hierarchy of jobs and audiencias is clear to historians (between audiencia). However, these two types miss many lateral and diagonal moves that may have been considered promotions in the eighteenth century. Therefore, I also find promotions inductively.

For promotion *within* audiencias, I use a known hierarchy of jobs, basically determined by three facts (Burkholder and Chandler 1977). First, judges (oidores and alcaldes del crimen) were more influential than crown attorneys (fiscales). Second, in audiencias with specialization in criminal and civil cases, the latter were more distinguished. Third, regent (chief judge) was the highest position. 96 ministers were promoted within their audiencias (149 promotions).

The second type of promotions are those *between* audiencias: A move to Mexico or Lima from any of the other twelve audiencias, without a loss of within-audiencia rank. Positions in Mexico and Lima were considered more powerful and prestigious (Burkholder and Chandler 1977). By law, vacancies in these two audiencias were to be filled by ministers working in the other audiencias (Recopilación, II, ii, xxxiiii). This law was not binding because the king could override royal decrees, but it is evidence that Mexico and Lima were at the top of the advancement ladder. Moreover, the two viceregal capitals had relatively pleasant climates and more networking opportunities. Burkholder and Chandler (1977) also mention intermediate audiencias (like Guadalajara or Santa Fe), but I found no hard evidence to deductively establish a complete ranking, so I only use promotions to Mexico and Lima. There were 94 promotions to Mexico or Lima.

Finally, I compute all promotions inductively. I assume promotions to be more frequent than demotions, as in most organizations (Gibbons and Waldman 1999). For each pair of posts, I classify a move from A to B to be a promotion if moves from A to B were more significantly more frequent than moves from B to A[7]. I count 325 promotions: 149 within, 94 within, and 127 others (desirable diagonal or lateral moves). For example, we observe nine

[7]I only classify a move as a promotion if there were at least three more moves in that direction than for the opposite. Results are very robust to different threshold specifications because the most common moves have an unequivocal direction.

instances of oidores in Guadalajara who became alcaldes del crimen in Mexico, and none in the reverse direction, so I classify those nine moves as promotions. This move was not deductively classified as a promotion *between* audiencias because oidor ranked lower than alcalde del crimen. It is not true that city dominates rank, as the previous example may suggest. For example, I observe that being named a regent wherever was a promotion. There are instances of oidores in Mexico becoming regents in Santo Domingo, Guadalajara, and Guatemala. This measure is further validated by the fact that the algorithm classifies no within- or between audiencia demotions as a promotion.

Table 3 summarizes the frequencies of each type of promotion.

Table 3: Frequency of each type of promotion

promotion	number of promotions	number promoted people	proportion of promoted people
within audiencia	149	96	0.20
between audiencias	94	51	0.11
all	325	149	0.32

5.3 Revenue

My measure of performance is revenue. The Spanish Empire was successful in fiscal terms. From the 1500s to the mid-1600s, gold and silver income from the Americas was used to finance the occupation of Italy and Flanders and almost constant European wars (Marichal 2007). There was a decline in revenue during the late seventeenth and early eighteenth century, but it was more than reversed in the second part of the eighteenth century. Before the Napoleonic wars, Spain remained the third European state in terms of fiscal income (after England and France) (Marichal 2007, p. 7). Even at the low point of the late 1600s, the transfers from America to Spain were always positive. In summary, the Spanish Empire was very successful at extracting revenue from its colonies, and it was neither static nor in permanent decline.

The Spanish Crown needed American silver to finance costly European wars, but the tax burdens were a constant source of friction between the crown and its American subjects

(Klein 1998, p.3). Audiencia members needed to exert effort to make sure taxes were properly raised, and they needed to resist pressure and bribes from local elites.

I use itemized income and expenditure data from the royal treasuries. The data was collected by TePaske and Klein (1982)[8]. The accounts have yearly frequency[9] and include itemized revenue and expenditures. The figures are in nominal *pesos de ocho*. I have not transformed these to real terms because I could not find an undisputed price index for the whole period. My analysis includes year fixed effects that should account for inflation.

To compute revenue, I matched the categories in Klein (1998), appendix 3, to the fiscal data. The included revenue categories are: mining and minting, taxes on trade and agriculture, taxes on government officials, taxes on Native Americans, and royal monopolies. I exclude loans, carryovers, and transfer income.

6 Effect of connections on promotions

To estimate the effect of connections on promotions, I exploit plausibly exogenous changes in the composition of the Council of the Indies. Entries and exits were decided in Madrid by the king upon the recommendation of the Camara of the Indies (a subset of the Council). The identifying assumption is that promotions and exits from the Council are not related to the ability or performance of audiencia ministers. Historians argue that both connections in Madrid and professional qualifications were necessary to get a seat in the Council (Haring 1963, Schafer 1935). It does not seem plausible that officials in the colonies were influential or relevant enough to have an impact on the process.

The dependent variables are the three measures of promotions outlined above: *within* audiencias, *between* audiencias, and all promotions. The first two were classified deductively from the historical record, and the last one was inferred inductively from my data. The promotion process was long, as it required a vacancy to be open, deliberation in Madrid,

[8]The data is available online at `realhacienda.colmex.mx`

[9]A minority of accounts have shorter or longer periods. I transformed all of them into year-level observations. For example, if one account covered the first half of 1750 and another one covered the second half, I added them up.

and sometimes a back and forth between the colonies and Spain (months-long trips each way). Therefore, I define a promotion window of four years. The dependent variable $Promotions_{i,j,t}$ equals 1 if minister i, with job j in year t had a better job in $t+4$, and 0 if she did not. If the jobs are not comparable, or if she retires, the data is missing. The results are robust for promotion windows between 0 and 8.

The independent variables are connections to the Council, denoted $Connections_{i,t}$. They count how many members of the Council are connected to i in year t. I report separate results for connections through the audiencia system, early-life connections (university, college, or tribunals), and both pulled together. To absorb all individual-level variation that may be correlated with connections, such as performance on the job or ability, I include individual-post fixed effects, denoted $\delta_{i,j}$. Therefore, I am comparing the number of connections in the last five years before a promotion with the number of connections in the years before that. Since ministers tend to accumulate connections the longer they stay in office (because their friends make it to the Council), I always add time in office fixed effects, denoted $\gamma_{i,j,t}$ (number of years i has been in job j). For minister i, in job j, in year t, I estimate the following specification:

$$Promotion_{i,j,t} = \beta \times Connections_{i,t} + \gamma_{i,j,t} + \delta_{i,j} + \epsilon_{i,j,t}$$

Table 4 reports the main results for the three dependent variables and the three independent variables. Standard errors are clustered at the individual-job level. The results show a strong effect of connections on promotions, confirming that having friends on the Council was a key determinant of career prospects. The number of observations is lower for *within* (models 1, 4, and 7) and *between* (models 2, 5, and 8) promotions because many job moves are not comparable under those definitions. Anyone who is getting transferred to a different audiencia has a missing value for *within* promotion. Also, anyone who is getting a *within* promotion or who is already in Mexico or has a missing value for the *between* promotion. The number of observations is higher in models that only account for connections made within the audiencia system (models 1, 2, and 3) because I can also use ministers whose date of

birth is unknown.

The effects are sizeable. My preferred specification is model 9, since it uses all available data (every type of promotion and every type of connection). An increase in one standard deviation in connections (1.375 councilors) increases the probability of a promotion within the next four years in 3.4pp, 17% of the average probability (20.4%). The effects are similar in size for most models. The estimates become noisier when I only use promotions between audiencias, which is expected since they only account for 37% of the variation in promotions. The estimates are also less robust when I use early life connections (college, university, and the bar). This is expected since early life connections have more measurement error, are less intense (fewer interactions), and happened many years ago (relationships could have faded away).

Table 4: Effect of Personal Connections to the Council on Promotions

	Promotion								
	Within audiencia	Between audiencias	All	Within audiencia	Between audiencias	All	Within audiencia	Between audiencias	All
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Audiencia system connections	0.047***	0.036	0.034**						
	(0.016)	(0.027)	(0.017)						
Early life connections				0.006	0.032	0.029*			
				(0.011)	(0.022)	(0.017)			
All connections							0.029***	0.032*	0.034***
							(0.010)	(0.018)	(0.013)
Ind-post F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time in job F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean promotions	0.078	0.089	0.204	0.078	0.089	0.204	0.078	0.089	0.204
SD connections	1.006	1.004	1.005	0.904	0.887	0.93	1.365	1.358	1.375
N promotions	96	51	149	96	51	149	96	51	149
Observations	5,724	3,602	6,828	5,724	3,602	6,828	5,724	3,602	6,828

Note: The unit of observation is the minister-year. Sample: 14 audiencias between 1708 and 1808. Dependent variables equal one if the individual was close to being promoted (within four years). Promotions could be within audiencia, between audiencias, or both. Independent variables measure the number of members of the Council of Indies that are connected to the minister. Connections could have been formed during audiencia service, in their early life (education or law practice), or both. Robust standard errors in parentheses, clustered at the individual-post level. *p<0.1; **p<0.05; ***p<0.01

These results are explained by personal connections and not by shared backgrounds. In table 5, I use likely connections between councilors and audiencia ministers as the independent variables. They share backgrounds if they went to the same university or college, or

if they were admitted to the bar in the same tribunal, regardless of date (models 1, 4, and 7). I also classify two individuals as having a likely connection if they are relatives up to 16 degrees (models 2, 5, and 8)[10]. The two measures combined are the independent variables in models 3, 6, and 9.

The specification is otherwise the same as in table 4, models 3, 6, and 9 since I use all promotions as the dependent variable. I find no effect of likely connections on the promotion probability, which suggests the Council was showing favoritism towards individuals whom they knew personally and not to those similar to them. In models 4-9, I run the regressions with both likely and confirmed connections, and the estimates for confirmed connections stay significant, with similar effect sizes as in table 4, further confirming that the results are not driven by homophily.

[10]I choose 16 degrees as the cut-off to make my results comparable to Xu (2018) and Voth and Xu (2020), but the results are not statistically significant for any cut-off. For cut-offs smaller than 5, for which we may expect closer relationships, there is not enough variation since there are very few connected ministers.

Table 5: Effect of Shared Background with the Council (likely connections) on Promotions

	All promotions								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Shared background	−0.003			−0.012			−0.012		
	(0.008)			(0.009)			(0.009)		
Relatives		−0.004			−0.009			−0.011	
		(0.037)			(0.037)			(0.036)	
All likely connections			0.005			0.0003			−0.008
			(0.007)			(0.008)			(0.009)
Early life connections				0.038*	0.030*	0.029			
				(0.019)	(0.017)	(0.019)			
All personal connections							0.039***	0.034***	0.040***
							(0.014)	(0.013)	(0.015)
Ind-post F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time in job F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean promotions	0.078	0.078	0.078	0.078	0.078	0.078	0.078	0.078	0.078
SD indep variable	3.413	0.551	5.097	3.413	0.551	5.097	3.413	0.551	5.097
Observations	6,828	6,828	6,828	6,828	6,828	6,828	6,828	6,828	6,828

The unit of observation is the minister-year. Sample: 14 audiencias 1708 and 1808. Dependent variables equal one if the individual was close to being promoted (within four years). Promotions could be within audiencia, between audiencias, or both. *Shared background* measures the number of members of the Council of Indies who shared university, college, or bar admittance. *Early life connections* counts the same, but only if they happened at the same time. *All connections* counts both early life and audiencia system connections. *Relatives* counts the number of councilors connected to the minister up to 16 degrees of separation (up to eighth cousins). *All likely connections* combines shared background and relatives. *p<0.1; **p<0.05; ***p<0.01

7 Effect of connections on friendships

The purpose of this section is to verify that my measure of connections is a strong predictor of observed friendships and alliances. I also show that likely connections do predict friendships (especially indirect ones) but not nearly as much as personal connections. I report results for first, second, and third-degree connections.

The unit of observation is the councilor-minister pair, and I include all the pairs that overlapped between 1708 and 1808. There are 6,292 pairs, which means that each audiencia minister overlapped with 13 councilors on average. I include minister and councilor fixed effects in all the specifications. Therefore, I control for the total number of connections that each member of the pair had. This accounts for the fact that those individuals whose life was better documented are both more likely to have an observed connection and an observed relationship. For a pair consisting of minister i and councilor j, I estimate the following specification:

$$Friendship_{i,j} = \beta \times Connected_{i,j} + \gamma_i + \delta_j + \epsilon_{i,j}$$

The dependent variable $Friendship_{i,j}$ equals one if minister i was ever friends with councilor j, zero otherwise. The independent variable $Connected_{i,j}$ equals one if they had a connection (personal in models 1-3, likely in models 4-6), zero otherwise. In models 7-9, I include both types of connections.

I find that a pair with a personal connection is 2.5pp points more likely to be friends than an unconnected pair (model 1). The effect may look small, but keep in mind the average pair has only a 0.7% probability of being friends. The effect is bigger for indirect friendships, 4pp and 3.6pp for second and third-degree, respectively. The average probability of indirect friendships is 3% and 8%, respectively. The relative scarcity of observed friendship is due to the fact that most acts of friendship are not part of the historical record and therefore not observable to us. However, the available data is still useful to compare the relative predicting power of personal and likely connections.

Table 6: Effect of Connections on Friendships or Alliances

	Councilor-minister pair are allies or friends, by degree								
	1^{st}	2^{nd}	3^{th}	1^{st}	2^{nd}	3^{th}	1^{st}	2^{nd}	3^{th}
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Personal connections	0.025***	0.040***	0.036*				0.024***	0.037***	0.029
	(0.007)	(0.012)	(0.020)				(0.008)	(0.013)	(0.020)
Likely connections				0.006*	0.015***	0.026***	0.002	0.009	0.021**
				(0.003)	(0.006)	(0.009)	(0.004)	(0.006)	(0.010)
Minister F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Councilor F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean Friends	0.007	0.027	0.079	0.007	0.027	0.079	0.007	0.027	0.079
Observations	6,292	6,292	6,292	6,292	6,292	6,292	6,292	6,292	6,292

The unit of observation is the councilor-minister pair. Sample: every overlapping pair of councilor-minister from 1708 to 1808. The dependent variable measures whether they were connected by alliances or friendships, by degree. A first-degree link is a direct alliance/friendship between them. A second-degree or third-degree link is an indirect alliance (friend of a friend, or friend of a friend of a friend, respectively). Robust standard errors in parentheses, two-way clustered at the minister and councilor levels. *p<0.1; **p<0.05; ***p<0.01

The estimate for personal connections is four times bigger than the estimate for likely connections (model 1 vs. model 4). The effect of likely connections gets bigger and more robust for more indirect friendships. In a horse-race regression with both likely and personal connections, only the former is significant for first and second-degree friendships. In summary, table 6 shows why personal connections are a better concept if we want to study the effect of relationships.

8 Effect of connections on performance

In section 6, I established that personal connections to the Council were a key determinant of career prospects in the Spanish Empire. I also described in section 4.3 how the Spanish Empire placed restrictions on links between audiencia ministers and American elite society. In this section, I will show that an increase in connections to the Council resulted in more revenue raised by the audiencia. I will also show evidence that suggests that audiencias with more connections to American elites raised less revenue.

8.1 Connections between the Council and the audiencias

To estimate the effect of audiencia-Council connections in performance, I use the following specification:

$$log(revenue_{a,t}) = \beta \times CouncilConnections_{a,t} + \gamma_a + \delta_t + \epsilon_{a,t}$$

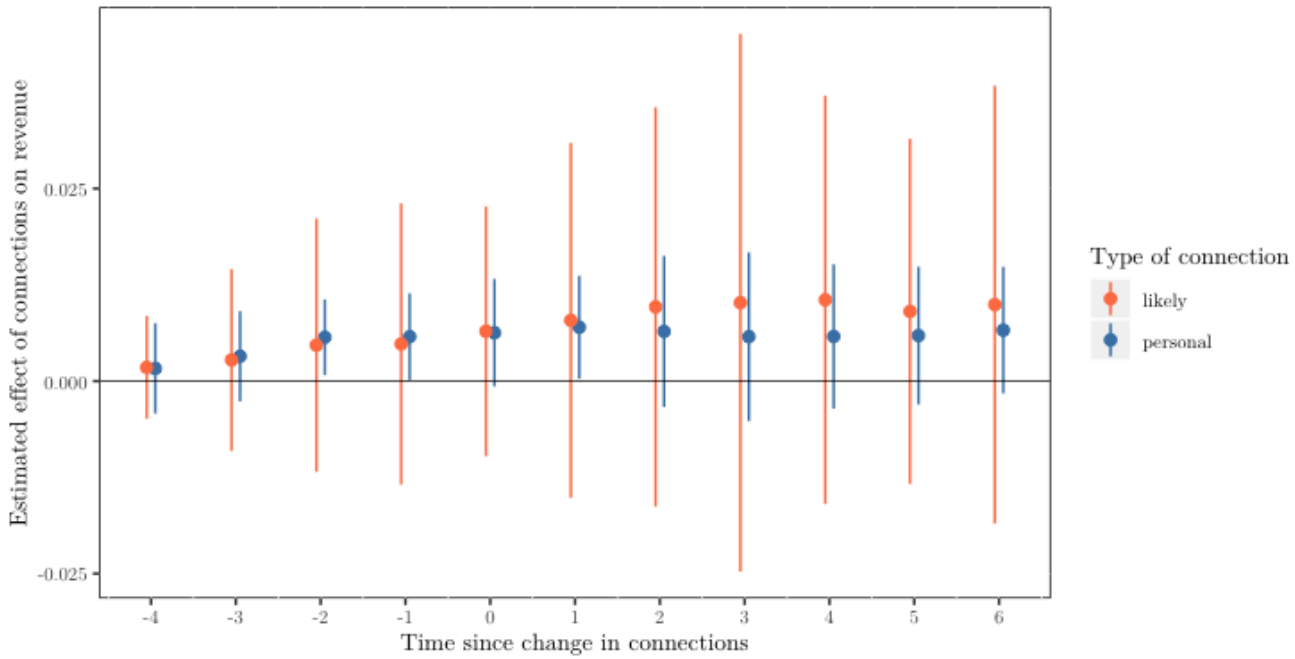
The dependent variable $log(revenue_{a,t})$ is the logarithm of the revenue collected on year t in audiencia a (matched to the closest treasury district). I report results for different lags and leads of the dependent variable. In include leads because implementing changes that would result in a higher tax collection could take years. For example, contracts with tax farmers were usually negotiated one or two years in advance. I include lags because audiencia ministers could anticipate changes in the Council's composition. Promotions to the council were sometimes decided years before they became effective since a vacant had to open up. Also, since most council members stayed in office until their deaths, their exits were often gradual. It was common for the most senior members to get attendance waivers for bad health or infirmity.

The independent variable $CouncilConnections_{a,t}$ is the cumulative sum of connections in audiencia a on year t, using only Council variation. For each councilor's entry and each audiencia, I count how many ministers were connected to the councilor and add them. When the councilor exits, I subtract the same number of connections[11]. Note that this variable is an approximate measure of the number of bilateral connections, not of the number of connected councilors or ministers. Standard errors are clustered at the audiencia level. Because of the small number of clusters I calculate standard errors using a wild-bootstrap procedure (Cameron, Gelbach, and Miller 2008). I include audiencia and year fixed effects in all specifications.

Figure 4 reports the results for two types of connections: personal and likely connections (people who knew each other personally and people with shared backgrounds, see definitions

[11] An alternative approach would be to subtract the number of connections at the time of exit. The problem with this approach is that councilors usually have more connections when they enter than when they exit, so the number of connections gets artificially higher over time. Results are robust to using this specification.

Figure 5: Connections to the Council and audiencia performance



This figure shows the effects of one extra connection to the Council on the logarithm of audiencia revenue for different lags and leads of the dependent variable. The unit of observation is the audiencia/caja-year. Sample: 8 audiencias 1708-1808 with gaps, 493 observations. All specifications include audiencia and year fixed effects. I only use turnover in the Council as the source of variation. I include leads of the dependent variable because policy changes may have a delayed impact on revenue. I include lags because turnover in the Council may have been anticipated. The bars depict 90% confidence intervals, with standard errors clustered at the audiencia level using a wild bootstrap procedure due to the small number of clusters (Cameron, Gelbach and Miller 2008).

above). Similarly to the results on promotions, I find a positive effect of personal connections on performance. The estimates are fairly noisy, which is expected given the small number of clusters. The effect is significant at the 90% level when lags -2 to 1. In the years following a change in connections, the estimates are always positive and mostly close to significance, but I can not exclude zero. Going to the past, the effect disappears between 3 and 4 years before the change in connections (going further back yields similar null effects). The results suggest that entries and exits were anticipated[12] and that their effect may have a long-lasting impact, although with decreasing precision. Likely connections, on the other hand, have no effect on performance. This pattern further confirms that relationships of trust are driving my results, and not homophily.

The effects are economically significant. For example, in the baseline model (dependent and independent variables measured in the same year), one extra connection (one more minister connected to a councilor) is associated with an increase of 0.6% increase in revenue. One standard deviation in connections (21.3) is associated with a 13.8% increase in revenue.

8.2 Connections between the audiencias and the colonial elite

In this subsection, I show that connections between the colonial elite and the audiencias were negatively correlated with revenue raised. I run a regression very similar to the one in the previous section. Table 7 displays the results.

$$log(revenue_{a,t}) = \beta \times AmericanTies_{a,t} + \alpha \times SpanishTies_{a,t} + X_{a,t} + \gamma_a + \delta_t + \epsilon_{a,t}$$

The unit of observation is again the audiencia year, with audiencia and year fixed effects. The dependent variable is the same as in the previous section. The independent variable $AmericanTies_{a,t}$ is the number of American friends and allies that the members of the

[12]With more data collection, I will be able to account for anticipated entries and exits by using dates of appointment instead of dates of effective service and by classifying ministers with attendance waivers as retired.

audiencia a had in a year t. I use two versions of this variable: In models 1 and 2 of table 7, I count only friends and allies, defined in section 5.1 (references, *compadres*, and getting someone a job). In models 3 and 4, I also include close family members and associates (people with whom the ministers had a professional relationship). $SpanishTies_{a,t}$ measures the same for connections born in Spain.

Since we do not have an exogenous source of variation for American connections, I cannot guarantee that local connections have a causal effect on revenue. In models 2 and 4 I include three time-varying controls to account for the three most obvious sources of bias. First, I control for the proportion of American-born members of the audiencia. Place of birth could influence loyalties or skills through mechanisms different from connections. Second, since the main mechanism through which Americans or the American-connected got hired was office-buying, I control for the proportion of audiencia ministers who bought either their office or a dispensation for marriage or holding property. Third, I include the number of connections to the Council (defined in section 5.1).

I find that audiencias with more local connections raised significantly less revenue. One extra friendship with the American-born resulted in a decrease of revenue between 3.7% to 4.6%. The results are statistically different from zero for every specification (but only at the 90% level for model 3). This effect may seem larger than the previous sections', but the results are not directly comparable. In the previous section, I use very complete biographical data to capture every councilor-minister connection. Data in this section is more fragmentary, and it is certain that most friendships were not recorded, either because they did not leave a paper trail or because the evidence did not survive the passing of time. Therefore, each observed friendship may represent many historical ones.

This effect is not necessarily causal, and it should be interpreted with caution. However, it is remarkable that within-audiencia changes in local connections are strongly negatively correlated with changes in revenue raised, even after controlling for the most likely sources of bias. This result suggests that the empire's restrictions on social ties with local elites had a role in maximizing revenue.

Table 7: American Connections and Performance

	log(revenue)			
	(1)	(2)	(3)	(4)
American connections	-0.046*** (-0.070, -0.022)	-0.045** (-0.079, -0.011)	-0.037* (-0.080, 0.006)	-0.041** (-0.070, -0.013)
Spanish connections	0.003 (-0.005, 0.011)	-0.001 (-0.004, 0.001)	0.006** (0.0001, 0.011)	-0.001 (-0.007, 0.006)
Share of Americans		0.308 (-0.545, 1.161)		0.279 (-0.446, 1.005)
Share of office-buyers		0.288 (-0.540, 1.116)		0.332 (-0.905, 1.569)
Connections to the Council		0.007 (-0.003, 0.017)		0.008 (-0.003, 0.019)
Type of connections	Friends	Friends	Friends, family and associates	Friends, family and associates
SD American connections	3.393	3.393	3.987	3.987
Audiencia F.E.	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes
Observations	493	493	493	493

The unit of observation is the audiencia-year. Sample: 8 audiencias 1708 and 1808, with gaps. The dependent variable is the logarithm of the revenue collected in the audiencia-year, matched to the closest treasury district. American connections is the sum of friends (models 1 and 2) or friends, family, and associates (models 2 and 3), of the audiencia ministers born in the colonies. Standard errors are clustered at the audiencia level using a wild bootstrap procedure due to the small number of clusters (Cameron, Gelbach and Miller 2008). 95% confidence intervals in parenthesis. *p<0.1; **p<0.05; ***p<0.01

9 Conclusion

The Spanish Crown's personnel strategy minimized connections between officials and colonial societies. Audiencia ministers were not allowed to serve in their home district, and they were forbidden to buy property or marry within their districts. These restrictions were further extended to their children. They were also forbidden to be godfathers at baptisms or best men at weddings. In this paper, I show a less conspicuous but complementary side of the personnel policy: the fact that it maximized ties to officials in Spain. Specifically, connections to the Council of Indies were strong predictors of promotions in the audiencias. Moreover, I present evidence that suggests that both policies were beneficial for the Spanish Empire's objectives since audiencias with more connections to Spain raised more revenue and audiencias with more local connections raised less.

The audiencias and the Council are better suited to the study of connections than other settings studied in the literature. Ministers and councilors had relatively standardized career paths that involved law studies and a lifelong career in the Spanish judiciary. Since they often run into each other at different steps of the promotion ladder, they are part of a dense network. The relative abundance of connections between audiencia ministers and their superiors allows me to restrict the definition of connections to those that interacted intensively in person.

The literature on connections up to this point has used more expansive definitions. In this paper, I defined these as *likely connections*. Different papers have used attendance to the same school (even if the individuals attended on different periods), distant family relations, sharing a hometown, or work for the same branch or agency of government. To the best of my knowledge, none of the relevant papers include an estimate of the size of the connected population (in and out of sample), so it is hard to form an idea of the probability of a personal connection. This paper is the first to validate the measure of connection using endogenous acts of trust, such as references in job applications and ritualized friendships. As a matter of fact, I show that a pair with a personal connection is five times more likely than the average pair to have an observed act of friendship. In comparison, a pair with a

likely connection is only twice as likely to be classified as friends.

In summary, personal loyalties affected policy in the Spanish Empire. Central rulers were cognizant of that fact and strategically shaped the social networks of high-ranking officers in order to foster their policy goals.

My results also speak to the trade-off that states face between appointing officials insiders or outsiders (often referred to as embeddedness). Insiders may have better information about the communities they serve and may be willing to work harder for them. On the other hand, outsiders may be less likely to be captured by the local elite and may be more loyal to central rulers. The Spanish Crown consistently avoided hiring embedded audiencia ministers. They only did so when they needed to sell the offices. At least in terms of tax collection, they were justified to do so.

Further work should study this trade-off for other outcomes. Tax collection is close to a zero-sum game between local elites who pay taxes and central rulers that depend on them. Results may be different for other policies for which cooperation between local elites and the Spanish was needed.

The effect of the personnel policy on the long-term survival of the empire is also reserved for further work. In particular, the pro-peninsular bias in appointments was a common grievance among Americans[13]. This bias was not an explicit goal. On the contrary, several royal decrees declared descendants of the first settlers and conquistadores should be given preferential access to office[14]. These decrees were always prominent in the grievances referred above, but they were not effective, as 61% of audiencia ministers in my sample were born in Spain. Moreover, Burkholder and Chandler (1977) argue that most of the appointed Americans were sons of peninsulares (first-generation Americans), and therefore not descendants of first settlers. The evidence suggests that the policies that attempted to minimize local ties and maximize ties to Spain excluded American elites from positions of power. In fact, the Spanish ministers had on average 2.3 times more connections than the American ministers.

[13]Among the most influential, Bolivar y de la Redonda in 1667 and Alejo Alvarez in 1811. The American representatives to the Cortes de Cadiz in 1810 demanded half the posts for the American-born (all cited in Burkholder and Chandler 1977, p. 140).

[14]Recopilación, book 3, titulo 2, ley 14.

The marriage and property restrictions were also more binding on the American-born. Historians have argued that the lack of American representation in the bureaucracy may have been one of the major causes of independence (Kinsbruner 2000).

Also reserved for further work is the impact of personnel policies on the welfare of Native Americans, the majority of the Spanish Empire's inhabitants. The effect is ex-ante ambiguous. On the one hand, the Spanish Empire used forced labor to extract minerals and finance European wars (see, for example Dell 2010). More loyal high-ranking officials may have exacerbated Spanish extractive practices. On the other hand, colonial rulers may have protected Indigenous populations in order to keep local elites in check (Franco-Vivanco 2020a). Also, Indigenous groups used a variety of strategies to face land invasions and ruthless working conditions, which included judicial action (Franco-Vivanco 2020b). A judiciary more aligned with the white local elite may have been less receptive to Native American claims.

10 References

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