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The demand for extraterritoriality: Religious minorities in nineteenth-century Egypt

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Abstract

The transplantation of European legal systems in the periphery often occurred via semi-colonial institutions, where Europeans were subject to their own jurisdictions that placed them outside the reach of local courts. In nineteenth-century Egypt, the option of extraterritoriality was extended to local non-Muslims. Drawing on Egypt's population censuses in 1848 and 1868, we show that locals did not seek extraterritoriality to place themselves under more efficient jurisdictions. Rather, legal protection mitigated uncertainty about which law would apply to any contractual relationship in an environment where multiple legal systems co-existed and overlapped.

KEYWORDS
extraterritoriality, legal pluralism, Middle East, non-Muslim minorities, protégé

A rich literature stresses the primacy of legal traditions for economic development. According to this view, substantive differences between European legal systems – such as investor protection, barriers to entry, contractual flexibility, regulation in labour markets, and judicial independence – are important determinants of divergent fortunes across countries,[1] or within countries.[2] There has also been significant debate on whether these legal differences promote growth.[3]

[1] La Porta et al., 'Legal determinants'; idem, 'Law and finance'; La Porta, Lopez-de-Silanes, and Shleifer, 'Legal origins'.

[2] Acemoglu et al., 'French Revolution'.

[3] Berkowitz, Pistor, and Richard, 'Transplant effect'; Klerman and Mahoney, 'Legal origin'; Graff, 'Law and finance'; Musacchio and Turner, 'Law and finance'.

While this literature has focused on the economic consequences of legal institutions, how European legal institutions were adopted outside of the 'legal origin' countries remains understudied. In many countries, such as Japan or China, the transplantation of European laws was preceded by a semi-colonial period in which many legal systems coexisted, where European residents were subject to their own jurisdictions that gave them extraterritorial rights, but locals remained under the control of the 'precolonial' legal system.[4] In the Ottoman Empire, European consulates were allowed to grant these extraterritorial rights to local non-Muslims on a case-by-case basis. This created an unusual context, where a subset of the population was able to opt into their preferred legal system.

This paper investigates the determinants of demand for extraterritoriality, and choice of law, in nineteenth-century Egypt, which provides a rich setting to examine preferences over different legal regimes within the same country. Due to the Ottoman Empire's concessionary agreements with European powers, European nationals enjoyed extraterritorial legal privileges in Egypt. They were subject to European laws under consular courts.[5] Egyptian non-Muslims could individually acquire legal protection from European consuls. If granted, these Egyptians became 'protégés': pseudo-European nationals with extraterritorial privileges. Legal protection removed protégés from the reach of state courts, and placed them under the jurisdiction of consular courts.

We take advantage of Egypt's legal pluralism to evaluate protégés' decisions to opt out of state courts and their choice of European law. We focus on two theories. The legal quality hypothesis views acquiring consular protection as a flight from local laws to the more effective business organization rules of European laws. This hypothesis implies that, absent protection supply constraints, a sizable proportion of local non-Muslims – at least those in commerce and finance – would opt out of the Egyptian system. It also implies a hierarchy among European jurisdictions. Some countries' legal rules might provide better enterprise forms, financial techniques, or litigation practices than others. In contrast, the legal uncertainty hypothesis explains the demand for legal protection through its improvement of contractual credibility in an environment where multiple legal systems coexisted.[6] The European consular courts, applying their respective country's laws, had competence over commercial and civil affairs involving their nationals. With more than 15 overlapping jurisdictions, this framework led to considerable uncertainty about which law would apply to contracts involving Europeans and locals, or Europeans of different nationalities. One way to grapple with this uncertainty was to become a protégé of the other contracting party's consulate, which placed both contracting parties under the same law. This hypothesis implies that only local non-Muslims who were involved in contractual relationships with Europeans were likely to demand European legal protection. Furthermore, local non-Muslims were more likely to become protégé of a particular country if they expected to have more frequent contractual relationships with members of that country, regardless of the substantive content of the law.

To investigate these hypotheses, we use a novel data source: Egypt's individual-level population census samples of 1848 and 1868 that were digitized from the original Arabic manuscripts at the

[4] Kayaoğlu, *Legal imperialism*; Cassel, *Grounds of judgment*.

[5] Egypt was an autonomous Ottoman vassal state throughout the nineteenth century, ruled by the Ottoman viceroy Muhammad Ali Pasha (1805–48) and his descendants. Even though Egypt maintained its own court system, Ottoman international treaties applied to Egypt.

[6] The literature has different definitions and interpretations of 'legal uncertainty', but a common usage refers to variance in courts' expected decisions and lack of predictability about how courts might apply a particular rule. In contrast, our usage describes uncertainty about which court would eventually hear a case and which country's law would apply.

Egyptian archives by Mohamed Saleh.[7] We augment these with two oversamples of non-Muslims in Cairo in 1848 and 1868.[8] The Egyptian censuses, the earliest population-wide censuses in the Ottoman Empire and among the earliest in any non-Western country, enable us to identify European nationals and local non-Muslims – both protégés and non-protégés – along with their European polity. We restrict our sample to adult local non-Muslim men who resided in Cairo and Alexandria.[9] We focus on these cities because they included virtually all protégés and European nationals. The population censuses have advantages and limitations relative to Ottoman court records that previous studies on protégés used. The censuses enumerate the entire population, and record the European legal protection status of every individual in Egypt, regardless of how they acquired it, along with the polity of protection, as reported by the individual and verified by the state. So, the censuses capture all instances of legal protection, making our evidence, based on a systematic and comprehensive primary source, the most reliable measure of legal protection in the literature. This overcomes the inevitable selection that arises in court records, which are limited to parties with legal disputes. The Egyptian censuses also provide a better alternative to study extraterritoriality systematically than having to go through the archival records of all 15 European consular courts and the Egyptian courts. But, unlike court records, the population censuses do not record contractual relationships between local non-Muslims and Europeans, which are suited to test the legal uncertainty hypothesis. We partially address this limitation by examining the impact of occupational and spatial networks that local non-Muslims had with Europeans. We measure the occupational networks by the proportion of Europeans in the individual's occupation, and the spatial networks by the proportion of European neighbours who live within a 250 m radius of the individual's street address. These two types of networks plausibly reflect a higher likelihood for local non-Muslims to engage in contractual relationships with Europeans. We then complement the quantitative evidence with historical evidence on legal uncertainty from primary and secondary sources.

Our new macro-level evidence shows that potential differences in legal quality did not drive the opt-out dynamics. First, contrary to previous claims of more than 320 000 protégés in the Ottoman Empire in the nineteenth century, Egypt in 1848–68 had a modest protégé population of 600–1000 individuals. Protégés made up only seven per cent of the local non-Muslim population of Cairo and Alexandria in 1848, and eight per cent in 1868. Only a negligible proportion of Coptic Christians were protégés, despite accounting for 94 per cent of Egypt's non-Muslim population, and 55 per cent of the non-Muslim population of Cairo and Alexandria, whereas 18 per cent of Jews and 12 per cent of non-Coptic Christians (Levantines, Armenians, Ottoman Greeks) had legal protection. So, there was no mass flight out of state courts, even among local non-Muslims working in commerce and finance. Conditional on opting out, choice of European polity did not reflect a clear hierarchy of quality. While some European legal systems introduced important reforms between 1848 and 1868, such as general incorporation statutes, these jurisdictions did not see any appreciable increase in demand. If anything, protégés selected into polities whose laws got more restrictive and less open with respect to business organization. However, we acknowledge that there might well be European business practices that did not require legal protection to access. Local non-Muslims could – and likely did – take advantage of such migratory institutions without becoming protégés.

[7] See Saleh, 'Egyptian censuses', for details on how the censuses were digitized.

[8] These oversamples were previously digitized and used in Saleh, 'Reluctant transformation.'

[9] In principle, Ottoman Muslims were not eligible to become protégés. That said, we do observe a small number of Muslim protégés that we exclude from our empirical analysis.

We then turn to our microeconometric evidence on the impact of European networks on the acquisition of European protection, and on the choice of polity among protégés. We show that local non-Muslims were more likely to become protégés if the proportion of Europeans within their occupation or neighbourhood increased. A one-standard-deviation rise in the proportion of Europeans in the occupation doubled the probability of becoming a protégé among local non-Muslims, relative to the baseline probability of three per cent. Similarly, the probability of becoming a protégé rose by 75 per cent, when the proportion of European neighbours increased by one standard deviation. We then evaluate whether the protégés' choice of polity is explained by the European country's presence in the protégés' occupational or spatial networks. Our results are imprecise due to the small number of protégés, and the high correlation of Europeans' occupational and spatial distributions across European polities. Our findings on spatial networks provide suggestive – but admittedly inconclusive – evidence that protégés selected into the polity of their European neighbours.

While our econometric evidence supports the legal uncertainty hypothesis, we also check a number of plausible alternatives. The historical evidence does not support alternative explanations including the mitigation of information asymmetries about legal quality through European networks, international trade patterns with European powers, protection from state expropriation and persecutions, and access to consular support in local courts. However, we acknowledge that we cannot rule out European networks mitigating information asymmetries about legal quality that are caused by other unobservable sources.

Our findings do not support the view that individuals valued one legal system over another based on substantive differences in law, despite the emergence of important distinctions between European laws during this period. The modest protégé take-up is also inconsistent with the notion that protégés placed themselves out of Egyptian courts because local legal institutions involved higher transaction costs, and European laws were relatively more efficient. However, we do not necessarily disagree with the idea that contractual freedom in common law, or the introduction of general incorporation statutes, could have been important sources of financial or economic development,[10] even if protégés flocked to seemingly 'bad' European jurisdictions. While recent studies have taken up the challenge of directly testing the economic implications of common and civil law regimes using within-country variation,[11] testing the legal origins hypothesis is beyond the scope of this paper. Rather, our evidence highlights that the value of predictability in contracting surpassed other considerations and provides a new dimension to consider in this debate.

Our findings also contribute to the broader scholarship on European involvement in the development of non-European countries. The impact of European intervention depended on whether colonizers set up inclusive or extractive institutions. Much like other states with strong central governments, Egypt was not directly colonized until the British occupation of 1882. It was a semi-colonial country, under Ottoman suzerainty and subject to unequal treaties – capitulations – with European powers. These treaties, as they did in Japan and China, granted extraterritorial privileges to Europeans. The ensuing consular interference in circumventing local legal institutions led to political concern in these contexts as well.[12] In the Ottoman Empire, capitulations had affected the direction of legal reform.[13] This paper provides a different facet

[10] La Porta et al., 'Law and finance'; Owen, *Corporation*; Kuran, *Long divergence*.

[11] Le Bris, 'Testing legal origins'.

[12] Anghie, *Imperialism*; Kayaoğlu, *Legal imperialism*.

[13] Ahmad, 'Ottoman perceptions'; Ağır and Artunç, 'Evolution of business law'.

of capitulations and semi-colonial institutions by evaluating the extent to which European privileges became available to local populations and how they made use of these institutions.

Finally, this paper contributes to Egyptian legal and economic history. The legal protection system was the predecessor of the Mixed Courts, which were established in 1875 to resolve the multiplicity of European consular courts. Using a transplant of the French law, these courts had jurisdiction over any contract or dispute between Europeans (including protégés) and Egyptians, or between Europeans of different nationalities. In practice, the courts' jurisdiction expanded to virtually all commercial life.[14] The Mixed Courts remained in effect until 1949, and they had long-lasting influence over Egyptian legal and economic development. They influenced the creation of the Egyptian native courts in 1883, and are in many ways the predecessor of the current Egyptian judiciary system. Furthermore, the protégés were a small subset of local non-Muslims, a rich segment of whom later formed an haute bourgeoisie in the twentieth century, contributing to Egypt's industrial and commercial development.[15]

I | LEGAL PROTECTION IN NINETEENTH-CENTURY EGYPT

Egypt maintained a distinct, but parallel, judicial space with separate state court systems, which were organized independently from those in the Ottoman centre. As a formal part of the empire, however, Egypt was subject to the Ottoman treaties with European powers – most importantly, the capitulations. Thanks to capitulations, Europeans in the Ottoman Empire, including Egypt, had the right to use their own laws and be sued in their consular courts. This was part of the broader Ottoman legal complex where each religious community retained its court system. Local non-Muslims were eligible to use either denominational courts or state-organized courts. They took advantage of the latter when contracting with Muslims, other non-Muslims from different denominations, or even for intracommunal disputes.[16]

In the eighteenth century, European extraterritorial privileges were extended to local non-Muslims. There were three ways to acquire legal protection: imperial licenses called *berats*, which were prevalent during the eighteenth century but were abolished during the first half of the nineteenth century; letters/patents of protection, which became the primary form of protection during the nineteenth century; and naturalization. Enjoying European extraterritorial rights as native Ottomans, protégés had a hybrid legal status. They could use their European status to contract under European laws and be sued in consular courts, placing them out of state-organized courts' reach. As Ottoman subjects, they could also move any case to an Ottoman court, but still be represented by their European consuls.

Berats, the first form of legal protection, were originally granted by the Ottoman administration to European ambassadors for the employment of local non-Muslims as interpreters and staff. At first, these locals were genuine consular employees. But as European foreign offices replaced locals with Europeans, ambassadors and consuls started selling *berats* to local non-Muslims.[17] The Ottoman administration viewed the expansion of *berats* as a threat to its sovereignty. Following

[14] Brinton, *Mixed Courts*; Hoyle, *Mixed Courts*.

[15] See Tignor, 'Economic activities', for the seminal study on the origins and composition of Egypt's business elite during the early twentieth century.

[16] Baldwin, *Islamic law*, p. 12.

[17] Artunç, 'Price of legal institutions'.

an Ottoman order in 1806 aiming at suppressing *berats*, the European powers agreed to stop *berat* sales permanently in a series of bilateral treaties with the Ottoman Empire.[18]

This did not curb the growth of European legal protection, however. In Egypt, viceroys grew even more lenient with the dispensation of legal protection to local non-Muslims and collaborated with European consuls to navigate conflicts associated with overlapping jurisdictions.[19] European consulates replaced *berats* with 'letters of protection' (or 'patents of protection') – the second form of legal protection – which became the primary form of protection during our period of study. This practice grew out of consular rights, specified in the capitulations, to give protection to foreigners without diplomatic representation in Ottoman territories. Letters of protection were issued even in mid-eighteenth century, but as *berats* were phased out, consuls started to substitute these letters for *berats*.[20] Unlike *berats*, letters of protection did not require the approval of the Ottoman authorities but were issued by European consuls at their discretion.[21] Since consuls had almost total control over letters of protection, little information is available about how they were distributed. Consuls could grant letters of protection freely without reporting to anybody and contemporary records show that it remained a profitable business for consuls.[22] Letters of protection were also offered to poorer non-Muslims who were not employed by consulates, including shopkeepers, bakers, butchers, and artisans.[23]

European consulates could also grant protection through naturalization (issuing passports), the third form of legal protection. Russia, and later Greece, were particularly aggressive in pursuing this policy.[24] Regardless of the medium, legal protection was issued to individuals, not entire communities. Ambassadors and consuls only 'protected' individuals who were registered in embassies or consulates as protégés.[25] Protégé status was verifiable by documentary evidence: a *berat*, letter of protection, or passport. The protected individual was thus fully aware of their protection status, and could prove it to the Ottoman or Egyptian authorities.

There was no clearinghouse where one could bid on different jurisdictions. A prospective buyer had to solicit a letter or passport from a consul or vice-consul directly.[26] However, granting protections imposed costs on consuls, who would need to balance the marginal benefit of selling a letter of protection with the marginal cost of higher and more complicated caseloads in expectation. The workload was not trivial, especially since most consuls did not have legal training.[27]

[18] Rey, *La protection*, pp. 279–80.

[19] Cheta, 'Rule of merchants', pp. 233–34.

[20] Féraud-Giraud, *La juridiction française*.

[21] Rey, *La protection*, p. 280.

[22] Consuls treated granting letters of protection as their prerogative and confidential; even magistrates overseeing consular jurisdictions had little idea. The French government attempted to regulate how these protections were distributed, but these policies could not be enforced and were finally abandoned in 1833 (Féraud-Giraud, *La juridiction française*, pp. 74–84). Primary sources confirm that consuls sold letters of protection at their discretion, e.g., the National Archives of the UK, Foreign Office 78/16, fol. 85–91: Robert Liston to Grenville, 25 April 1795.

[23] Rey, *La protection*, pp. 287–8.

[24] Ibid., pp. 280–1, 284–5.

[25] The National Archives of the UK, Foreign Office 78/16, ff. 85–91: Robert Liston to Lord Grenville, 25 April 1795.

[26] This was the case for *berats* in the eighteenth century as well. Potential buyers would apply to the consul, or the ambassador, in their territory and negotiate a price (Artunç, 'Price of legal institutions'). Being an Ottoman vassal state, Egypt had only consulates. The embassies were in Istanbul.

[27] n.a. *La réforme*; n.a., 'New courts'.

British consuls, whose posts did have trained judges on staff, routinely complained about having to intervene on behalf of their protégés.[28]

European consular courts, with more than 15 distinct overlapping jurisdictions created judicial chaos in the Ottoman centre and Egypt. To resolve conflicts of law, consuls followed the practice of *actor sequitur forum rei*. Defendants had to be sued in their consular courts under that country's law. Appeals to a consul's decision triggered a new hearing outside of Egypt: Constantinople for Great Britain, Aix for France, Ancona for Italy, and Athens for Greece.[29] This provided a distinct advantage to Europeans in their contracts with Egyptians. Even if the European partner lost the case in their consular court, they could appeal to a new court outside of Egypt, staffed by their fellow nationals, discouraging an Egyptian party from suing at all.

The system was equally hectic for disputes involving two European nationals of different polities. Forum shopping was common. In some cases, it could be facilitated easily by transferring property to different nationals to precipitate a new action in another consular court. The same individual could opt in and out of different jurisdictions or try to acquire multiple legal protections of different consulates simultaneously.[30] It was difficult to ascertain where any dispute would end up.[31] Taking legal action against a partnership or a group could involve separate lawsuits in different consular courts.[32] The consular court systems' stranglehold on commerce was stifling trade to the extent that 'no wise Egyptian [was] in partnership with a foreigner, nor [accepted] his surety'.[33] Local non-Muslims were similarly unwilling to take loans from or lend to Europeans, or engage in other contractual agreements.[34] So, this system of consular courts depressed overall contractual credibility.

To mitigate this judicial chaos, the Ottoman administration attempted to reform the judiciary system. It first introduced its own 'protection' system in 1806 by creating separate courts that merchants in the Ottoman centre (excluding Egypt) could buy into. Although this system was somewhat successful in attracting rich non-Muslim Ottomans, it ultimately could not prevent the spread of European protection.[35] These reforms were part of a broader re-configuration of the Ottoman legal regime, which transitioned into new state-organized courts that applied new legal codes and confined denominational jurisdictions to issues of personal status. The Ottoman Empire later issued a law in 1863 that no longer recognized the protégés' hybrid status, requiring native Ottomans to be subject to Ottoman laws and courts unless they became naturalized as European subjects. When this law failed in achieving its objective, the Ottoman government

[28] For example, Cheta, 'Rule of merchants', pp. 238–9. Similar complaints about protégés by British and French consular staff appear in Istanbul, Izmir, Aleppo, and Salonica in the late eighteenth and early nineteenth centuries (Artunç, 'Price of legal institutions').

[29] Hoyle, *Mixed Courts*, pp. 6–7.

[30] Cheta, 'Rule of merchants'; Artunç, 'Price of legal institutions'.

[31] Hoyle, *Mixed Courts*, pp. 6–7. The contemporary legal scholar Demetriades writes, '[each] court applies a different law, and has a special procedure… [The] parties to a contract … cannot tell, when they enter into the contract, before what jurisdiction they will have to plead in the event of any dispute, and according to what rules of law or procedure the question will be determined' (Demetriades, 'Administration, I', p. 148).

[32] For example, when the Suez Canal Company tried to act against a civil organization in one of the company's properties in Port Said, the case got mired in multiple consulates as the organization kept changing its representative with individuals of different nationalities. The Company had to concede. See n.a., *La réforme*, pp. 34–5.

[33] Hoyle, *Mixed Courts*, pp. 6–7, citing *The Times*, 12 Feb. 1870.

[34] M'Coan, *Consular jurisdiction*, pp. 22–4.

[35] Masters, 'Sultan's entrepreneurs'; Artunç, 'Price of legal institutions'; Ağır and Artunç, 'Evolution of business law'.

followed up with a new nationality law in 1869 that tried to denaturalize anyone with dual status.[36] Egypt witnessed independent but parallel developments with the establishment of judicial councils and state-organized commercial courts: the Merchant Courts. These were inaugurated in Alexandria in 1845 and in Cairo in 1846. They applied French law, making European legal rules available to locals without the need for protégé status. These courts were institutionally new, but the idea of specialized, mixed jurisdictions – first created during the French campaign (1798–1801) along religious rather than national lines – was known to Egyptian reformers and consuls.[37] Nevertheless, the chaotic judicial environment persisted until 1875, when the Egyptian government – after negotiations with European powers – created the Mixed Courts, which had competence over all contracts involving individuals of different nationalities.

II | CONCEPTUAL FRAMEWORK

We evaluate two hypotheses that explain why some local non-Muslims sought European legal protection, and which European jurisdictions they chose. European laws provided more efficient rules for economic activity, or legal protection reduced uncertainty associated with overlapping jurisdictions. This section formalizes the two hypotheses and summarizes their empirical implications.

Legal quality describes a broader institutional thesis, which views some legal rules to be more conducive to economic activity than others. Many aspects of the law can be pertinent: judicial independence, the flexibility afforded to business organization, the quality of contract enforcement, or the security of property rights. Substantive differences in these rules imply an ordering of legal systems. Individuals will select into the jurisdiction that best fits their preferences, subject to other constraints. Kuran argues that historical institutions associated with Islamic law raised obstacles to economic development. Muslim entrepreneurs faced barriers to incorporation, had limited access to capital markets, were constrained by restrictive inheritance rules, and had to navigate a court system that favoured the political elite.[38]

Legal protection offered an alternative for local non-Muslims. By becoming protégés, they could opt out of state courts and acquire access to laws with lower transaction costs for contracting and business organization. According to Kuran, by the nineteenth century, European legal innovations made businesses organization so much more effective than Ottoman law that the ranks of protégés proliferated in major urban centres. So, non-Muslims acquired foreign legal protection to take advantage of 'modern organizational forms, financial techniques, and litigation practices'.[39] The exit option was also significant for the evolution of commercial law in the empire.[40]

The hypothesis that local non-Muslims became protégés to take advantage of better legal institutions yields two testable implications, if consuls did not impose significant constraints on the supply of legal protections. First, if Egyptian law involved higher transaction costs for organizing modern enterprises, we should observe a sizable take-up of legal protection among local non-Muslims, especially among occupations related to entrepreneurship or finance. Furthermore, if

[36] Arminjon, *Étrangers*, pp. 58–67, 86–7; Hanley, 'Ottoman nationality'.

[37] Goldberg, 'Majālis al-Tujjār'; Cheta, 'Rule of merchants'.

[38] Kuran, *Long divergence*; Kuran and Lustig, 'Judicial biases'; Kuran and Rubin, 'Financial power'.

[39] Kuran, 'Religious ascent', p. 501.

[40] Ağır and Artunç, 'Evolution of business law'.

the efficiency advantages of European legal rules are known, protégés' opt-out patterns should not be correlated with European presence in spatial or occupational networks. Second, we should observe a sorting of protégés among consular jurisdictions. The European countries with the most advanced commercial laws should attract higher demand.

The Egyptian legal environment involved a multiplicity of European consular courts that applied distinct laws. This caused uncertainty about contract enforcement. Parties did not know which law would ultimately have competence over any agreement between European nationals of different polities, or between locals and Europeans.

To illustrate how legal pluralism might reduce contractual credibility, consider a simple setting in which parties contract on how much individual investment or effort they will exert and an allocation of surplus after the product is delivered or produced. This example can cover a number of standard settings including joint investment, bilateral trade, debt contracts, or principal–agent relationships. Three assumptions are critical. Individual decisions, whether effort or investment, are private or are not verifiable; decisions of distinct courts are not perfectly correlated; and individual effort or investment costs are sunk. In these examples, potential disputes at the ex-post stage reduce to zero-sum games. Either party will have an incentive to take the case to a more favourable jurisdiction. And given the option, the party that shirks from their contractual obligations will make litigation more costly for the plaintiff by forum shopping. Knowing that forum shopping is possible, parties from different jurisdictions will be less likely to enter into contractual relationships. If all parties have access to the same, single legal system, then forum shopping is not available. So, there is an equilibrium in which economic agents enter into contracts exclusively with members of the same jurisdiction. But if jurisdictional shift is possible, then one party can place themselves under the other party's jurisdiction, thus bringing certainty as to which court system has jurisdiction over the contract and taking away the option to engage in forum shopping.[41]

We hypothesize that the protégé system fulfilled the role of such a commitment device to facilitate complex transactions (that is, anything more sophisticated than spot trade) between Europeans of different nationalities, as well as between Europeans and local non-Muslims. This distinguishes the legal uncertainty hypothesis from that of legal quality. Under legal uncertainty, having access to a European legal jurisdiction had value, not because the law in question was 'better' in some substantive way but due to its function as a credible commitment device.

The legal uncertainty hypothesis predicts that, if local non-Muslims sought legal protection to reduce uncertainty in contract enforcement, the protégé take-up should be higher when such contractual arrangements were more likely. In the absence of data on contractual relationships, we exploit the occupational and spatial networks that local non-Muslims formed with Europeans. This leads to two testable implications. First, the protégé take-up should be higher among local non-Muslims working in occupations, or residing in neighbourhoods, with a higher European presence, because they were more likely to engage in contractual arrangements with Europeans. It is thus possible under the legal uncertainty hypothesis that the protégé take-up is higher in business and finance if Europeans are over-represented in these occupations. Second, protégés should be more likely to choose European polities with significant presence in their occupational or spatial network, regardless of the content of the European law. For example, a non-Muslim merchant working in a trade with a significant Greek presence is more likely to seek Greek protection, even if Greek law is not friendly to businesses.

[41] For a detailed, formal model of legal pluralism, see Artunç, 'Barrators, *berats*, and bandits'.

Multiple equilibria may arise under the legal uncertainty framework. Since polity choice is a coordination game, individuals do not necessarily care which polity they buy into as long as it is the polity of their contractual partners. As a result, different polity configurations are feasible. For example, it is possible for parties to sort into a single jurisdiction to abate legal uncertainty, but choose that jurisdiction based on its legal quality. However, the key distinctive prediction of the legal uncertainty hypothesis is that the demand for legal protection, and the choice of European jurisdiction, are both functions of the contractual relationships with Europeans of a given nationality, without necessarily ranking European laws based on their quality.

III | DATA

To examine the protégé take-up and protégés' choices of European consulate, we take advantage of the 1848 and 1868 individual-level population censuses. These include a wide range of information including name, age, gender, religious affiliation, nationality, ethnicity (e.g., Armenian, Levantine, Greek, British), place of origin, relationship to household head, occupational title, location of residence down to the street address in cities, dwelling ownership type (private, state, or religious endowment), and dwelling type (house, palace, yard, shack, etc.) among other variables.

We employ two systematic nationally representative samples of around 80 000 observations in each census.[42] We restrict the sample to Cairo and Alexandria, where almost all protégés and European nationals resided. The 1848 census operations in these cities started after the census decree for urban provinces on 10 January 1847, and were completed by 1848. The 1868 census operations took place between 1865 and 1868.[43] The sampling probability – the sample size divided by the population – is 8 per cent (10 per cent) in Cairo in 1848 (1868), and 10 per cent (12 per cent) in Alexandria in 1848 (1868). We augment these systematic samples by two oversamples of non-Muslims in Cairo in each of 1848 and 1868, where one in four non-Muslim households is selected into the sample, excluding non-Muslim households that appear in the systematic samples. Throughout the analysis, we apply a personal weight that is equal to the inverse of the sampling probability per province (Cairo, Alexandria), census year (1848, 1868), and religious group (Muslims, non-Muslims). The personal weight is defined as the number of individuals in the population that each observation represents, as it takes into account both the difference in the sampling probability between Cairo and Alexandria in each of 1848 and 1868, and the higher sampling probability of non-Muslims in Cairo in 1848 and 1868.[44] We further restrict the empirical analysis to 15-year-old or older non-European non-Muslim males with non-missing religious affiliation. In the occupational networks analysis, we further restrict the analysis to those with

[42] The samples are constructed by stratification by province, where a targeted sample size for each province is determined a priori. A page is selected in the sample every range x of pages, and all the households that start on the page are entered in the sample, from the beginning until the end of each province's census registers. The range of pages (x) is determined based on the targeted sample size, the total number of pages of the province's registers, and the average number of individuals that appear on a given page in the province. For details, see Saleh, 'Egyptian censuses'.

[43] See Cuno and Reimer, 'Census registers', pp. 213–16, for the 1847 census decree. We do not know with certainty when the 1868 census operations took place in Cairo and Alexandria, because we could not find the 1868 census decree. But the Egyptian parliamentary minutes in March and April 1868 refer to census operations. The earliest 1868 census registers belong to 1865 (for a rural province), whereas the Cairo and Alexandria registers belong to 1868.

[44] For non-Muslims, the sample size (n) and personal weight (pw) are as follows: Cairo, 1848: $n = 1574$, $pw = 3.39$; Alexandria, 1848: $n = 318$, $pw = 9.87$; Cairo, 1868: $n = 2002$, $pw = 3.55$; and Alexandria, 1868: $n = 638$, $pw = 8.37$.

non-missing occupation. In the spatial networks analysis, we restrict the analysis instead to those with non-missing coordinates.

The population censuses enable us to identify protégés of European consulates. The 1848 census decree directed district heads to prepare lists of 'Europeans,' and identify their polity. Individuals' 'European' status was self-reported, then verified by the Ministry of Interior. The same procedure was followed for the 1868 census. Neither the decree nor the census registers distinguished Europeans from non-European protégés. The census designated all these individuals as 'protégés' of European consulates'. According to the default practice, census takers recorded the name of the protégé, the protégé's street address, and dwelling information, with a note that generally took the form: 'not enumerated in the census [because] the individual is a protégé of consulate *x*'. No further individual-level information about the protégé is provided, and if the protégé is the household head, the protégé's household members are not recorded.[45] However, census takers varied in the additional individual-level information that they recorded about protégés (e.g., occupation), implying that they had some discretionary leeway in interpreting the census decree.

To identify protégés of non-European origin, we first identified all individuals who are recorded in the censuses under the jurisdiction of European consulates. We then added to the universe of the census-defined 'protégés' all individuals with a European ethnicity, even if they are not explicitly recorded as protégés. The latter omission arises presumably because the census takers found the recorded information on ethnicity (e.g., French, British) sufficient to indicate the protégé status. Three remarks are in order. First, according to the Egyptian censuses, Persians were protégés of the Persian consulate (*bilad al-'ajam*) and were thus not enumerated by census takers. However, we excluded them from our definition, because they are not under the legal protection of a European polity. Second, we included the US consulate within our definition of European polities. Third, we also excluded 20 Muslim protégés – one in 1848 (corresponds to 13 in the population) and 19 in 1868 (178 in the population) – because they, for the most part, did not obtain foreign protection voluntarily but through colonial occupation. We observe 7–13 Muslim protégés who originated from polities that were under colonial rule: 6–10 Algerians under French protection, and 1–3 Indians under British protection.[46]

To distinguish between European nationals and non-European protégés, we first employed the protégé's place of origin and/or ethnicity, whenever they are available. For the vast majority of protégés, the two variables are missing, so we had to rely on names. We classified those with a European-sounding name as European nationals, and those with a non-European-sounding name as non-European protégés. A minority of cases remained indeterminate because of neutral-sounding names that could well be European or local. Examples include Musa (Moses), Youssef (Joseph), Yaqoub (Jacob), and Dawoud (David).[47] We thus dropped these unclassified protégés from the sample. It is generally not possible though to further classify non-European-origin protégés into Egyptians and non-Egyptians, because their names are mostly too similar.

[45] If the protégé is not the household head, though, they are recorded among the other members of the household. For example, it is possible that a local non-protégé male is married to a protégé woman.

[46] There are six (resp. one) Algerians (resp. Indians) under French (resp. British) protection. To these, we can potentially add four protégés with missing origin under French protection who are probably Algerians, and two protégés with missing origin under British protection who are probably Indians. The remaining seven Muslim protégés are under the protection of Austria (one missing origin), France (one Cretan), Greece (one missing origin), Russia (one Iranian), Spain (two missing origin), and an unidentified polity (one missing origin).

[47] The two versions of each name refer to the Arabic and English versions. The Egyptian census takers often recorded the Arabic version of the name, even for European nationals.

The Egyptian censuses record for the vast majority of non-European protégés their European polity of choice. We first standardized the European polities according to the political map of European polities in 1848 and 1868. We then homogenized the polities across the two censuses, to have comparable polities over time. For example, we aggregated the independent Italian states in 1848 to Italy in 1868. Similarly, we aggregated the Austrian Empire and the Hungarian Kingdom in 1848 to the Austro-Hungarian Empire in 1868.

Our empirical analysis examines whether the demand for legal protection among local non-Muslims is driven by their occupational and spatial networks with Europeans. We measure both types of networks in the census samples.

The censuses record the occupational titles for men. Because of the variation across census takers in the individual-level information on protégés, the occupational title is available for only a subset of protégés. Occupations are coded using the five-digit historical international standard classification of occupations (HISCO) occupational code.[48] We measure the occupational networks with European nationals, among local non-Muslims, by the proportion of Europeans in the five-digit HISCO occupational code.

The censuses record the street address (dwelling number, street name) for all individuals in Cairo and Alexandria. We use the coordinates of street centroids that are geolocalized by Lévêque and Saleh.[49] The percentage of individuals with non-missing coordinates in Lévêque and Saleh's geolocalization is 79 per cent in Cairo's systematic samples in each of 1848 and 1868, and 41 per cent and 66 per cent in Alexandria in 1848 and 1868, respectively.[50] We improve Lévêque and Saleh's geolocalization by imputing the coordinates for individuals with missing coordinates. To do so, we exploit the fact that the census registers follow a spatial order. Census takers enumerated individuals moving from one street to the next within the same urban quarter, before moving to the adjacent quarter. For individuals with missing coordinates, we assign the coordinates of the individual in the nearest page within the same census register, and if available, within the same urban quarter.[51] This imputation raises the percentage of individuals with non-missing coordinates to 100 per cent in Cairo in each of 1848 and 1868 (both in the systematic samples and the oversamples of non-Muslims) and to 83 per cent and 80 per cent in Alexandria in 1848 and 1868, respectively. We measure the spatial networks with Europeans, among local non-Muslims, by the proportion of Europeans among their neighbours who reside within a 250 m radius.

IV | EVIDENCE ON LEGAL QUALITY

The legal quality hypothesis predicts a significant protégé take-up among local non-Muslims, especially among workers in trade and finance, because European laws provided better rules in

[48] See Saleh, 'Reluctant transformation'.

[49] See Lévêque and Saleh, 'Industrialization'.

[50] Lévêque and Saleh geolocalized only the systematic samples of Cairo and Alexandria in 1848 and 1868, but not the oversamples of non-Muslims in Cairo in each year. This geolocalization is done by manually matching street names in the 1848 and 1868 censuses with current street names in Google Maps in 2014, which is then augmented with historical information on street locations in Mubarak, *Al-Tawfiqiya*. The lower geolocalization rate in Alexandria is due to a higher incidence of street name changes there between 1848 and 2014.

[51] If all individuals (streets) of an urban quarter are not geolocated, we assign to each individual the non-missing coordinates in another urban quarter in the nearest page, as long as both quarters belong to the same census register. Hence, only if no individual (street) in a census register is geolocated do they remain with missing coordinates in our imputation procedure.

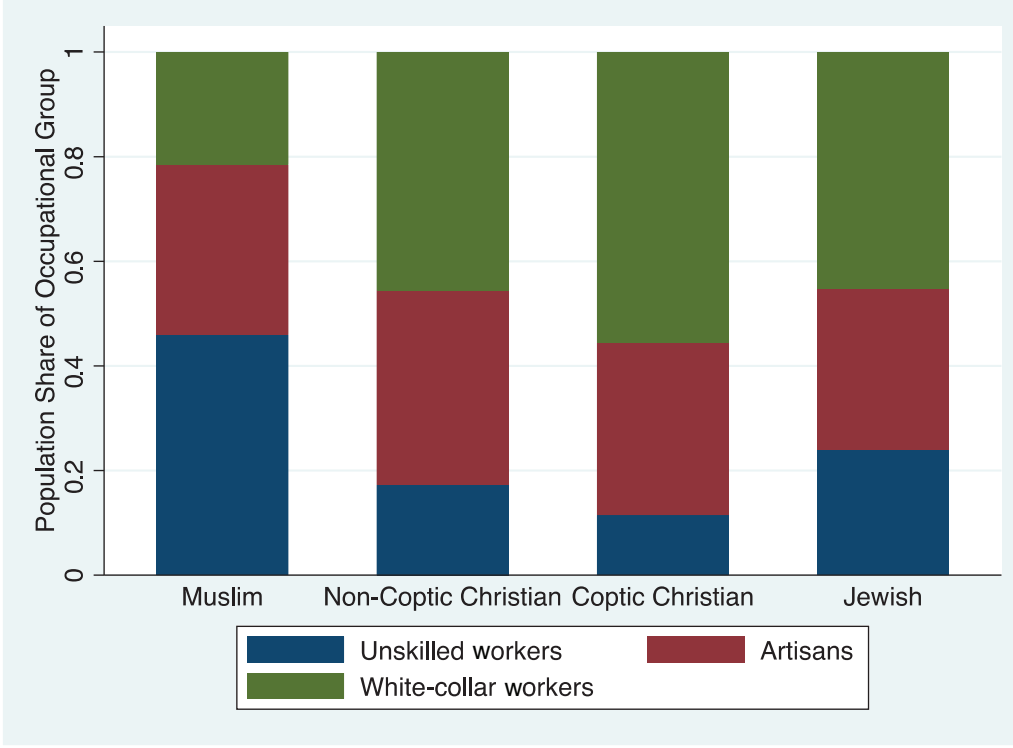

FIGURE 1 Inter-religious occupational differences in Urban Egypt in 1848 and 1868.
Notes: The sample is restricted to local (non-European) adult men who are at least 15 years of age with non-missing religious affiliation and occupational title in Cairo and Alexandria in 1848 and 1868. The statistics are weighted by personal weights (see section III for details).
Source: The 1848 and 1868 population census samples.
[Colour figure can be viewed at wileyonlinelibrary.com]

business organization and private contracting than the Egyptian legal system. This mass flight should be observed at least in 1848, when the state-organized commercial courts were still in their infancy, which may have mitigated local non-Muslims' incentives to opt out of state-organized courts.[52] We should also expect that protégés sort into higher quality European jurisdictions.

We start by describing the occupational differences between Muslims and local non-Muslims, including both protégés and non-protégés. Figure 1 shows that local non-Muslims, who constituted six per cent of Egypt's population in 1848 and 1868, were more likely than Muslims in Cairo and Alexandria to be white-collar workers and artisans and less likely to be unskilled non-farmer workers.[53] The vast majority of non-Muslims were Coptic Christians, comprising 94 per cent of Egypt's non-Muslims, and 55 per cent in Cairo and Alexandria.[54] The remaining non-Muslim groups were (a) non-Coptic Christians – mainly Levantine Christians, Greeks, and Armenians,

[52] However, recall that we observe the stock, rather than flow, of protégés in 1848 and 1868. So, most protégés that we observe in 1848 likely obtained their legal protection before the establishment of these courts.

[53] Recall that we restrict the sample to Cairo and Alexandria, and hence, we do not observe farmers.

[54] Non-Coptic Christians and Jews were almost entirely urban, residing in Cairo and Alexandria. The majority of Copts were rural, though, and were better off than Muslims in rural provinces.

making up four per cent of Egypt's non-Muslims, and 29 per cent of non-Muslims in Cairo and Alexandria – and (b) Jews, both Rabbinites and Karaites, accounting for two per cent of Egypt's non-Muslims and 16 per cent of non-Muslims in Cairo and Alexandria.

We then evaluate the first prediction of the legal quality hypothesis by examining the opt-out patterns among local non-Muslims. Our census samples show that Cairo and Alexandria had 103 protégés in 1848 and 196 in 1868, which correspond to 601 in 1848 and 989 in 1868 in the whole population, according to the sample design personal weights. There are virtually no protégés outside these two cities. This qualifies previous claims in the literature of more than 320 000 protégés in the Ottoman Empire, including Egypt, during the nineteenth century. These high estimates are based on a claim that Russia, France, and Great Britain protected entire swaths of Christians (Orthodox, Catholic, and Protestant, respectively) thanks to a series of bilateral treaties with the Ottoman Empire. This is a misinterpretation. While these treaties granted Europeans the right to diplomatically intervene on behalf of Ottoman minorities' religious liberty, they did not place all local non-Muslims under Russian or French legal protection.[55] Indeed, legal protection was a privilege given to individuals, and these individuals had to be registered in consulates as protégés before they were placed in a consul's legal jurisdiction. An early claim of high protégé numbers appeared in the seminal work of Bağış, who argued that Russia protected a high number of Christians in Moldavia, Wallachia, and the Aegean Islands (not the Ottoman 'core'), specifically by giving them patents of protection.[56] His source was Rey, who argued that these 200 000 or so protégés were exclusively residents of Moldavia and Wallachia. Russia had issued these individuals letters of protection to annex these territories.[57] Our Egyptian census data, on the other hand, are consistent with Artunç's more recent and modest estimate of 1700 protégés across the Ottoman Empire, excluding Egypt and North Africa but including Iraq and Greater Syria, during the late eighteenth century.[58]

Figure 2 shows the proportion of protégés among the local non-Muslim adult male population of Cairo and Alexandria by religious group and census year, whereas table 1 demonstrates the characteristics of local non-Muslims by protégé status. Protégés constituted only seven per cent of local non-Muslims of Cairo and Alexandria in 1848, and this proportion increased to eight per cent in 1868. While the proportion of protégés was negligible among Copts, it reached 18 per cent among Jews and 12 per cent among non-Coptic Christians. The concentration of legal protection among a small proportion of non-Muslims suggests that it played a limited role in driving broader inter-religious socioeconomic disparities. We interpret the inter-religious differences in the protégé take-up by the occupational differences across religious groups. Unlike Jews and non-Coptic Christians, whose socioeconomic advantage stemmed from trade and finance, Copts' advantage stemmed from their over-representation in the mid-low bureaucracy and artisanship, where the protégé status was not as advantageous. Consistent with this interpretation, we find that protégés

[55] The source of this confusion is the Treaty of Küçük Kaynarca (1774), signed between the Ottoman and Russian Empires. This treaty gave Russia religious protection over Christians, but the article's scope – whether all Christians or a small community in Istanbul – is disputed (Davison, 'Russian skill', pp. 34, 41). Even with Russia's broader interpretation, the treaty only gave Russia the right to defend the religious freedom of Christians. It did not place these Christians under Russian domicile (Kolb, 'Protection', pp. 334–5). For the broader context of Küçük Kaynarca and similar treaties, see Nijman, 'Minorities'; Ungern-Sternberg, 'Religion'.

[56] Bağış, *Gayri müslimler*, pp. 35–6. Bağış still cites Küçük Kaynarca as the turning point, but stresses that the treaty allowed Russia to set up consulates, which could then start issuing letters of protection to individual Christians.

[57] Rey, *La protection*, pp. 264–5.

[58] Artunç, 'Price of legal institutions', p. 727.

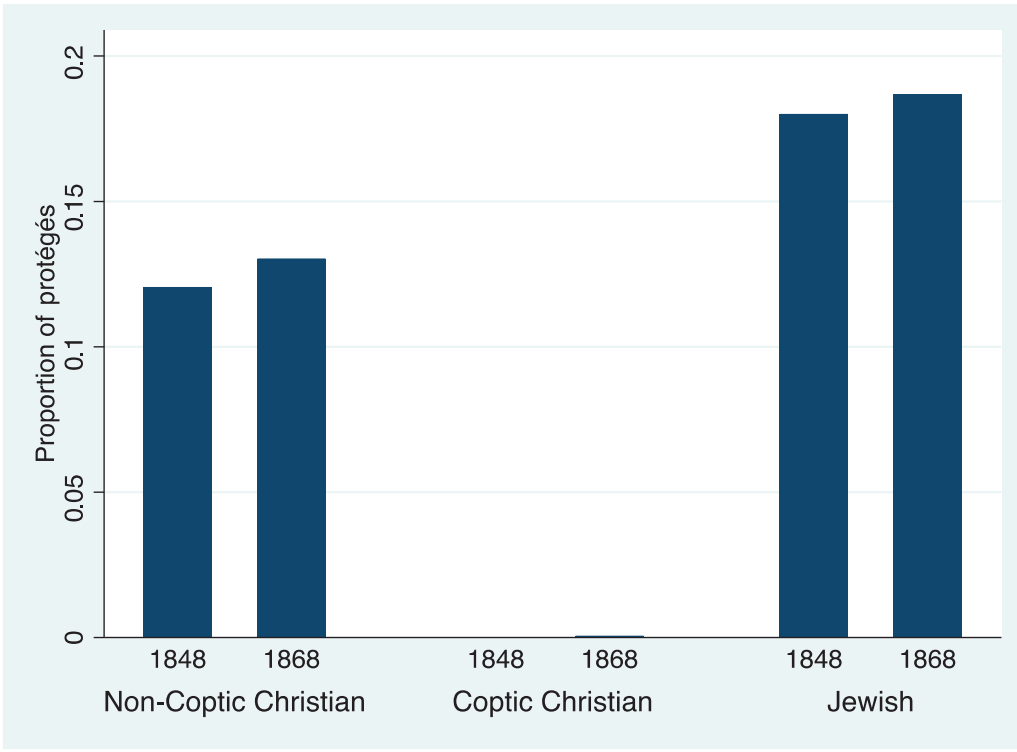

FIGURE 2 The protégé take-up by religious group in 1848 and 1868.
Notes: The sample is restricted to local (non-European) non-Muslim adult men who are at least 15 years of age with non-missing religious affiliation in Cairo and Alexandria in 1848 and 1868. The statistics are weighted by personal weights (see section III for details).
Sources: The 1848 and 1868 population census systematic samples, and the two oversamples of non-Muslims in Cairo in 1848 and 1868.
[Colour figure can be viewed at wileyonlinelibrary.com]

are more likely than non-protégés to be white-collar workers, and in particular, workers in trade and finance.

That said, the demand for legal protection is not confined to non-Muslim white-collar workers or those working in trade and finance. In all, 34 per cent of protégés were artisans and unskilled workers, and 47 per cent worked in other occupations unrelated to trade and finance. Table 1 also demonstrates that there were no significant differences in the dwelling type between protégés and non-protégés. Furthermore, while protégés were less likely to have been tenants in religious-endowment- or state-owned dwellings, suggesting they were richer on average, they were less likely to have had servants or slaves, suggesting that they belonged to the urban non-Muslim middle class, and not to the richest non-Muslims. This is probably because wealthy non-Muslims had access to political power, and so did not need foreign protection.[59] So, while occupational differences mattered, there was no significant flight out of state-organized courts, even among workers in trade and finance, despite the ease with which one could secure European legal protection.

[59] Certain affluent non-Muslims in nineteenth-century Egypt rose in government ranks and did not have European legal protection. Examples include Nubar Pasha (1825–99), an Egyptian Armenian, and the first prime minister of Egypt, and Yacoub Cattaui Bey (1800–83), an Egyptian Jew, and the director of currency, treasury, and finance, under Khedive Ismail.

TABLE 1 Characteristics of urban Egypt's non-Muslim population in 1848 and 1868 by protégé status

	Non-protégés		Protégés		
	N	**Proportion**	**N**	**Proportion**	**Difference**
Coptic Christian	4233	0.51	299	0.00	−0.504***
Non-Coptic Christian	4233	0.36	299	0.64	0.275***
Jew	4233	0.13	299	0.36	0.229***
White-collar	3549	0.51	107	0.64	0.134**
Artisan	3549	0.34	107	0.26	−0.078
Unskilled worker	3549	0.15	107	0.09	−0.058*
Trade or finance worker	3549	0.29	107	0.53	0.246***
Lives in a low-status dwelling	4233	0.09	299	0.09	−0.004
Lives in a mid-status dwelling	4233	0.15	299	0.18	0.022
Lives in an unknown-status dwelling	4233	0.75	299	0.74	−0.018
Lives in a Waqf or state-owned dwelling	3789	0.27	266	0.19	−0.085***
Has servants or slaves	4233	0.24	299	0.18	−0.066**

Note: Trade or finance workers overlap with white-collar workers and artisans, as they include certain occupations from both groups (e.g., merchant, goldsmith). Low-status dwellings include yards, ruins, cemeteries, rooms, shacks, and poorhouses. Mid-status dwellings include caravanserais and group quarters. Unknown-status buildings include all other types which we could not classify as low-status or mid-status (mostly, only mentioned as houses). The sample is restricted to local (non-European) non-Muslim adult men who are at least 15 years of age with non-missing religious affiliation in Cairo and Alexandria in 1848 and 1868. The statistics are weighted by personal weights (see section III for details).

Sources: The 1848 and 1868 population census systematic samples, and the two oversamples of non-Muslims in Cairo in 1848 and 1868.

Next, we show that, contrary to the second prediction of the legal quality hypothesis, protégés did not sort into 'higher quality' laws, conditional on opting out. Since the previous literature has stressed the primacy of access to the corporate form, we start by investigating whether protégés took advantage of easier incorporation. We use the conventional definition of the business corporation: a legal entity distinct from the identity of its members, acting as a unit for a common purpose, and recognized by the laws of the state.[60] Despite the presence of European jurisdictions, and the application of these rules in Egypt, the corporation as an enterprise form was not popular. Before 1868, only six corporations were ever founded, three under British law, one under French law, and two under Egyptian law.[61]

Furthermore, if legal quality had been driving the demand for legal protection, there should have been a higher take-up of protection from polities with laws that provided easier access to the corporation and other novel enterprise forms. Between the two census years, 1848 and 1868, only Great Britain (1857), the Netherlands (1863), and the United States adopted general incorporation statutes. France introduced this legislation in 1867, just a year prior to the 1868 census, and Spain and Prussia, a few years after (1869 and 1870, respectively). Austria-Hungary adopted general incorporation much later, in 1899. Greece did not introduce such statutes until after the

[60] Harris, *Going the distance*, p. 251.

[61] Compagnie Universelle du Canal Maritime de Suez in 1856, Bank of Egypt Limited in 1856, Société Anonyme des Monts-de-Piété Egyptiens in 1860, Alexandria Ramleh Railway Company Limited in 1862, Anglo-Egyptian Bank Limited in 1864, and Société Anonyme des Eaux du Caire in 1865. See Egypt, *Annuaire*, and *Statistique*.

TABLE 2 Polity choice of Egypt's protégé population in 1848 and 1868

	1848		1868		
	N	**Proportion**	**N**	**Proportion**	**Difference**
France	102	0.15	194	0.19	0.040
Greece	102	0.14	194	0.16	0.024
Italy	102	0.31	194	0.18	−0.127**
England	102	0.08	194	0.09	0.010
Austro-Hungarian Empire	102	0.20	194	0.08	−0.124**
Russian Empire	102	0.03	194	0.03	−0.003
Spain	102	0.01	194	0.17	0.167***
Prussia	102	0.00	194	0.02	0.018**

Note: The sample is restricted to protégés in Cairo and Alexandria. The statistics are weighted by personal weights (see section III for details).
Sources: The 1848 and 1868 population census systematic samples, and the two oversamples of non-Muslims in Cairo in 1848 and 1868.

1950s.[62] Given the variation in business law reform across European powers and the United States, there should have been greater selection into jurisdictions that enacted such reforms. That is, the expansion of protégés between 1848 and 1868 should have been driven by increases in the number of British, Dutch, and American protégés.

Our census data show that this is not the case. Table 2 reports the selection of protégés into different European jurisdictions. Between the two census years, Spain and France registered substantial increases (although the increase is not statistically significant in the case of France). But French company law did not change much during this period except the Acts of 1863 and 1867. While the 1863 law standardized the incorporation process, it still required authorization. General incorporation statutes became law only in 1867. This reform, being so late, could not have been the driver of increases in French protégés in the 1868 census. Before the 1867 act, very few corporations were founded in France itself.[63]

Spain did not introduce its substantial legal reform during our period of study either. The first Spanish commercial code, enacted in 1829, did introduce general incorporation, but a civil war, which lasted from 1833 to the early 1840s, and the economic crisis of 1845 put an end to this easy access to the corporate form. The subsequent 1848 law reintroduced an ad hoc authorization process to form a corporation (or any company whose capital was divided into shares). Free incorporation was only restored in 1869, following the overthrow of the Spanish monarchy.[64] There were almost no Spanish protégés reported in the 1848 census, when Spanish laws were uniquely liberal with free access to corporation. In 1868, there was a remarkable increase in Spanish protégés despite Spanish commercial code being its most restrictive between 1848 and 1869. This shift cannot be explained by the 'quality' of Spain's commercial law.[65]

[62] Bogart et al., 'State', p. 85; Guinnane et al., 'Corporation', p. 692; Pepelasis, 'Legal system', pp. 195–6.

[63] Rochat, 'Change', pp. 248, 260.

[64] Martínez-Rodríguez, 'History of the corporation', pp. 301–3.

[65] The likelier explanation is more mundane. As Spanish trade expanded in the Levant, they turned to recruiting local non-Muslims, especially the Sephardim, who were already prominent forces in the region's commercial life, to intermediate Spain's trade (Asuero, 'Spanish consulate', p. 170). Our census data show that 55 per cent of Spanish protégés in 1868 were

Among the countries that did introduce general incorporation statutes between 1848 and 1868 – Great Britain, the Netherlands, or the United States – the take-up of legal protection did not change much. The Netherlands and the United States had very few protégés. Those under British legal protection constituted less than 10 per cent of all protégés. Protégés did not turn to these jurisdictions with higher demand after the introduction of novel legal reforms that the literature stressed in distinguishing legal quality.

The corporate form was but one dimension of the law and arguably not important to many protégés, who were small business owners or artisans. In fact, certain useful features of the corporate form that helped mobilize capital or facilitate impersonal exchange were available to the Egyptian population (e.g., limited liability for partners without control rights). These features were not embedded in European legal context and could migrate.[66] Certain migratory institutions, such as bills of exchange, had existed under Egyptian court systems, and the Egyptian Merchant Courts further harmonized these institutions with Continental European laws.[67] Contemporary sources also stressed partnerships, bankruptcy, landlord–tenancy relations, mortgage, patents, and trademarks. But at this point, English law and Continental laws were not different enough to produce a clear hierarchy in giving more protection to creditors, landlords, or entrepreneurs. Some Continental European countries' laws might have suffered from the transplant effect, but this did not translate into less demand for protection. For instance, Greece accounted for 12–14 per cent of legal protections despite its commercial code, transplanted from France, omitting important provisions.[68]

For many protégés, single proprietorship or partnership forms were more relevant.[69] In this case, British law sharply differed from French law by disallowing limited liability for any partner in any partnership form until 1907. French law offered a richer menu of partnership forms, providing remarkable contractual flexibility in assigning liability and control among partners.[70] However, these partnership forms were also available through Egyptian Merchant Courts. So, access to Continental partnership forms could not have motivated local entrepreneurs to seek consular protection.

Other legal dimensions could be relevant in distinguishing alternative consular jurisdictions. For instance, in tenancy, laws could have distributional differences, such as rights and obligations assigned to tenants and landlords, what counted as damages to property, and eviction procedures.[71] In bankruptcy, Continental laws provided stronger creditor protection than English law, but not by much.[72] There were many minor differences, such as disagreements about which date contracts signed by the insolvent party had to be annulled by. Individuals could exploit these

Jewish. The rest were non-Coptic Christians. While Jews in the Egyptian censuses do not have Sephardic names, it is possible that Spain extended its protection to local Jewish communities.

[66] Harris, *Going the distance*.

[67] Goldberg, 'Majālis al-Tujjār'.

[68] Greece imported its commercial code from France, but the French civil law was left out. Instead, Byzantine law was the single source of all Greek civil law. Hence, the Greek commercial code lacked fundamental provisions, even the basic definition of a company or joint ownership, and was filled with many anachronistic rules, such as archaic ceilings on interest rates, and other inconsistencies (Pepelasis, 'Legal system', pp. 185–8).

[69] Guinnane et al., 'Corporation'.

[70] Lamoreaux and Rosenthal, 'Legal regime'.

[71] n.a. 'New courts', pp. 452–3.

[72] Sgard, 'Bankruptcy'.

TABLE 3 Polity choice of Egypt's dual-national Europeans in 1848 and 1868

Origin	Acquired the legal protection of							Total	Number origin nationals
	Austria	Great Britain	France	Greece	Italy	Prussia	Russia		
Austria	0	0	0	0	2	0	0	2	124
France	1	5	0	1	1	0	0	8	442
Greece	2	0	3	0	9	0	6	20	443
Italy	0	0	0	2	0	0	0	2	265
Malta	2	32	0	0	0	0	0	34	34
Russia	0	0	0	1	0	1	0	2	44
USA	1	1	1	0	4	0	0	7	11
Total	6	38	4	4	16	1	6	75	

Note: The sample is restricted to Europeans who acquired the legal protection of a second European polity, and who resided in Cairo and Alexandria in either 1848 or 1868. The table shows the distribution of the second (acquired) polity of protection for each polity of origin. The Total row for each polity shows the number of Europeans who did not originate from that polity yet acquired its protection. The Total column for each polity of origin shows the number of individuals who acquired a second protection. Number Origin Nationals is the number of individuals in the sample who originated from a given polity. Austria refers to the Austrian-Hungarian Empire.

Sources: The 1848 and 1868 population census systematic samples, and the two oversamples of non-Muslims in Cairo in 1848 and 1868.

differences to gain an advantage, and in fact, this provided grounds for forum shopping on a case-by-case basis, creating uncertainty about enforcement.[73]

Beyond substantive differences in laws, consuls could have specialized in adjudicating different types of disputes, thus attracting more protégés to their jurisdictions. While consuls likely competed, we do not observe specialization. Most consuls were not even trained in law. Only Britain appointed its consular staff from members of the legal profession. France and Italy also appointed judges as part of consular staff but only in Alexandria.[74] But despite their lack of expertise, other jurisdictions continued to attract protégés. So, perceived differences in quality based on the consul's legal expertise was not a determinant in choice of jurisdiction.

Finally, we observe 75 Europeans (seven per cent of Europeans) in our census samples who acquired the legal protection of a second European polity that is different from their polity of origin. Table 3 shows the distribution of the polity of protection among these 'dual-national' Europeans. The largest dual-national group were the Maltese, most of whom had British protection. The second-largest dual-national European group were the Greeks. The demand for legal protection among the Maltese and the Greeks can be explained by their political situation. Malta was officially a British colony, while Ottoman Greeks may have benefited from generous naturalization policies by various European countries. But the diversity of the European dual nationals cannot be explained by the legal quality hypothesis. Even excluding the Maltese- and Greek-origin dual nationals, we still observe 21 dual-nationals (two per cent of Europeans) of other origins.[75]

[73] n.a., *La réforme*, pp. 30–5.

[74] Great Britain, *Reports*, p. 199; n.a., *La réforme*, pp. 36–7; *American law review*, p. 450.

[75] Although this is a very small sample, these 21 dual-national Europeans represent 116 people in the population, based on the sampling design personal weights. Furthermore, this is a rare phenomenon in the population. There were few Europeans in 1848 and 1868 to begin with. Observing a small number of dual-national Europeans is informative. Finally,

The fact that we observe Europeans from polities with better quality legal systems selecting into lower quality systems (e.g., Italian-Greeks, American-Italians, Austrian-Italians) suggests that there were other reasons that induced these Europeans to acquire a second European legal status.

Overall, our findings are not consistent with legal quality being the driver of the demand for extraterritoriality. We do not observe mass flight from the Egyptian legal system. The corporation was costly in most of the European countries with consular courts in Egypt. When access was made more open, those polities did not enjoy an increase in protégés. But where or when the access was shut down, the protégé population in that polity increased. While Continental laws offered a rich menu of partnership forms, these were also available under Egypt's state-organized courts, as were other useful migratory institutions. In other areas, Continental and English laws were not significantly different. But some polities continued to attract protégés despite maintaining commercial laws that arguably involved higher transaction costs. This is not to say that certain European legal innovations, business forms, or financial techniques were unimportant. Rather, those innovations migrated and so did not require non-Muslims to become protégés, or these innovations were closed off even to Europeans.

V | EVIDENCE ON LEGAL UNCERTAINTY

We now turn to the legal uncertainty hypothesis in explaining local non-Muslims' demand for extraterritoriality. While we do not observe the contractual relationships that local non-Muslims had with Europeans, we observe two types of networks with Europeans in which these contractual relationships are most likely to emerge: the occupational and spatial networks.

Table 4 shows the occupational and polity-of-origin composition of the European immigrant population in Cairo and Alexandria in 1848 and 1868. Two key patterns emerge. First, the majority of Europeans worked in white-collar jobs, especially those related to trade and finance, followed by artisanal jobs. The occupational distribution of Europeans remained mostly stable between 1848 and 1868, although there was a slight shift from artisanal jobs to both unskilled and white-collar jobs. Second, the polity distribution of Europeans changed between 1848 and 1868, shifting from British, Austro-Hungarians, Maltese, Russians, and Prussians (53 per cent) in 1848 to French and Italians (58 per cent) in 1868, with Greeks making up 24 per cent of the European population in both years. Figures 3 and 4 show the spatial distribution of European immigrants in Cairo and Alexandria in 1848 and 1868. The maps suggest that Europeans became more spatially widespread in both cities between 1848 and 1868.

We now turn to the empirical strategy of evaluating the effect of European networks on legal protection. Recall that the legal uncertainty hypothesis implies greater protégé take-up in networks with larger European presence, and that protégés will sort into the European jurisdiction(s) with the strongest representation in their networks. This section evaluates the impact of the occupational and spatial networks with Europeans on local non-Muslims' protégé status, and on protégés' choice of polity.

We begin with an ordinary least squares (OLS) regression of the protégé take-up among local non-Muslims. We investigate whether an individual was more likely to become a protégé if they worked in an occupation with a higher proportion of Europeans:

the phenomenon must have been common enough that the French government tried to regulate the grant of protégé status to other Europeans, but this regulation could not be enforced and was dropped in 1833 (Féraud-Giraud, *La jurisdiction*).

TABLE 4 The occupational and polity of origin composition of Egypt's European population in 1848 and 1868

	1848		1868		
	N	Proportion	N	Proportion	Difference
White-collar	237	0.50	231	0.53	0.033
Artisan	237	0.41	231	0.32	−0.082*
Unskilled worker	237	0.09	231	0.13	0.039
Trade or finance worker	237	0.30	231	0.30	0.009
Austro-Hungarian Empire	532	0.12	1099	0.04	−0.082***
Belgium	532	0.00	1099	0.00	−0.002
Croatia	532	0.00	1099	0.00	0.001
Denmark	532	0.01	1099	0.00	−0.009*
England	532	0.27	1099	0.10	−0.171***
France	532	0.11	1099	0.39	0.277***
Greece	532	0.24	1099	0.24	0.001
Italy	532	0.08	1099	0.19	0.107***
Malta	532	0.07	1099	0.01	−0.063***
Prussia	532	0.02	1099	0.01	−0.014**
Russia	532	0.05	1099	0.02	−0.029***
Spain	532	0.01	1099	0.01	0.002
Sweden	532	0.01	1099	0.00	−0.012**
USA	532	0.01	1099	0.00	−0.006*

Note: The sample is restricted to Europeans residing in Cairo and Alexandria in 1848 and 1868. The statistics are weighted by personal weights (see section III for details). The sample size is smaller for the occupational distribution than for the polity of origin because of the higher frequency of missing occupational titles. Trade or finance workers overlap with white-collar workers and artisans, as they include certain occupations from both groups (e.g., merchant, goldsmith).
Sources: The 1848 and 1868 population census systematic samples, and the two oversamples of non-Muslims in Cairo in 1848 and 1868.

$$protege_{ickt} = \beta_1\, occeuro_{ckt} + \alpha_k + \gamma_t + \varepsilon_{ickt} \quad (1)$$

where $protege_{ickt}$ is a dummy variable that takes the value of one if a local non-Muslim i in occupation c in occupation group k in census year t is a protégé of a European polity.[76] The variable $occeuro_{ckt}$ is the proportion of Europeans in occupation c in census year t. We control for a full set of occupational group fixed effects, α_k, to account for the differences in protégé take-up between occupation groups. We are unable to include the detailed (five-digit) occupation fixed effects (α_c) in this regression. The occupational distribution of Europeans remained largely unchanged between 1848 and 1868 (table 4), and so its impact would be mostly absorbed in the detailed occupation fixed effects. The fixed effect, γ_t, is a dummy variable for the 1868 census to account for aggregate shocks to the protégé take-up between 1848 and 1868. Finally, ε_{ickt} is an error term. The standard errors are clustered at the occupation c level, the level of aggregation of the explanatory variable.

[76] Occupational groups are the one-digit HISCO major occupational groups: (1) professionals (e.g., engineers, physicians); (2) religious workers; (3) administrative and managerial workers; (4) clerical and related workers; (5) sales and trade workers; (6) service workers (e.g., servants, slaves, police, military); (7) workers in agriculture, animal husbandry, and fishing; (8) spinners, millers, food processors, and tailors; (9) shoemakers, blacksmiths, and jewellers; and (10) construction workers, carpenters, and labourers.

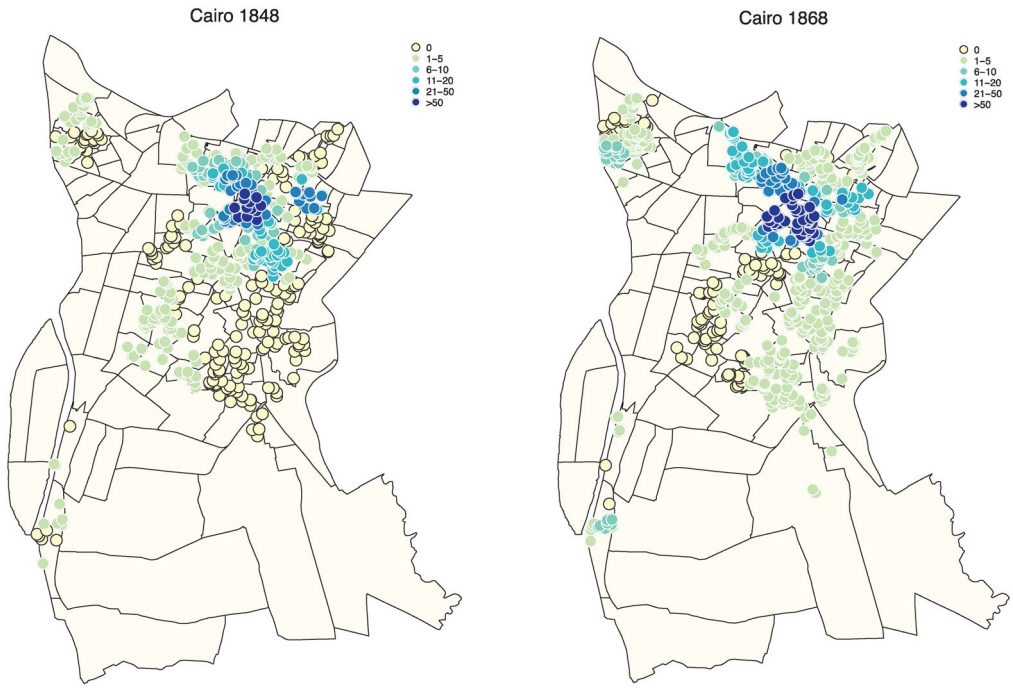

FIGURE 3 The spatial distribution of Europeans in Cairo in 1848 and 1868. [Colour figure can be viewed at wileyonlinelibrary.com]

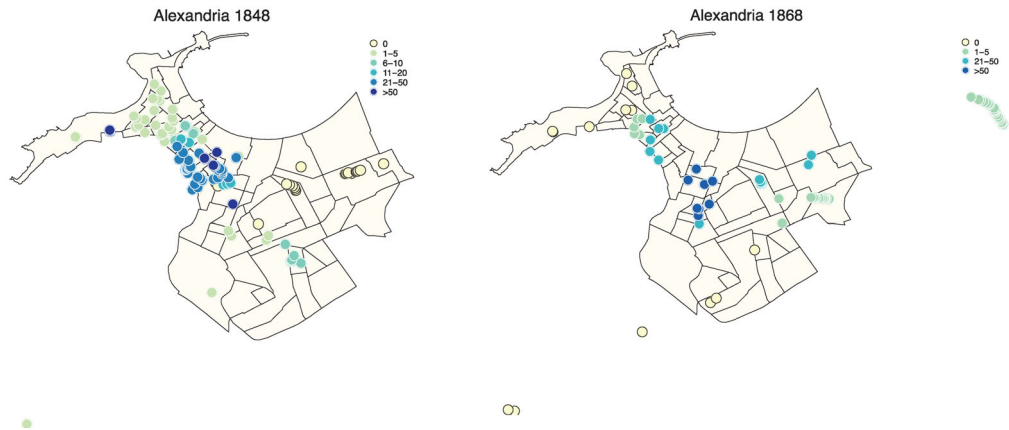

FIGURE 4 The spatial distribution of Europeans in Alexandria in 1848 and 1868. [Colour figure can be viewed at wileyonlinelibrary.com]

We also examine if local non-Muslims are more likely to become protégés if they have a higher proportion of European neighbours:

$$protege_{igt} = \beta_1 \, euronbrs_{igt} + \alpha_g + \gamma_t + \varepsilon_{igt} \quad (2)$$

where $protege_{igt}$ is a dummy variable that takes the value of one if a local non-Muslim i in neighbourhood g in census year t is a protégé of a European polity. The explanatory variable $euronbrs_{igt}$

is the proportion of Europeans among neighbours who live within a 250 m radius of individual i's street address in neighbourhood g in census year t. Standard errors are clustered at the neighbourhood level g. The explanatory variable is measured at the individual level because the proportion of European neighbours is computed from the viewpoint of each individual's street address, and not at the neighbourhood level.

We control for a full set of neighbourhood fixed effects, α_g, to account for differences in protégé take-up across neighbourhoods. Recall from figures 3 and 4 that the spatial distribution of Europeans expanded between 1848 and 1868, thus enabling us to exploit the change in the proportion of European neighbours within the neighbourhood between 1848 and 1868. To have a consistent definition of neighbourhoods between 1848 and 1868, and in the absence of administrative maps of the two cities from the period, we define neighbourhoods according to the administrative division of Cairo and Alexandria in the 2006 population census. As a robustness check, we also construct for each of Cairo and Alexandria a grid of cells of 250 m × 250 m that spans the whole city.[77]

The legal quality and legal uncertainty hypotheses make testable implications about the sign of β_1 in both Equations (1) and (2). Under the null hypothesis ($\beta_1 = 0$), the protégé take-up is uncorrelated with the distribution of Europeans across occupations or neighbourhoods, which is consistent with the legal quality hypothesis under perfect information about legal protection. Under the alternative hypothesis ($\beta_1 > 0$), the demand for legal protection is positively correlated with the presence of Europeans, which is consistent with the legal uncertainty hypothesis.

Equations (1) and (2) depend on the identification assumption that the occupational (spatial) distribution of Europeans, across occupational groups (neighbourhoods), is exogenous. This assumption may be violated due to reverse causality or omitted variables. Europeans may be attracted to occupations or neighbourhoods with a higher presence of protégés. There may also be other characteristics of occupations or neighbourhoods, such as income, which are correlated with the presence of both Europeans and protégés. Following the migration literature, we address the potential endogeneity of the distribution of Europeans by using a shift-share instrumental variable. To construct this instrument, we restrict the analysis to the 1868 census, and we employ the following instrumental variable for the proportion of Europeans in each occupation or neighbourhood in 1868:

$$Z_{l,1868} = \frac{1}{P_{l,1868}} \sum_j z_{lj,1848} \times g_{j,1868} \tag{3}$$

where $P_{l,1868}$ is the size of occupation or neighbourhood l in 1868; $z_{lj,1848}$ is the 1848 share of Europeans of polity of origin j working in the occupation, or the share of European neighbours of polity of origin j living in the neighbourhood; and $g_{j,1868}$ is the number of Europeans of polity of origin j who entered Cairo and Alexandria between 1848 and 1868 excluding those in occupation or neighbourhood l.[78] Because the two-stage least squares (2SLS) regressions are restricted to the 1868 census, we cannot include either year or occupation (neighbourhood) fixed effects in the 2SLS regressions.

We also use an adjusted IV ($Z^{adj}_{l,1868}$), where we exploit the impact of the Egyptian cotton boom in 1861–65 on Egypt's cotton trade pattern with its European partners. We hypothesize that the shifts

[77] We show in appendix figures A1 and A2 the mapping of the census data using the 2006 quarters and the grid cells for each of Cairo and Alexandria.

[78] In total, 99.5 per cent of Europeans who entered Egypt between 1848 and 1868 settled in Cairo or Alexandria.

in Egypt's cotton partners before and after the cotton boom may have altered the migration inflows from European countries.[79] Specifically, we replace the shift component ($g_{j,1868}$) in Equation (3):

$$Z^{adj}_{l,1868} = \frac{1}{P_{l,1868}} \sum_{j} z_{lj,1848} \times cotton_{j,1868} \quad (4)$$

where $cotton_{j,1868}$ is equal to the (positive) shift in country j's relative share of Egypt's total cotton exports before and after the cotton boom, if the country increased its share of Egyptian cotton exports, and is equal to 0 if country j reduced its share during this period.[80] Three European countries registered an increase in their relative shares of Egypt's cotton exports during this period. Great Britain witnessed a substantial increase of 40 percentage points, Italy of eight percentage points, and France of three percentage points. The shares of all other countries declined and are thus assigned zeros.

The shift-share instrument exploits two sources of variation: (1) the variation across occupations or neighbourhoods in their initial (1848) shares of European polities of origin, and (2) the Egypt-level national shift in the number of Europeans from each European polity of origin between 1848 and 1868. The validity of this instrument depends on the exogeneity of the occupational or spatial distribution of Europeans from each polity of origin in 1848.[81] We evaluate the validity of the shift-share IV in equation (3) following the procedures suggested by Goldsmith-Pinkham, Sorkin, and Swift. First, we show in appendix tables A4 and A7 the Rotemberg weights of the European countries in terms of their contribution to the variation of the IV. These weights decompose the shift-share IV into a weighted sum of the just-identified instrumental variable estimators that use each country's share in 1848 as a separate instrument. The results show that the Rotemberg weights are almost perfectly correlated with the national migration inflows between 1848 and 1868, in the occupational networks analysis, and 85 per cent correlated in the spatial networks analysis. Furthermore, the variation in our IV is mainly driven by France (88 per cent) and Italy (12 per cent) in the occupational networks analysis, and by Italy (70 per cent), Greece (18 per cent), France (9 per cent), and Spain (2 per cent) in the spatial networks analysis. Second, appendix tables A5 and A8 report the correlation between each of the initial shares of the top Rotemberg weight countries, and the characteristics of occupations or neighbourhoods in 1848, finding mostly no statistically significant correlation. Third, appendix tables A6 and A9 show alternative IV estimates, finding that the IV estimates are robust across different estimation methods.

Finally, we investigate the effect of the occupational and spatial networks on the choice of polity among protégés using a multinomial logistic regression. The outcome variable is a categorical variable for the following polities: Austria, Great Britain, France, Greece, Italy, Russia, Spain, and other countries (base outcome). The vector of explanatory variables includes the proportions of Austrian, British, French, Greek, Italian, Russian, and Spanish immigrants within the person's occupation in the case of the occupational networks, or among the person's neighbours (within a 250 m radius) in the case of the spatial networks.

[79] This is similar to Tabellini's shift-share IV adjustment strategy that replaces the national growth of European immigration into the United States in 1900–30 by the predicted migration inflows due to both the First World War and the imposition of the US migration quotas in 1924 (Tabellini, 'Gifts').

[80] We obtain similar results if we employ instead the shift in each country's relative share of Egypt's total trade, or of the total number of vessels departing from the port of Alexandria. We collected these statistics from *Tables* (P.P. 1849, Vol. 53), pp. 359–67 for 1842–43, and US House of Representatives, *Report*, p. 905, for 1876.

[81] Goldsmith-Pinkham, Sorkin, and Swift, 'Bartik'; Jaeger, Ruist, and Stuhler, 'Shift-share'.

The results are shown in tables 5 and 6. Table 5 reports the OLS and 2SLS estimates of the effect of the occupational and spatial networks with Europeans on the protégé take-up. Panel (5a) reveals that occupational networks played a role in the demand for extraterritoriality. Local non-Muslims are more likely to become protégés the higher the proportion of Europeans in their occupation. According to the OLS estimate for the full sample of local non-Muslims in column (1), a one standard deviation increase in the proportion of Europeans in the occupation (= 0.05) is associated with a 43 per cent rise in the baseline probability of becoming a protégé (= 0.03). The shift-share IV estimate in column (2) and the adjusted IV estimate in column (3) both reveal an even larger effect. A one-standard-deviation rise in the proportion of Europeans doubles the baseline probability of becoming a protégé. Restricting the sample to non-Coptic Christians and Jews in columns (4)–(6) results in similar but noisier estimates.

Panel (5b) shows that non-Muslims were more likely to become protégés when the proportion of Europeans among their neighbours increased. The OLS estimate in column (1) reveals that an increase in the proportion of European neighbours by one standard deviation (= 0.03) is associated with a 51 per cent increase in the baseline probability of becoming a protégé (= 0.07). Both the shift-share IV in column (2) and the adjusted IV in column (3) show a stronger effect. A one-standard-deviation rise in the proportion of European neighbours is associated with a 75 per cent increase in the protégé take-up likelihood. Restricting the sample to Jews and non-Coptic Christians results in similar yet noisy estimates, because of the high concentration of these two groups in a relatively small number of neighbourhoods in Cairo and Alexandria. We also obtain qualitatively similar results when we use the grid cells, instead of the 2006 census administrative division, as a robustness check (appendix table A1). The results are imprecise when using grid cells, though, because the boundaries of these cells are arbitrary, unlike the 2006 quarters, which reflect actual residential patterns.

The larger 2SLS coefficients in both panels (5a) and (5b), in comparison to the OLS estimates, may be driven by several factors. First, as the 2SLS measures the local average treatment effect (LATE), it is plausible that the effects on the protégé take-up among the subset of local non-Muslims for whom the IV – the shift-share instrument – had an effect are larger than for the entire local non-Muslim population. Second, there is stronger correlation between the occupational or spatial networks with Europeans and the protégé take-up in 1868, in comparison to 1848 – recall that the 2SLS is estimated for 1868 only. Third, there may be measurement error in the main regressor, the proportion of Europeans in the occupation or among neighbours, that biases the OLS estimates downwards.

We turn to testing the second implication of the legal uncertainty hypothesis regarding the protégés' polity choice. Appendix table A3 reports the multinomial logistic regression results of the protégés' choice of polity on the proportion of Europeans in the occupation, among six major European polities with a significant number of protégés: Austria, Great Britain, France, Greece, Italy, and Spain. However, we fail to detect any meaningful correlation due to the small sample size – we observe only 92 protégés with non-missing occupational titles – and the high correlation across European polities in the occupational distribution.

Table 6 shows the multinomial logistic regression results of the protégés' choice of polity on the proportion of European neighbours from the same six major European polities with a significant number of protégés. Overall, the results reveal that protégés were more likely to choose the protection of a European polity – at least in the case of Austria, Great Britain, and France – the higher the proportion of its nationals among the protégé's neighbours. We interpret these results as suggestive evidence in support of the legal uncertainty hypothesis. Conditional on the protégé status, protégés sorted into the same European jurisdiction as their European

TABLE 5 The effect of the occupational and spatial networks with Europeans on the demand for legal protection

(a) Occupational networks

	All non-Muslims			Non-Coptic Christians and Jews		
	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	2SLS	Adjusted 2SLS	OLS	2SLS	Adjusted 2SLS
Proportion of Europeans in occupation	0.26	0.89	0.81	0.18	0.88	0.83
	(0.15)*	(0.32)***	(0.30)***	(0.22)	(0.28)***	(0.26)***
Occupation group fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Census year fixed effects	Yes	No	No	Yes	No	No
Observations (individuals)	3656	2066	2066	1560	908	908
Clusters (occupations)	145	115	115	109	84	84
R^2	0.02	0.03	0.03	0.03	0.10	0.10
Mean dependent variable	0.03	0.03	0.03	0.03	0.03	0.03
Kleibergen–Paap Wald *F*-stat	–	18.51	16.35	–	17.58	15.69

(b) Spatial networks

	All non-Muslims			Non-Coptic Christians and Jews		
	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	2SLS	Adjusted 2SLS	OLS	2SLS	Adjusted 2SLS
Proportion of European neighbours	1.18	1.76	0.97	1.54	1.29	0.64
	(0.53)**	(0.94)*	(0.45)**	(0.86)*	(1.47)	(0.57)
Census year fixed effects	Yes	No	No	Yes	No	No
2006 quarter fixed effects	Yes	No	No	Yes	No	No
Observations (individuals)	4404	2532	2532	1963	1140	1140
Clusters (2006 quarters)	100	79	79	81	63	63
R^2	0.09	0.00	0.02	0.07	−0.01	−0.00
Mean dependent variable	0.07	0.07	0.07	0.07	0.07	0.07
Kleibergen–Paap Wald *F*-stat	–	6.07	8.86	–	2.12	11.78

Note: The dependent variable is a dummy variable that is equal to 1 if the individual is a protégé of a European consulate. Standard errors clustered at the occupation level in Panel (a), and at the 2006 census quarter level in Panel (b), are in parentheses. The regressions are weighted by personal weights (see section III for details). The 2SLS regressions in columns (2) and (5) are based on the shift-share instrument that is defined in Equation (3). The adjusted 2SLS regressions in columns (3) and (6) are based on the adjusted instrument defined in Equation (4). The 2SLS and adjusted 2SLS regressions are conducted for 1868 only. The sample is restricted to the adult (≥ 15 years) male local (non-European) non-Muslim population of Cairo and Alexandria with non-missing religious affiliation. It is further restricted to those with non-missing occupational titles in panel (a) and to those with non-missing coordinates in panel (b).

Sources: The 1848 and 1868 population census systematic samples, and the two oversamples of non-Muslims in Cairo in 1848 and 1868.

*$p < 0.10$. **$p < 0.05$. ***$p < 0.01$.

TABLE 6 The relationship between the spatial networks with Europeans and the proteges' choice of polity

	Austria	England	France	Greece	Italy	Spain
Proportion Austro-Hungarian	11.26	20.34	10.56	11.83	5.32	13.27
	(6.11)*	(6.37)***	(6.35)*	(5.10)**	(5.86)	(5.31)**
Proportion English	2.60	13.69	10.86	4.62	3.83	9.25
	(3.73)	(4.52)***	(4.00)***	(3.77)	(4.86)	(3.61)**
Proportion French	−4.02	11.85	12.74	2.05	−1.81	7.86
	(5.64)	(7.13)*	(5.10)**	(5.53)	(4.36)	(6.17)
Proportion Greek	−3.30	8.67	8.16	2.78	2.36	7.78
	(3.44)	(4.25)**	(3.06)***	(2.76)	(2.34)	(2.87)***
Proportion Italian	1.19	1.52	8.33	2.24	3.54	9.45
	(3.34)	(3.86)	(2.96)***	(3.34)	(3.54)	(3.01)***
Proportion Spanish	21.89	101.24	51.40	17.60	55.80	49.43
	(32.69)	(50.10)**	(37.45)	(28.20)	(39.65)	(39.53)
Observations	288					

Note: The table reports the marginal effects on the probability of choosing a certain polity relative to the base polity, using a multinomial logistic regression. The dependent variable is a categorical variable indicating the choice of polity: Austria, Great Britain, France, Greece, Italy, Russia, Spain, and other (base outcome). Standard errors are clustered at the grid cell level. The regressions are weighted by personal weights (see section III for details). The sample is restricted to protégés in Cairo and Alexandria with non-missing religious affiliation and coordinates.

Sources: The 1848 and 1868 population census systematic samples, and the two oversamples of non-Muslims in Cairo in 1848 and 1868.

*$p < 0.10$. **$p < 0.05$. ***$p < 0.01$.

neighbours. However, we acknowledge that the effects are imprecisely estimated because of the high correlation across European polities in the spatial distribution.

VI | DISCUSSION

Overall, the results suggest that the occupational and spatial networks with European immigrants were important drivers of the demand for legal protection. Local non-Muslims were more likely to acquire the protégé status if Europeans made up a higher proportion of their occupational and spatial networks. The stronger European presence in these networks implies a higher likelihood of establishing contractual relationships with Europeans. We thus interpret these results as consistent with the first implication of the legal uncertainty hypothesis. Local non-Muslims demanded the legal protection of a European polity to mitigate the uncertainty about which law would apply to their contracts with Europeans. We also find suggestive evidence supporting the second implication of the legal uncertainty hypothesis. Conditional on becoming a protégé, the choice of European jurisdiction seems to be positively correlated with the nationality composition of the protégé's European neighbours. Our findings on polity choice are noisy, however, especially for occupational networks, due to the small number of protégés with non-missing occupational titles, and the high correlation of spatial and occupational choices among Europeans.

Although our findings support the legal uncertainty hypothesis, they can be still consistent with the legal quality hypothesis if there were significant information asymmetries between Europeans and local non-Muslims about the quality of the European legal systems relative to the Egyptian

legal system and if European networks mitigated these asymmetries. In this case, Europeans might have shared information with local non-Muslims within their occupational and spatial networks about the possibility of legal protections, and how European consulates differed from one another in law, procedures, and enforcement.

We acknowledge that we are unable to rule out European networks mitigating information asymmetries about the benefits of legal protection that can be caused by a variety of (unobservable) sources. However, we argue that the legal uncertainty explanation is the main driver of our findings, based on three pieces of evidence. First, the macro-level patterns of legal protection we demonstrated do not support the legal quality hypothesis. Second, historical evidence supports the view that non-Muslims became protégés, and chose jurisdictions, so that they could safely contract with Europeans. Contemporary reporting and scholarship found that locals were not willing to enter into contractual arrangement with Europeans, whether partnerships, debt contracts, mortgages, or even bills of exchange, due to the 'absolute judicial chaos'.[82] Because there was no higher court that could adjudicate the affairs between Egyptian protégés and non-protégés before the Mixed Courts of 1875, the enforcement uncertainty that characterized contractual relationships between Europeans and Egyptians also appeared between protégés and non-protégés.[83] The legal uncertainty hypothesis thus predicts that local non-Muslims were drawn into consular protection not only directly by their European trading partners but also indirectly by their Egyptian protégé partners. So, our econometric evidence measures the aggregate effect of European presence in the occupational and spatial networks of local non-Muslims, whether direct or indirect.

Third, we can rule out European networks mitigating information asymmetries about European legal protection that are caused by differences in spatial distance across European consulates. All consulates were located around a major, central square in each city, implying that they were equally accessible to all local non-Muslims. Until the late nineteenth century, European consuls mostly resided in Alexandria as the seat of the 'general' consulates, whereas Cairo had 'regular' consulates where vice-consuls or agents resided. The map of Alexandria in 1855 and the 1872–73 *Guide-Annuaire d'Egypte* show that most Alexandria consulates were located within 500 m of Place des Consuls in 1855 and 1872. Similarly, the 1872–73 *Guide-Annuaire d'Egypte* shows that most Cairo consulates were located within 500 m of the Azbakiya Square (Park).[84] The spatial proximity of consuls suggests that potential buyers did not necessarily opt for the closest consulate and could easily shop around.[85] Indeed, many protégés opted in and out of different consulates, and often tried to obtain multiple protections from different consulates at the same time. We also conducted a robustness check where we control for the distance to the major square in each city where European consulates were located. We do not include this variable in the main specification, because consulates were endogenously located, and are presumably highly correlated with the spatial distribution of Europeans. The results are shown in appendix table A2 and are similar to the main findings. Finally, recall that some Europeans sought the protection of a second – possibly, less efficient – European jurisdiction despite having full information about their first jurisdiction.

[82] Hoyle, *Mixed Courts*, p. 7; Demetriades, 'Administration, II', p. 255; M'Coan, *Consular jurisdiction*, pp. 22–8.

[83] Artunç, 'Price of legal institutions'.

[84] There are a few exceptions in 1872. The Greek and (new) Italian consulates in Alexandria were 572 and 795 m, respectively, from Place des Consuls, and the Russian consulate in Cairo was 1.5 km from the Azbakiya Square (Park).

[85] This is consistent with the previous evidence in Artunç, 'Price of legal institutions', who provide examples of individuals applying to different consuls in the eighteenth century.

Another cluster of alternative explanations stresses protégés gaining other sorts of benefits from legal protection. It could be, for example, that becoming a protégé was simply a threshold that non-Muslims needed to fulfil to enter a country's trade network. Although the international trade argument does not explain why we observe correlation between European presence in occupational and spatial networks and the demand for legal protection, it might explain the protégé patterns at the aggregate level. Egypt's major European trade partners were Great Britain (24 per cent of total imports and exports in 1843, and 64 per cent in 1868), Austria (21 per cent and eight per cent), France (10 per cent and 12 per cent), Italy (nine per cent and four per cent), and Greece (three per cent and one per cent).[86] If international trade explains the demand for legal protection among local non-Muslims in 1848 and 1868, we expect that the proportion of protégés would be the highest for Egypt's largest trade partners, which is not exactly what we observe in table 2. In 1848, the top countries that attracted protégés were Italy (31 per cent), Austria (20 per cent), France (15 per cent), Greece (14 per cent), and Britain (eight per cent). In 1868, these became France (19 per cent), Italy (18 per cent), Spain (17 per cent), Greece (16 per cent), Britain (nine per cent), and Austria (eight per cent). Therefore, the trade shares do not predict the protégé population shares, perhaps except for France and Austria. Furthermore, Britain was by far Egypt's largest trade partner and witnessed a substantial rise in its trade share between 1848 and 1868, yet its protégé population remained relatively modest in both years. By contrast, while Italy, Greece, and Spain had modest trade shares, their protégé populations were among the largest.

In a similar vein, local non-Muslims might have also become protégés to get an advantage when they had to engage with local courts. Protégés were represented by their consuls in state-organized courts. This plausibly allowed protégés to get more favourable judgments in these proceedings. This mechanism operates differently from the opt-out incentive that the legal quality hypothesis highlights. While we cannot measure how effective consular representation was at Egyptian jurisdictions, we cannot completely rule out this possibility. But this mechanism cannot explain why legal protection depended on European occupational and spatial networks, and why the demand for protections remained modest.

A third cluster of explanations stresses protégés opting out of Egyptian legal status to shield themselves from local authorities. For instance, the extraterritorial status might have conferred protection from state expropriation of their immovable assets. Our data suggest that the demand for legal protection did not come from wealthy rich non-Muslims but from the non-Muslim urban middle class who had less immovable wealth.

Similarly, non-Muslims might have become protégés because they were persecuted. Western powers may have been sympathetic with local non-Muslims, granting them legal protection, or even adopting an outright religion-based naturalization policy. Persecutions of local non-Muslims, the argument goes, may have been initiated by the Egyptian state itself (i.e., Muhammad Ali's dynasty), or by (Muslim) mob violence, sponsored, or at least tolerated, by the state. One can further hypothesize that persecution targeted Jews and non-Coptic Christians more than Copts, thus explaining the inter-religious differences in the demand for legal protection. Alternatively, persecution might have targeted white-collar workers or those in trade and finance occupations.

However, the historical evidence suggests that state persecution was not widespread under Muhammad Ali's dynasty, and so it cannot explain the demand for legal protection among local non-Muslims. Ottoman Egyptian viceroys during this period were generally portrayed by contemporary European observers and consuls as enlightened rulers who pursued relatively

[86] This does not include major non-European trade partners: Ottoman core (23 per cent in 1843 and six per cent in 1868), Syria (seven per cent and three per cent), and Barbary states (three per cent and two per cent).

egalitarian policies towards non-Muslim minorities.[87] Sa'id Pasha (1854–63) abolished the poll tax on non-Muslims that had been enforced since the Arab conquest of Egypt in 641 CE. He also allowed non-Muslims to serve in the army, first as conscripted soldiers and later as officers in 1856, for the first time since the Arab conquest.[88] While non-Muslim children were not allowed to enrol in public modern schools, Ismail (1863–79) removed this ban in 1873. Prior to 1873, non-Muslim children were more likely than Muslims to enrol in any school, and as early as 1868, in modern private (European and local) schools.

But even if state persecution was not widespread, mob persecution remains a possibility. The most well-known episode of mob violence against non-Muslims targeted the Copts in the aftermath of the French occupation of Egypt in 1798–1801. However, as far as the historical evidence goes, this episode did not disproportionately target Jews or non-Coptic Christians. If anything, it was more directed against Copts. Furthermore, mob violence against non-Muslims subsided during our period of study.

VII | CONCLUSION

Capitulations were originally granted to promote trade and attract European investment to the Ottoman Empire. These concessions granted extraterritorial privileges to European residents, allowing them to contract and be sued under their consular courts. But the proliferation of consular courts, with overlapping jurisdictions, caused uncertainty about which law would apply and in which court a case would be heard. Legal pluralism posed significant problems by raising transaction costs in the contractual environment and was only effectively resolved by a comprehensive reform: the creation of the Mixed Courts in 1875. Until then, for (non-protégé) local non-Muslims, the next best option was to place themselves under European jurisdictions. This allowed them to more credibly contract with that polity's nationals and protégés. Occupational and spatial networks were critical determinants of how legal protection expanded. As Europeans became more prominent in an occupation or neighbourhood, more local non-Muslims sought to become protégés. We also provided suggestive evidence that protégés sorted into the jurisdiction that had stronger presence in their spatial networks.

Our findings do not support the view that protégés switched jurisdictions because European laws were more efficient than local laws. During our period of study, significant differences between laws had emerged. But these differences did not inform the protégés' choice of law at the time. If anything, protégés ended up more prominently in jurisdictions in which legal rules were ostensibly less well suited for business. The demand for more innovative or advanced jurisdictions decreased over time. Our econometric evidence clarifies this puzzling sorting by stressing the problems associated with legal uncertainty. There might well be a hierarchy of legal systems in terms of economic efficiency, and certain European laws might be more conducive to effective business organization than the local laws at the time. And there could well be alternative ways of securing the advantages of European business practices other than becoming protégés. Unless these innovations required extensive institutional set-up, they could migrate and be adopted by locals. But the revealed preferences of protégés show that raising credibility of the contractual environment remained the pressing concern.

[87] Tagher, *Christians*, pp. 195–223.

[88] Prior to this, non-Muslims were only allowed to serve in the army in service occupations that did not involve carrying arms (e.g., carpenters, sailors). We observe two Coptic military officers in the 1868 census sample.

Tracing the origins of Egypt's non-Muslim economic elite and their business practices in the nineteenth and early twentieth centuries is a promising area of future research. As we outlined in the introduction, this business elite consisted of immigrants and natives, protégés, and non-protégés. They participated in many of Egypt's early corporations as founders, lawyers, or auditors. More generally, we should re-evaluate the conventional view of the Middle East's non-Muslim minorities in the economic history literature as mostly merchants and financiers, who formed an urban haute bourgeoisie and were overwhelmingly protégés of European consulates. Egypt's non-Muslims were in fact a very heterogeneous population, mostly rural Copts, over-represented among mid-low bureaucrats and artisans, with a minority of Jewish and non-Coptic Christian financiers and traders, and a small minority of protégés.

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