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## Intergenerational mobility in Ottoman Istanbul: Evidence from court records

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### Intergenerational Mobility in Ottoman Istanbul: Evidence from Court Records

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***Intergenerational Mobility in Ottoman Istanbul:***

***Evidence from Court Records<sup>†</sup>***

By

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**ABSTRACT:** We use data from the Istanbul court registers spanning from the 16<sup>th</sup>-19<sup>th</sup> centuries to establish, for the first time, long-term trends in intergenerational mobility in a major premodern city. The dataset contains information on over 270,000 individuals who appeared in court in various roles, including litigants, witnesses, and representatives. Crucially, it records the honorific titles (if any) of individuals and their fathers, which we use as measures for socioeconomic status. Our goal is to trace long-term changes in Istanbul's social structure, analyze the relationship between fathers' and sons' titles to assess shifts in intergenerational mobility, and determine whether these shifts reflect primarily horizontal movements within social strata or also include greater mobility across class boundaries. We find that the share of titled individuals followed a non-monotonic but ultimately upward trajectory between the sixteenth and nineteenth centuries. During the same period, the intergenerational transmission of titles declined, indicating increased mobility. However, this mobility was largely confined within the elite strata, suggesting a consolidation of power and status among the upper classes rather than a broad opening of the social hierarchy.

**JEL Codes:** J62, N3

**Keywords:** intergenerational mobility, Ottoman Empire, Istanbul, socio-economic status, honorific title, religious/judicial and military/administrative elite

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## 1. Introduction

An important question of the economic history of all societies is whether intergenerational mobility increased over time. Although several studies have recently found evidence of rising mobility in some European societies and the United States since the mid-19th century, the literature includes very limited coverage of societies outside of the western world (Maas and van Leeuwen, 2023). The temporal coverage is also restricted because large datasets, such as census schedules, which are typically required for the analysis of intertemporal mobility, are available for only the period since the mid-19<sup>th</sup> century. The implicit assumption is that pre-industrial societies worldwide were as immobile, or more, than European societies in the 19<sup>th</sup> century. Due to data limitations, however, empirical studies on social mobility before 1800 are scarce, limited in scope, and focused on Europe.<sup>1</sup> Outside of Europe, bureaucratic empires (Ming, Persian, Ottoman) used systems of examinations theoretically open to the children of all classes. These empires were then meritocratic and would exhibit high social mobility. On the other hand, autocratic regimes can only survive by co-opting the elites and rewarding them, and their children (North et al, 2009). Whether social mobility is high or not, is then theoretically ambiguous. However, there is no systematic empirical work in this area.

We examine long-term trends in intergenerational mobility in Istanbul during the period between the early 16<sup>th</sup> and early 19<sup>th</sup> centuries. Our empirical analysis uses unique data from the court registers of the Ottoman Empire.<sup>2</sup> The dataset includes information for over 54,000 cases, each potentially containing the names and personal characteristics of several individuals who

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<sup>1</sup> Clark (2015) uses surnames to trace elite continuity in several countries. Espín-Sánchez et al. (2022), using a direct measure of status, find more modest persistence for 18<sup>th</sup> century Spain. Van Leeuwen et al (2016) show that mobility has increased in France since 1720. Keller and Shiue (2023) study social mobility in pre-industrial China.

<sup>2</sup> Economic historians have used Ottoman court registers for a variety of purposes, such as to learn about the application of laws and legal procedures, to gather information regarding the socio-economic status of individuals, to estimate the inequality of wealth, and to examine patterns in the resolution of disputes. For reviews of this literature, see Agmon (2004), Coşgel and Ergene (2016: Chapter 1), Faroqhi (2004), Ghazzal (1996), and Ze'evi (1998).

came to court in various capacities, such as litigants, witnesses, or representatives. Importantly, the dataset includes the honorific titles (if any) of individuals and their fathers, which we use as indicators of socio-economic status. Our first objective is to use the data to examine long-term trends in socioeconomic status in Istanbul. For our second objective, we study the relationship between the honorific titles of fathers and sons to determine how intergenerational mobility changed over time. Finally, we analyze differences in mobility within and between groups to reveal whether changes over time involved movements across occupational categories within each group or reduced barriers between social classes.

A unique advantage of Ottoman court registers for the study of intergenerational mobility is that father-son pairs are already linked in the records. In the Ottoman Empire, as well as in other pre-modern Islamic societies, individuals did not use family names for identification. Instead, as part of the official record-keeping practices, individuals were identified by their own and their fathers' first names, so that two individuals with the same first name would be distinguished by the names and other personal characteristics (e.g., honorific title) of their fathers. Thus, we are not concerned with biases arising from linking. We use honorific titles to construct indicators of absolute and relative mobility—two distinct but complementary ways of understanding intergenerational socioeconomic changes—over the very long-run. Absolute (upward) mobility measures whether children achieve higher living standards than their parents in real terms, reflecting both individual opportunity and broader economic growth. Relative mobility, by contrast, assesses whether children's position within the income distribution is independent of their parents' position, capturing equality of opportunity regardless of economic expansion.<sup>3</sup> Specifically, to measure absolute mobility (persistence), we calculate the share of

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<sup>3</sup> Chetty et al. (2017) showed that absolute mobility in the United States declined dramatically from 90% for children born in 1940 to 50% for those born in the 1980s, despite continued economic growth. This decline

children who held a different (the same) title as their father. For relative mobility, we track changes over time using the Altham statistic, a standard measure of intergenerational mobility (Altham, 1970; Long and Ferrie, 2013).

The results show that the fraction of high-status (i.e., titled) individuals was low at the beginning of the 16<sup>th</sup> century, but rose significantly in a cyclical pattern during the following three centuries. Regarding the transmission of honorific titles from fathers to sons, our measures of absolute and relative mobility indicate a rise in intergenerational mobility between the 16<sup>th</sup>-19<sup>th</sup> centuries. Following a sharp rise during the sixteenth and seventeenth centuries, intergenerational mobility followed a non-monotonic but broadly upward pattern between the 16<sup>th</sup>-19<sup>th</sup> centuries. However, the rise in mobility was more concentrated within the elite classes (i.e., between the elite ranks of the religious/judicial and military/administrative occupations) than between the elite and non-elite groups. This meant that the elite ranks were consolidating over time.

We run a battery of robustness tests to ensure that our results are consistent across different specifications of the sample and variables. Despite being extremely rich sources of information, court registers can be vulnerable to selection bias. The registrations, litigations, and other types of entries recorded there are not random samples of the socio-economic interactions encountered in the general population (Coşgel and Ergene, 2014). Consequently, the individuals who wind up in our dataset may not be representative of the population. We address this concern by comparing our indicator variables across different subsamples of court users to determine whether there are systematic variations that could bias our results. Specifically, we calculate our indicators separately for different court locations, case-types, and time-periods. These tests show

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represents what Fields (2008) called the “growth without mobility” phenomenon. Manduca et al. (2024) shows significant cross-country variation in both types of mobility, with Nordic countries maintaining higher relative mobility than most developing economies.

that our results are robust across different specifications of analysis, raising confidence in the strength of our conclusions.

An important implication of our results is that intergenerational mobility was far from being always low and stable in the premodern period as typically presumed in the literature. During the period leading up to industrialization, there were dynamic patterns in the evolution of mobility in the Ottoman Empire. Starting from an early period of low mobility in the 16<sup>th</sup> century—which coincided with extreme elitism where only a small fraction of the population had a title—the Empire experienced a significant rise in mobility by the early 19<sup>th</sup> century. Therefore, an important question for the broader literature is to determine whether the Ottoman experience was unique or shared globally. A major historical task may be not just determining how mobility rose after industrialization, but also analyzing how it changed in the period leading up to it.<sup>4</sup>

Our analysis contributes significantly to the literature on intergenerational mobility. We provide the first empirical results regarding the long-term evolution of mobility outside of Western Europe and North America before the twentieth century. Although studies focused on the western world continue to dominate the literature, there has been recent progress in the analysis of data from Asia, Africa, and South America (Maas and van Leeuwen, 2023). Despite this progress, however, studies of these regions still typically use either short-term data, focus on a small location, or focus on a period after 1800. We use a large dataset to shed light on mobility over the very-long run in Istanbul, the capital of the Ottoman Empire and one of the largest cosmopolitan cities in the world.

Our results are also directly related to the literature on social mobility in the Ottoman Empire. As Ergene and Kaygun (2011: 30) have recently noted, previous studies of the

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<sup>4</sup> Milanovic (2016), using data for Castille, found large oscillations in inequality over the same period.

transmission of occupations and status in the Ottoman Empire were “frequently impressionistic and generally limited in scope.”<sup>5</sup> In their pioneering quantitative analysis based on probate estate records (*tereke*), Ergene and Kaygun (2011, 2014) found that intergenerational mobility declined in the provincial town of Kastamonu during the 18<sup>th</sup> century. By taking the next step, our work contributes to the literature on social mobility in the Ottoman Empire in several ways. First, we expand the empirical analysis of mobility from a provincial town to the city of Istanbul, the imperial center. This allows us to focus on a city of greater strategic importance and expand the number of observations substantially, from about 1,600 to over 270,000. Second, our results show that intergenerational mobility rose slightly in Istanbul during the 18<sup>th</sup> century, in contrast to the findings of Ergene and Kaygun (2014) for Kastamonu, underscoring the importance of studying the distinct geographic regions of the empire separately. Finally, we extend the temporal coverage substantially by showing the long-term evolution of mobility in Istanbul that spans over three centuries. Among other things, our results show that mobility did not fall steadily over time, as Ottoman historians have presumed, but it evolved in a cyclical fashion and ultimately rose during this period. Overall, our results raise important questions regarding the reasons behind rising mobility in the Ottoman Empire and its impact on economic growth, suggesting that nepotism and socioeconomic rigidity might not have played significant roles in the eventual demise of the Empire. They also raise questions for comparative history, such as how the power and impact of religious authorities in the Ottoman Empire differed from previous Islamic societies (Chaney, 2020, 2023).

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<sup>5</sup> For examples of previous approaches to Ottoman social mobility in the literature, see Faroqhi (1973), Hourani (1991: Chapter 15), Itzkowitz (1972), Kunt (1983: Chapter 3), Marcus (1989: Chapter 2), Tezcan (2010), Zilfi (1988: Chapter 3).



## 2. Pre-Modern Mobility

Regional patterns in historical mobility reveal important variations across societies. Researchers have found interesting differences in social and occupational mobility within Europe.<sup>6</sup> East Asian mobility patterns similarly reflected different institutional arrangements.<sup>7</sup> Distinctive mobility patterns recently found in pre-industrial Americas have also improved our understanding and challenged some of the conventional presumptions.

Historical mobility research has yielded important theoretical insights.<sup>8</sup> This body of historical mobility research challenges simplistic narratives about pre-industrial rigidity and modern fluidity, revealing instead complex patterns of persistence and change influenced by institutional, economic, and cultural factors. The “industrialization thesis” proposed by Kerr et al. (1960)—that industrialization universally increases social mobility—has been significantly qualified by historical evidence showing complex, non-linear relationships.

Researchers have used various types of archival sources to study intergenerational mobility in history. Guild records have proven valuable for understanding occupational mobility in urban settings. De Munck et al. (2006) analyzed Antwerp and Amsterdam guild membership rolls. As societies transitioned toward industrialization, additional sources became available. Knigge et al. (2014) studied Dutch marriage records. Espín-Sánchez et al (2022) use marriage records for Murcia (Spain) from 1700-1800. In East Asia, Paik (2014) analyzed records from

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<sup>6</sup> Long (2013) found surprisingly high rates of social mobility in Victorian Britain, challenging assumptions about rigid class structures. Mitch (1993) found that literacy significantly enhanced upward mobility prospects in Victorian Britain.

<sup>7</sup> Hayami (1983) used local population registers (*koseki*) from Tokugawa Japan to examine mobility between peasant status groups. Chen et al. (2020) examined social mobility during the Qing dynasty through genealogical records.

<sup>8</sup> Ogilvie and Cerman (1996) showed how early manufacturing created distinctive mobility patterns in pre-industrial European communities. Becker et al. (2010) study mobility in 19<sup>th</sup> century Prussia. Rosés and Wolf (2018) documented how varying inheritance laws across European regions created different patterns of status transmission before industrialization.

Korea's Sungkyunkwan University during the Joseon Dynasty (1392-1910), showing how elite status persisted through examination performance.

Social tables have provided valuable insights into historical mobility patterns. Lindert and Williamson (1982) reconstructed Gregory King's 1688 social table and subsequent tables, creating a framework for analyzing mobility across the 17<sup>th</sup> and 18<sup>th</sup> centuries in England. For colonial America, Lindert and Williamson (2017) developed social tables for American colonies since 1700, allowing for comparisons of mobility between colonial regions and across the revolutionary period. Morrisson and Snyder (2000) reconstructed social tables for 18<sup>th</sup> century France, providing insights into mobility patterns before the French Revolution. Campbell and Lee (2011) used household registers from northeastern China to document mobility patterns under the Qing Dynasty, revealing low but non-zero rates of status transmission in an ostensibly rigid society.

We advance this scholarship by introducing a long-term perspective, novel data sources, and multiple methodologies. Our Ottoman Istanbul findings provide a valuable Middle Eastern comparison case that further complicates traditional narratives. As detailed below, while we observe increasing mobility over time (16<sup>th</sup>-19<sup>th</sup> centuries), the predominance of circulation within the elite rather than broader class crossing suggests that Islamic imperial societies may have followed distinctive mobility trajectories compared to European and East Asian cases. These results align with broader historical scholarship on Ottoman society that has emphasized the durability of status distinctions alongside adaptability within status categories (Kafadar, 1995; Barkey, 2008).

### 3. Status and Mobility in the Ottoman Empire

Historians of the Ottoman Empire have traditionally attributed the status of individuals to where they belonged in the distinction between the subjects (*reaya*) and the ruling class (*askeri*). At a basic level, the distinction refers to whether an individual paid taxes. The subjects produced and paid taxes, and the rulers were exempt from taxation because of their position in the government. The ruling class is comprised of officials directly serving the sultan, including those with military, administrative, judicial, and religious responsibilities. In principle, only through a special decree by the sultan could an individual be released from the taxpaying subject status and be admitted into the ranks of the ruling class.

#### 3.1 Mobility between Subjects and the Ruling Class

Beyond the ideal dichotomy between the subjects and rulers, status and divisions in Ottoman society were highly complicated. Unlike contemporary European states, the Ottoman Empire had no blood-nobility with hereditary transmission of status from one generation to the next, other than in the “house of Osman” itself. Being a current member of the ruling class, therefore, did not generate an inherent ability to bequeath the same privilege across generations.

Consider intergenerational mobility in the case of provincial administration. The Ottoman system allowed the sons of fief-holding cavalymen (*sipahi*) to enter the ranks at lower levels of payment, but the privilege was not always used or guaranteed for lifetime (Kunt, 1983: Chapter 3). Any cavalryman could lose status for serious offenses, such as failure to go on a campaign for a period of seven years (İnalçık, 1973: 115). In the same vein, the system allowed children of taxpaying subjects to enter the ranks of the ruling class (Darling, 2017). To complicate matters, tax exemptions in the provinces could also be granted for providing a special public service, such

as the maintenance of a bridge. In fact, the rules governing the transition of taxpaying subjects to tax-exempt, or ruling class, status increasingly became a source of tension and debate at the highest levels of Ottoman administration during the 16<sup>th</sup> century (Kunt, 1983: Chapter 3). The discontent of government officials can also be seen in the critical works of contemporary writers in the (*nasihat*) literature (Inan, 2009).

In the case of central administration, the Ottoman system of recruitment in principle did not allow any direct privilege to the children of government officials, even for initial admission at lower ranks and payments. The children of religious dignitaries (*ulema*), for example, “had customarily shared the profession with the talented offspring of slaves and freemen of all sort (Zilfi, 1988: 47). That is because admission into the religious and judicial establishment (*ilmiye*) required extensive education and examinations. Theoretically, any talented individual could receive the required education in schools supported by pious foundations and then compete against the sons of government officials in qualification examinations.

In general, well-known Ottoman institutions of education and recruitment could challenge the rigidity of the boundary between the subjects and the ruling class. Talented Muslim youth could attend religious colleges (*medrese*) for the opportunity to rise in the ranks of government hierarchies. Of course, children of elite families would be more likely to attend the schools. Moreover, through a uniquely Ottoman system of recruitment, known as collecting (*devşirme*), talented children were forcibly collected from among the population of newly conquered lands, with the objective of raising them as soldiers and bureaucrats. Both systems allowed talented children, regardless of family status, to join the ranks of the ruling class. By the same token, however, their own children had to compete against other talented youth for a spot in the same paths to follow their parents.

Despite the theoretical possibility of mobility between subjects and the ruling class, we have limited information regarding the extent to which this was realized during the long history of the Ottoman Empire as a whole. Previous studies of nepotism and intergenerational mobility in the Empire have identified instances of rigidity and turning points observed in certain districts, organizations, and time periods. Based on an analysis of military-administrative appointments, Kunt (1983: 62) observed that “being related to other [officials] became in the course of the 16th century, much less important for promotion in the provincial administration.” Later in the same century, however, the trend was reversed toward the rising importance of family relations. Similarly studying aristocracy in the religious hierarchy in the 17<sup>th</sup> and 18<sup>th</sup> centuries, Zilfi (1988: 47) observed that “children were a constant feature, but in the 18<sup>th</sup> century, as never before, their numbers and prerogatives made the official religious calling virtually a closed corporation.” This is consistent with Marcus’s (1989: 64-72) analysis of mobility in Aleppo during the same century and Itzkowitz’s (1972: 104) general remark for the whole empire that by the 18<sup>th</sup> century, “[t]he career of the father tended to become the family career.” The upward trend in the importance of family relations in securing appointments seems to have continued during the 18<sup>th</sup> century, according to findings of Ergene and Kaygun (2014: 669). Based on a study of the probate records of Kastamonu, a provincial town in Anatolia, they argue, “intergenerational transitions linking elite title-holders and the lower echelons of the society became weaker” by the late 18<sup>th</sup> century,

### **3.2 Mobility within Groups and Honorific Titles as Indicators of Status**

The categories that separated the status of individuals extended well beyond the basic distinction between the subjects and the rulers. Within each group, there were numerous

positional categories that differed along horizontal and vertical dimensions. Horizontally, tax paying subjects could be engaged in rural, urban, agricultural, or commercial occupations. Government officials could similarly be performing religious, judicial, military, or administrative functions. Likewise, individuals differed vertically within each category, such as between those who had high level supervisory positions and others at lower ranks of the hierarchy. In the religious establishment, for example, careers could range from beginning student through the Grand jurisconsults (*Şeyhülislam*) of the state.

For a systematic analysis of intergenerational mobility in the Ottoman Empire, we will group these divisions into five simple categories of occupational status. For this, we take advantage of the honorific titles of individuals, which researchers have previously used as indicators of socio-economic status (Coşgel and Ergene, 2016: 49-61; Ergene and Kaygun, 2011, 2014). Following this approach, we are able to divide individuals who belonged to the category of tax-exempt government officials (*askeri*) into four groups based on specialization and hierarchy. Regarding specialization, we differentiate between those who belonged to the religious-judicial (*ilmiye*) and the military-administrative (*seyfiye*) establishments. We similarly distinguish hierarchically within each establishment between individuals who had an elite position and others. For example, men designated by the title of *efendi* in the religious-judicial and *ağa* in the military-administrative establishments were of elite status. Overall, these divisions allow us to define five categories of occupational status, consisting of individuals with ordinary (no title), elite and non-elite religious-judicial, and elite and non-elite military-administrative positions.

## 4. Data

Our analysis is based on information from the registers (*sicil*) of the Ottoman courts of law. Court registers contain extremely useful data regarding the economic lives of individuals, financial activities of public and private institutions, and administrative affairs of the state. Regardless of gender, religion, and socio-economic status, all Ottoman subjects had access to courts as needed. As they used courts for various purposes, they left behind records of their economic activities, financial transactions, contractual agreements, and legal disputes with each other. The registers similarly recorded the activities, transactions, agreements, and disputes of various corporate and collective economic units, such as families, neighborhoods, guilds, pious foundations, and agents of the state. Over thirty thousand registers of Ottoman courts are estimated to have survived loss and destruction, some since the 15<sup>th</sup> century, available to researchers in archives located in numerous successor states of the Empire in the Middle East and Eastern Europe. About twenty thousand of these registers are available in Turkish archives, half of which belong to courts of Istanbul, the capital city.<sup>9</sup>

### 4.1 Istanbul Courts

Our records contain a wide range of legal and administrative documents kept by twenty-two different courts that served in Istanbul. The courts include those administered by deputy (*naib*) judges and the chief judges (*kazasker*) of Rumelia and Anatolia and those specialized in the finances and management of pious foundations and in the inventory and distribution of the inheritance of government officials (*kismet-i askeriye*).

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<sup>9</sup> For different accounts of Ottoman court registers, see Akgündüz (2009), Aydin and Tak (2008), Coşgel and Ergene (2016: Chapter 3), Faroqhi (2004), Gedikli (2005), Mandaville (1966), Meshal (2006), and Uğur (2010).

**Figure 1**  
**The Locations of Istanbul Neighborhoods and Court Districts in 1850**



Source: Center for Islamic Studies, History of Istanbul, [Maps of Istanbul in Western Sources](#).

Figure 1 shows the locations of Istanbul neighborhoods corresponding to the court districts of Istanbul (*Suriçi*) and the “Three Towns” (*bilad-ı selase*) of Eyüp, Üsküdar and Galata in the year 1850. The Istanbul court district lies at the center of the map, bordered by Galata to the north, Bosphorus and Üsküdar to the east, and Eyüp in the far northwestern corner. Appendix A shows the distribution of our records across the four court districts, plus those specialized in administrative legal matters, over time.

Istanbul was the capital city of the Ottoman Empire, with an estimated population of about 500,000 at the beginning of the 19<sup>th</sup> century. Corresponding to the oldest neighborhoods of the city and located to the south of the Golden Horn, the walled (*Suriçi*) district had previously served as the capital region of the Roman and Byzantine Empires. Under the Ottoman rule, this section continued as the legal and administrative center of the Empire, housing over half of the courts in the four districts. The Eyüp neighborhood was located just outside of the walls to the



west, populated mainly by Muslims. Located on the northern side of the Golden Horn and the European side of the Bosphorus, the Galata neighborhood contained a major port and gradually grew in economic importance as a commercial center with the expansion of international trade over time. A high fraction of its population consisted of foreigners and non-Muslim Ottomans, who were likely engaged in trade and finance.<sup>10</sup>

The Üsküdar neighborhood was located on the Asian side of the Bosphorus in Istanbul, densely populated with Muslims. Since the roads leading to Anatolia began there, Üsküdar was an important center for commercial activities, though less so than Galata. The expansion of international trade in the 19<sup>th</sup> century affected the neighborhood's economy as well, causing a gradual shift from agriculture to trade. Population records show that a large proportion of the population in Üsküdar was engaged in trade and shipping, or worked in the textile industry, while a very small number was engaged in agriculture and stockbreeding during the 19<sup>th</sup> century (Bostan, 2012: 367).

## 4.2 Cases and Individuals in Court Registers

Ottoman court registers consist of various types of documents recorded for judicial, notarial, supervisory, and administrative reasons. Since adjudication was a primary function of courts of law, a significant portion of registers were typically devoted to recording the proceedings of legal disputes brought to court for resolution. In addition to summary accounts of litigations that were settled or tried before a judge, the registers included probate estate inventories (*tereke*) that were produced when the heirs of the deceased were not known or were in a conflict with each other. Special registers (*kısmet-i askeriye*) were kept for the estate inventories of military-

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<sup>10</sup> According to Eldem (1992: 59), the results of a census conducted towards the end of the 19<sup>th</sup> century show that 21.8% of the neighborhood's population were Muslims, 32% non-Muslims, and 47% foreigners.

administrative or religious-judicial government officials. The registers also served as a depository for the certification and recording of various types of contracts and agreements, such as suretyship (*kefalet*), guardianship (*vesayet*), and spousal support after divorce (*nafaka*), for future reference. Reflecting the supervisory role of the judge (*kadi*), registers include reports of the financial affairs of pious foundations (*vakıf*), sometimes collated in a separate volume, such as those concerning the lease of their shops, the cost of repairing their buildings, and the revenue of their enterprises. Finally, the registers contain orders and correspondence sent from the imperial authorities to the judge or other government officials of the district (*kaza*). This category could include various types of decrees (*firman*), including those concerning local appointments, troop deployment, official fixed prices (*narh*), and complaints by subjects.

Thanks to published transliterations in the Latin alphabet, Ottoman court registers have recently become more easily available to today's scholars and the public for research. Although copies of original entries have been available in the archives for some time, it had been difficult to extract the information from the registers because of various scribal and linguistic obstacles. To overcome these problems, recent transliteration projects have relied on specialists fluent in Turkish and/or Arabic and with appropriate training and experience in deciphering the scripts used in court registers. Two outstanding examples of such projects are the samples of court records published by Kuran (2010) and the series of registers transcribed by the Center for Islamic Studies through the "Istanbul Sharia Court Registers" (ISCR) project since 2012.

We use data from the (ISCR) project, which consists of 100 volumes that cover the period between 1513 and 1884. This collection provides a broad coverage of Istanbul court registers across districts and over time. For our empirical analysis, we use all types of records constituting the courts' ordinary local business, i.e., excluding imperial orders, to gather information about

the parties involved in each entry. Parties recorded in the registers include various types of corporate bodies, such as a guild or pious foundation, in addition to individuals. Given our interest in the names and status of individuals, recording concerning corporate bodies will obviously enter our analysis only if they include information at the individual level, e.g., names and titles of their leaders or representatives.

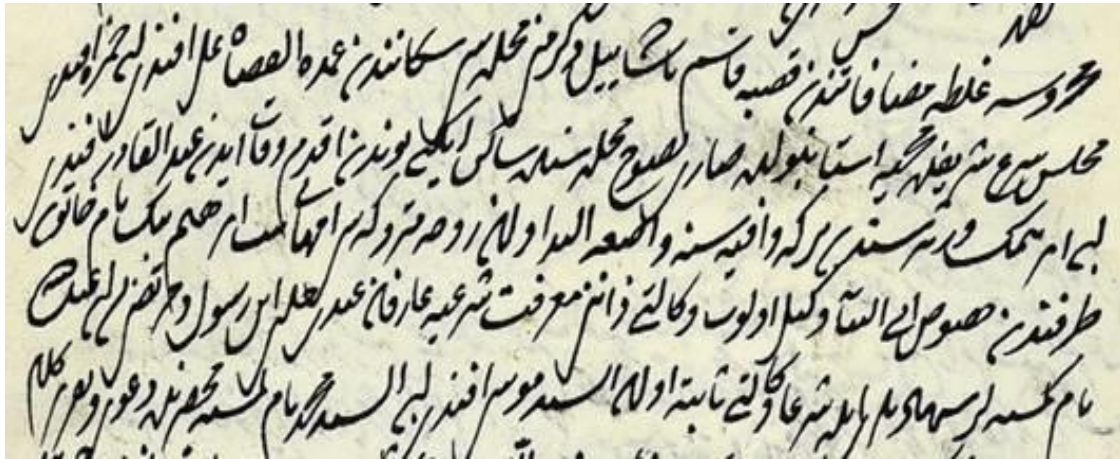
The 100 registers of the ISCR project contain more than 354,000 individuals who came to court. For each individual, the registers provide their name, the name of their father, and various types of additional details entered for identification. We use this information to determine socio-economic status (honorary titles) and personal characteristics (gender, religion). Regarding gender, although the registers did not explicitly record this information for an individual, we are able to make this determination indirectly from their names and the use of “son of” (*bin*) versus “daughter of” (*bint*) in reference to their fathers. Likewise, the records did not always identify an individual’s religion, but we can use their name and the name of their father to determine if someone was Muslim or non-Muslim. Appendix A shows the gender and religion distribution of all individuals in the original dataset who participated in Istanbul courts during this period.

Figure 2 shows the introductory section of a court record as an example of the way registers provide information regarding the names and socio-economic status of individuals. The record mentions a total of six individuals, named Ali, Abdulkadir, Ümmühani, Musa, Abdi, and Murtaza. Regarding status, Ali, Abdulkadir, and Musa shared the honorific title of Efendi, a designation of their elite religious/judicial position. Abdi’s title of Çelebi similarly denotes a religious/judicial position, but in the non-elite category. The record also includes the titles of the fathers of these individuals, which we can use to examine intergeneration transmission of status.

As an indicator of transmission, Ali's father Hamza was also Efendi. Interestingly, Ümmühani's father İbrahim was a Bey, an indication of his elite military/administrative status, though we cannot conclude her lack of title meant that he was unable to transmit social status to his daughter, because women typically did not receive similar honorific titles.<sup>11</sup>

**Figure 2**

**An Example of the Names and Honorific Titles of Individuals in Ottoman Court Records**

|  |
|--|
| <p style="text-align: center;"><b>Original source</b></p>   |
| <p style="text-align: center;"><b>Latin alphabet</b></p> <p>Mahrûse-i Galata muzâfâtından Kasaba-i Kasımpaşa'da Yel değirmeni mahallesi sükkânından umdetü'l-kuzât <b>Ali Efendi b. Hamza Efendi</b> meclis-i şer'î şerîfdemahmiye-i İstanbul'da Sarı Nasuh mahallesinde sâkin iken bundan akdem vefât eden <b>Abdulkadir Efendi b. İbrahim</b>'in veresesinden tereke-i vâfiyesine vâzî'atü'l-yed olan zevce-i metrûkesi <b>Ümmühani bt. İbrahim Bey</b> nâm hatun tarafından husûs-ı âti'l-beyâna vekîl olup vekâleti zâtını ma'rifet-i şer'îyye ile ârifân <b>Abdi Çelebi b. Rasûl</b> ve <b>Murtaza b. Abdullah</b> nâm kimesneler şehâdetleri ile şer'an vekâleti sâbite olan <b>es-Seyyid Musa Efendi b. es-Seyyid Mehmed</b> nâm kimesne mahzarında da'vâ ve takrîr-i kelâm edip...</p>   |
| <p style="text-align: center;"><b>Translation</b></p> <p>From among the neighborhoods of the Mahrusa-i Galata, in the town of Kasımpaşa, in the district of Yel Değirmeni, the chief of judges, <b>Ali Efendi b. (son of) Hamza Efendi</b>, in the honorable court of Istanbul, while residing in the Sarı Nasuh neighborhood, regarding the estate of the late <b>Abdulkadir Efendi b. (son of) İbrahim</b>, who passed away earlier—his widow, <b>Ümmühani bt. (daughter of) İbrahim Bey</b>, one of his heirs who took possession of the estate left behind, appointed a representative concerning the matter to be explained below, and, in the presence of a man named <b>es-Seyyid Musa Efendi b. (son of) es-Seyyid Mehmed</b>—whose power of attorney was legally validated through the testimony of two individuals knowledgeable in religious law, namely <b>Abdi Çelebi b. (son of) Rasûl</b>, and <b>Murtaza b. (son of) Abdullah</b>—brought forth his case and stated...</p> |

<sup>11</sup> For previous examples of using honorific titles for analysis of status, see Coşgel and Ergene (2016: 49-61), Ergene and Kaygun (2011, 2014), and Tülüveli (2005)

Since our analysis of intergenerational mobility relies entirely on the transmission of honorific titles, we drop all females (25,166 observations) and non-Muslims (44,111 observations) from the analysis, because such titles were not available to them. In addition, for our baseline analysis we drop 6,036 observations from the period after the year 1826, when the Janissary Corps, an elite infantry force in the Ottoman Empire, was disbanded.<sup>12</sup> This event obviously makes it questionable whether the military/administrative titles in our sample carried the same status connotations after the year 1826. For example, the title *ağa*, which previously denoted exclusively an elite military/administrative category, came to be used increasingly for guild leaders and other occupations during the 19<sup>th</sup> century. Moreover, the volumes of court registers that correspond to these latter years of the sample typically have low numbers of observations, reducing the power of our analysis for this period. For these reasons, we decided to drop from analysis the relatively small number of observations that come from the period after 1826 to avoid potential errors in estimation and interpretation. We nevertheless conduct a robustness test to examine how including these observations would have changed the analysis, as seen in Appendix B. To recap, our final dataset after dropping females, non-Muslims, and post-1826 observations, consists of 271,995 Muslim Males covering the period 1513-1826.

### **4.3 A preliminary Analysis of Status over Time**

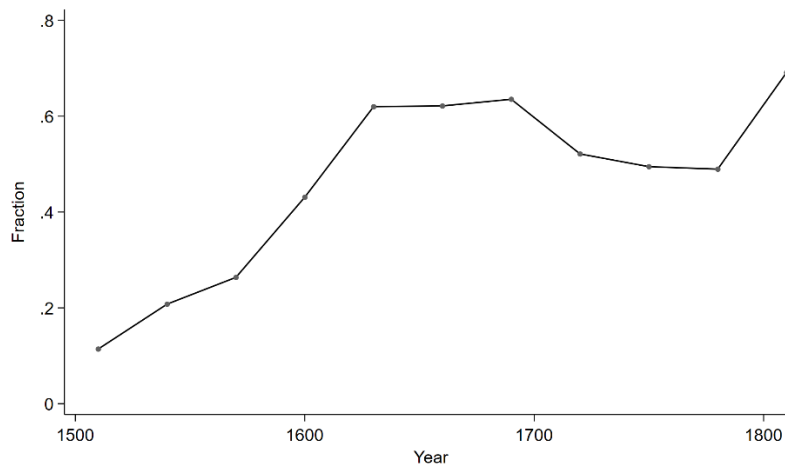
In this section, we offer a preliminary analysis of socio-economic status in the dataset by examining the simple fractions of individuals with honorific titles, distribution of titles by vertical and horizontal occupational subcategories, and their variation across case-types. As described above, previous historians (Coşgel and Ergene, 2016: 49-61; Ergene and Kaygun, 2011, 2014) have grouped honorific titles into five simple categories for analysis. The first

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<sup>12</sup> We thank Boğaç Ergene for this suggestion.

category consists of non-titled individuals, which is the baseline category for comparison. Titled individuals can be grouped into four subcategories based on their (horizontal) occupation and (vertical) elite status. Regarding occupation, we differentiate between those who belonged to the religious-judicial and the military-administrative establishments. Within each establishment, individuals could differ in status based on whether they had an elite position or not.

**Figure 3**  
**Fractions of Titled Individuals over Time**



*Notes:* The line shows the fractions of honorific-titled Muslim males found in Istanbul court registers, by 30-year intervals. See the text for sources and definitions.

For a broad outlook on status, we first calculate the simple fractions of all Muslim males with honorific titles in each volume. Aggregating this information by 30-year intervals, Figure 3 shows how overall socioeconomic status changed in Istanbul over time. There is a clear cyclical trend to the evolution of honorific titles. Whereas the fraction of titled individuals was about 10 percent in the early 16<sup>th</sup> century, the fraction rose to over 60 percent by the end of the 17<sup>th</sup> century, over a sixfold increase. Starting from about the turn of the 18<sup>th</sup> century, however, the fraction declined somewhat to about half of all court-users by the end of the century. The trend

was reversed once again during the 19<sup>th</sup> century, as the fraction of titled individuals rose to about 70 percent.

To illustrate the further breakdown of the non-monotonic evolution of titles, Table 1 shows the distribution of individuals by the five status categories over time. In addition to the sharp decline of the fraction of those without titles, we see that most of the rise observed over time came from the elite ranks. The fraction of those with elite titles rose sharply to about 36 percent in the military and administrative category and to about 14 percent in the religious and judicial hierarchy. Similarly, the fraction of the non-elite in the religious/judicial category fell by almost a third between the 18<sup>th</sup> and 19<sup>th</sup> centuries.

| <b>Table 1</b>  |                         |            |                    |            |           |              |
|---|-------------------------|------------|--------------------|------------|-----------|--------------|
| <b>Occupational Categories and Elite Status of Muslim Males over Time</b> |                         |            |                    |            |           |              |
| Century   | Military/Administrative |            | Religious/Judicial |            | %No Title | Observations |
|   | %Elite                  | %Non-Elite | %Elite             | %Non-Elite |           |              |
| 16  | 8.9                     | 2.0        | 3.0                | 9.9        | 77.0      | 73,055       |
| 17  | 13.9                    | 12.0       | 12.0               | 22.5       | 40.2      | 132,180      |
| 18  | 13.5                    | 9.3        | 11.6               | 20.4       | 46.9      | 58,056       |
| 19  | 36.4                    | 10.7       | 13.7               | 7.5        | 34.9      | 8704         |
| Total   | 13.1                    | 8.6        | 9.6                | 18.2       | 51.4      | 271,995      |

In addition to the cyclical nature of the data, we also observe a trend of increasing fraction of titled individuals over time. One interpretation for that trend is that there may have been inflation in the fraction of titled individuals in society. This could be a direct consequence of the increase is nepotism and corruption where many individuals would receive a title via other

means. An alternative interpretation is that the selection into the sample was changing over time, and non-titled individuals were being *de facto* excluded from judicial services. Below we assess the selectivity issue by looking at different types of cases.

For a systematic analysis of selection issues in our sample, we used textual analysis of each entry to classify its type into analytical categories. These categories are somewhat arbitrary, because the original court records did not formally classify entries by type. For a simple classification suitable for our analysis, we divided the legal matters handled by the courts into six broad categories, namely those concerning: commerce, personal crimes, family relationships, probate, property, and others.<sup>13</sup> Commercial interactions consist of entries concerning loans, contracts, partnerships, production, and exchange. Personal crimes involve various types of felony, such as rape, banditry, and murder; and various misdemeanors, such as theft, simple assault, and verbal insults and swearing. In the family category, we included entries related to marriage, divorce, children, and associated obligations, e.g., alimony, custody, *mahr*. The fourth category consists of probate entries, which include all legal interactions concerning the division of estate and appropriation of inheritance shares. Property-related entries could be recorded based on numerous interactions concerning real estate, arable land, water rights, and rights to various other types of fixed and movable property. Finally, we placed in the “Other” category those entries with descriptions in the court record that were either too vague or too complex to be classified into one of the previous categories. Appendix A shows the distribution of our records by case-type over time.

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<sup>13</sup> For a similar categorization, see Ergene (2003: Chapter 4).



**Table 2**  
**Fractions of Titled Individuals across Case-Types and over Time**

| Century | Commercial | Criminal | Family | Probate | Property | Other | Total |
|---------|------------|----------|--------|---------|----------|-------|-------|
| 16      | 0.23       | 0.12     | 0.26   | 0.29    | 0.25     | 0.20  | 0.23  |
| 17      | 0.62       | 0.52     | 0.56   | 0.64    | 0.56     | 0.58  | 0.60  |
| 18      | 0.53       | 0.42     | 0.58   | 0.51    | 0.59     | 0.52  | 0.53  |
| 19      | 0.65       | 0.60     | 0.63   | 0.61    | 0.71     | 0.63  | 0.65  |
| Total   | 0.50       | 0.34     | 0.51   | 0.53    | 0.47     | 0.46  | 0.49  |

This legal classification allows us to examine the selection issue in our sample by checking whether the trends observed in Figure 3 and Table 1 are driven by a particular type of entry in court registers. For this, we calculated the fractions of individuals with honorific titles in each of the six entry types by century. As seen in Table 2, the broad cyclical changes observed above apply with minor exceptions to all types. Specifically, the fractions of titled individuals rose significantly between the 16<sup>th</sup> and 17<sup>th</sup> centuries in each type, fell somewhat in the 18<sup>th</sup> century in all but family and property cases, and uniformly rose again in the 19<sup>th</sup> century. It is also worth noting that in each century the fractions of titled individuals were smallest in criminal cases, as expected. Overall, these observations indicate that the patterns were consistent across types of court entries. This evidences that the selection into the data did not change much over time. Moreover, even when criminal cases have the lowest fraction of titled individuals across all categories, as expected, this fraction is not very different from other cases. We would expect probate records to reflect the highest classes and criminal records to reflect the lowest classes. Property cases would be closest to the middle class. In this regard, we think the sample is

representative of Ottoman society as a whole or, at the very least, the distribution has full support and includes individuals belonging to all social classes.<sup>14</sup>

## 5. Intergenerational Mobility

The next question is how intergenerational mobility changed over time, which can be examined from the transmission of socioeconomic status between fathers and sons. Court registers recorded the father's name for the identification of individuals because, unlike in modern times, the Ottoman Empire--and other Islamic societies--did not use family names for this purpose. Instead, an individual with a certain first name would be distinguished from other individuals carrying the same first name by supplementing it with the name and other personal characteristics, e.g., honorific title, of their father. This system allows others to determine that Ahmed son of (*bin*) Mehmed was a different individual than Ahmed son of Ali. Likewise, differences in honorific titles allows us to differentiate between Ahmed Efendi son of Mehmed from Ahmed Ağa son of Mehmed.

As a unique benefit to researchers interested in intergenerational relationships, the Ottoman system of identifying individuals in association with their fathers provides family links automatically. Specifically, the system allows us to easily identify all pairs of father-child involved in a record and to associate this information with other characteristics of the record (e.g., year, type, location). Notice that each record would contain the family relationship and the name and personal characteristics for the father and the child by design. Therefore, there is no additional procedure required to create a linked sample for analysis. Having automatic father-son

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<sup>14</sup> Appendix B shows that the results do not change if we focus only on criminal cases. Results are less stable due to the reduced sample size.

match is in sharp contrast to census-based analyses of intergenerational mobility, which are often costly and error-prone (Abramitzky et al, 2021).

### **5.1 Absolute Mobility**

We first examine absolute mobility, using the information regarding the transmission of honorific titles between fathers and sons. To differentiate between upward and downward mobility, we construct separate measures for the transfer of titles from titled fathers to sons and the acquisition of titles by children of untitled fathers. In addition, we calculate these measures separately for elite titles to observe whether patterns of absolute intergenerational mobility differed significantly between the elite and non-elite ranks.

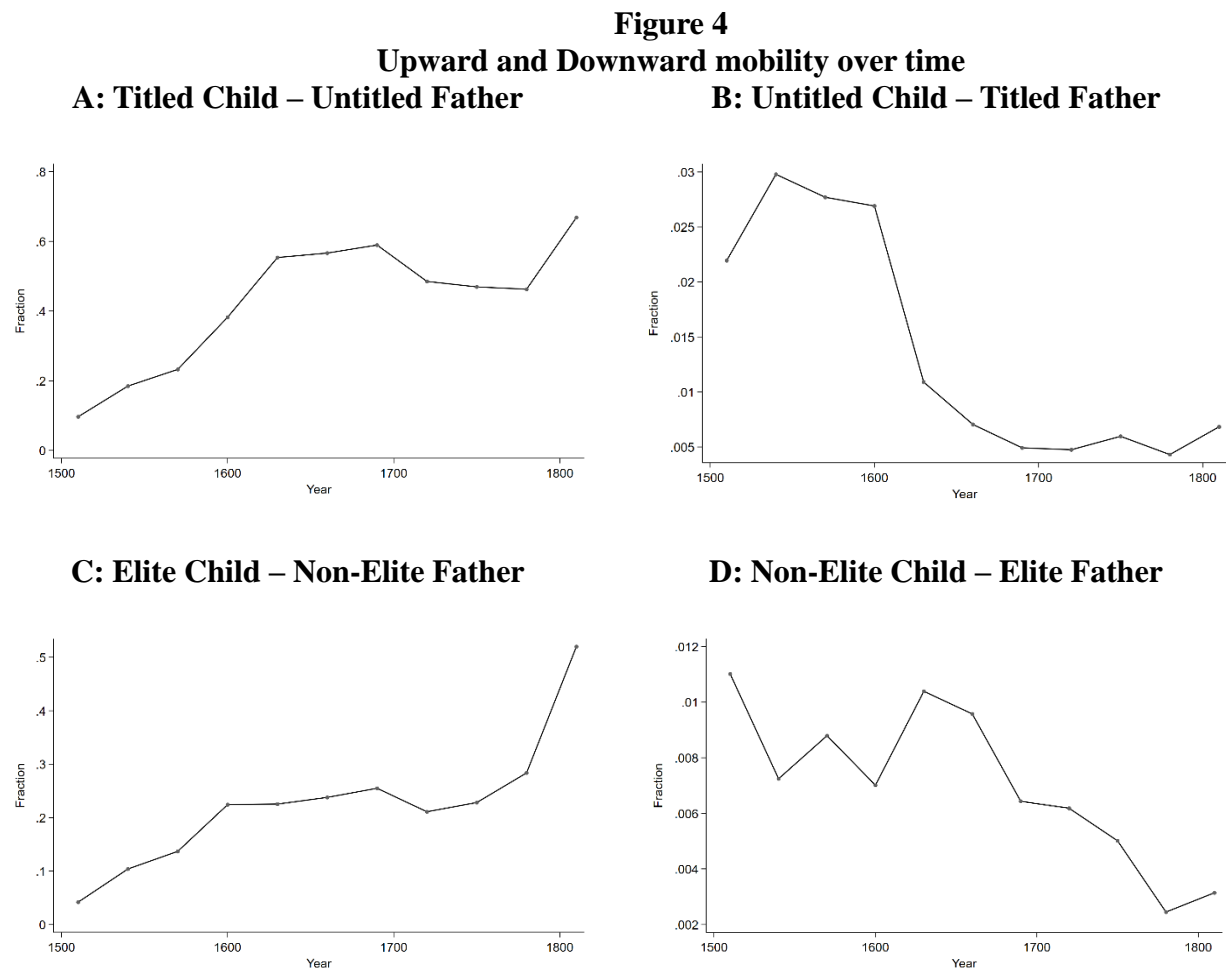
Figure 4 shows trends of mobility over time. Panel A shows upward mobility is going up over time. Panel B shows downward mobility is going down over time. Panels C and D show that the results still hold true when we look at the top of the distribution, by focusing on elite titles. This decomposition highlights the importance of looking at both upward and downward mobility, rather than using a simple statistic, e.g., rank-rank correlation, that averages between upward and downward mobility. Notice that the results in Panel A, which shows upward mobility, could be a direct result of the title inflation that we see over time. This is analogous of the usual measures of occupational (or income) upgrading, used in other contexts, that could be artificially generated by general economic growth, i.e., in a society where all children have the same occupation as their parents, but all incomes are going up, all children will have a greater income than their parents. The results in Panel B are more striking and show that after the mid-17<sup>th</sup> century, very few children of title fathers do not have a title themselves. This points to a

particular type of persistence—lack of downward mobility—with strong implications for social dynamics.

We now combine both effects—upward and downward absolute mobility—to see which one dominates and to make the results more comparable to the literature. Figure 5 (solid line) below corresponds to plotting the fraction of sons in a different social class than their father, based on the occupational transition matrices against the specified groups for the five categories in consideration: Elite Religious, Elite Military, Non-Elite Religious, non-Elite Military, and No Title. When looking at all categories, we see that there is an increase over time in the fraction of children that have an occupation different than their father. This is a clear sign of increasing mobility over time. The dashed line in Figure 5 shows the same measure, but looking only at the titled, i.e., excluding cases where the father or the son (or both) do not hold any title. This is useful to assess horizontal mobility, or mobility within the high-status individuals. We see that mobility within the titled decreases by half over this period. This again points to the complexity of social mobility in the Ottoman Empire and how focusing on one particular aspect of mobility would be misleading.

Figures 3 and 4 above present absolute measures of mobility, but it is hard to see whether the magnitudes are big or small, relative to the fraction of people with titles in the population. We now present the results with bounds to appreciate their magnitude. Figure 6 below shows the distribution over time of the fraction of observations in the data where both the father and the son hold a title. Notice that this is not stable over time, as a direct consequence of both fractions of fathers and children with titles changing over time. The solid line shows the distribution observed in the data, i.e., the fraction of pairs in the data where father and son have titles. The upper bound shows the theoretical (unfeasible) upper bound on title persistence, i.e., it shows the

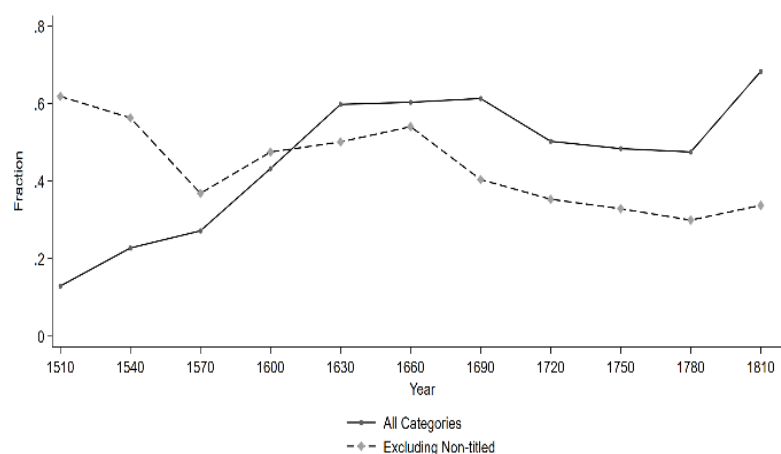
fraction of fathers with titles. This is the theoretical upper bound on pairs with titles because it shows the fraction of observations with both father and son titles if every father with title were able to pass the title to their children. This situation would correspond to perfect immobility.



*Notes:* Fraction of children in a different category than their fathers.

Finally, the lower bound corresponds to perfect mobility, i.e., the distribution of sons with titles in the data. With perfect mobility, whether the father has a title or not is independent of whether the son has a title or not. In this case, the distribution of children with titles that have a father with title would correspond to the unconditional distribution of titles for children.

**Figure 5**  
**Fraction in Different Occupational Category than Father**



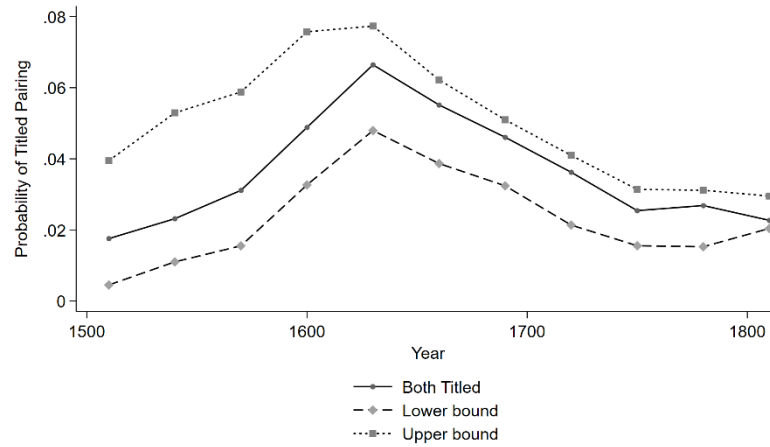
*Notes:* Fraction of children in a different category than their fathers.

Figure 6 presents two types of information. First, the levels in the figure indicate how exclusive titles are. The higher the lines, the more people in society hold titles and, thus, the less exclusive titles are. The evolution over time is consistent with the literature as noted above. Second, we can observe how close mobility is to the upper and lower bounds; by noticing how close the solid line is to the upper or lower dashed lines. We see that, beginning in 1630 and throughout the period, mobility is close to the upper bound, i.e., most children with titled fathers have titles themselves, as shown above in Figure 4.B. In the period before that, we see that observed mobility is at a middle point between the two bounds and closer to the lower bound.

## 5.2 Relative Mobility

We now turn attention to relative mobility, using the information regarding the transmission of status between the matched father son pairs. One way to display this information is through a social table.

**Figure 6**  
**Observed and Theoretical Title Probabilities**



*Notes:* Observed and theoretical probabilities of titled pairing (the event having a child and his father holding both a title). The middle line corresponds to the actual distribution observed in the data. The upper bound corresponds to the maximum probability of titled pairing, given the number of titled fathers in the data. The lower bound corresponds to the probability of titled pairing under the assumption of independence.

Table 3 shows the social table for the entire sample. Social tables show the number or frequency of individuals in a given social class for parents (across rows) and children (across columns). For example, in our data there were 3,818 individuals with an Elite Religious/Judicial title. Among them, 2,282 have a child that also had an Elite Religious/Judicial title. A society with high social persistence will have high numbers in the diagonal, i.e., father and son with the same occupation. A society with perfect mobility, the distribution in each column would be identical, i.e., the number of children in each class is independent of the father's class.

**Table 3**

|     |           | <u>Military/Administrative</u> |           | <u>Religious/Judicial</u> |           | No Title | Total   |
|-----|-----------|--------------------------------|-----------|---------------------------|-----------|----------|---------|
|     |           | Elite                          | Non-Elite | Elite                     | Non-Elite |          |         |
|     | Elite     | 1,263                          | 108       | 269                       | 158       | 33,686   | 35,484  |
| M/A | Non-Elite | 71                             | 178       | 41                        | 65        | 23,154   | 23,880  |
|     | Elite     | 193                            | 41        | 2,282                     | 2,832     | 18,532   | 23,509  |
| R/J | Non-Elite | 486                            | 149       | 899                       | 2,449     | 45,450   | 49,433  |
|     | No Title  | 410                            | 170       | 327                       | 2,831     | 135,951  | 139,689 |
|     | Total     | 2,423                          | 646       | 3,818                     | 8,335     | 256,773  | 271,995 |

For a systematic analysis of intergenerational mobility, we can create social tables for different periods over time. We then use this information in each table to calculate the Altham statistic, a standard measure of intergenerational mobility. The Altham statistic has emerged as a powerful tool for analyzing historical occupational mobility tables. Introduced by Altham (1970) and popularized in historical research by Altham and Ferrie (2007), this approach provides a distance measure between mobility tables that captures differences in relative mobility independent of marginal distributions.<sup>15</sup>

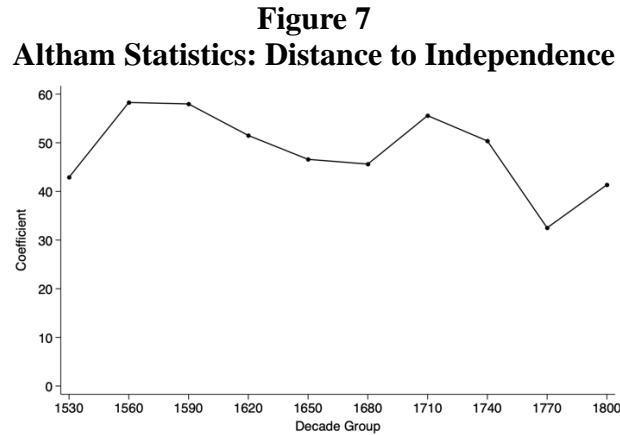
Given a social table (matrix)  $P$ , of size  $r \times s$  The Altham statistic is defined as:

<sup>15</sup> Long and Ferrie (2013) used the Altham statistic to compare occupational mobility in the US and Britain from 1850-1910, challenging assumptions about American exceptionalism by showing greater mobility in the US during the 19<sup>th</sup> century but convergence in the twentieth. Modalsli (2017) employed the Altham statistic to analyze Norwegian occupational mobility from 1865 to 2011, decomposing changes in mobility patterns across agricultural and non-agricultural sectors. Perez (2019) compared intergenerational occupational mobility across Argentina, the United States, Britain, and Norway in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries using an adjusted Altham statistic, finding that Argentina demonstrated mobility levels similar to the US, which challenged conventional understanding about mobility development in these regions and highlighted how migration and frontier expansion affected mobility opportunities.



$$d(P) = \left[ \sum_{i=1}^r \sum_{j=1}^s \sum_{l=1}^r \sum_{m=1}^s \left| \log \left( \frac{p_{ij}p_{lm}}{p_{im}p_{lj}} \right) \right|^2 \right]^{1/2}$$

where  $i$  and  $l$  index fathers' titles and  $j$  and  $m$  index sons' titles. This statistic  $d(P)$  aggregates the (log) differences between the cross-product ratios in table  $P$  versus a society with perfect mobility where all ratios are equal to 1. Higher values of  $d(P)$  imply larger differences in the row-column association of tables  $P$ .  $d(P)=0$  means perfect mobility. The higher the value of  $d(P)$  the less mobility in a given society. The interpretation of the Altham statistic in this case is how far a given society is from perfect mobility. The smaller the statistic, the more mobile the society. Figure 7 below shows the Altham statistic when we divide our data into 30-year intervals. We see that the values are not monotonically decreasing, but there is a clear downward trend over time: when dividing the society into 5 classes, we see a clear increase in mobility over time.



*Notes:* Altham statistics using five social categories.

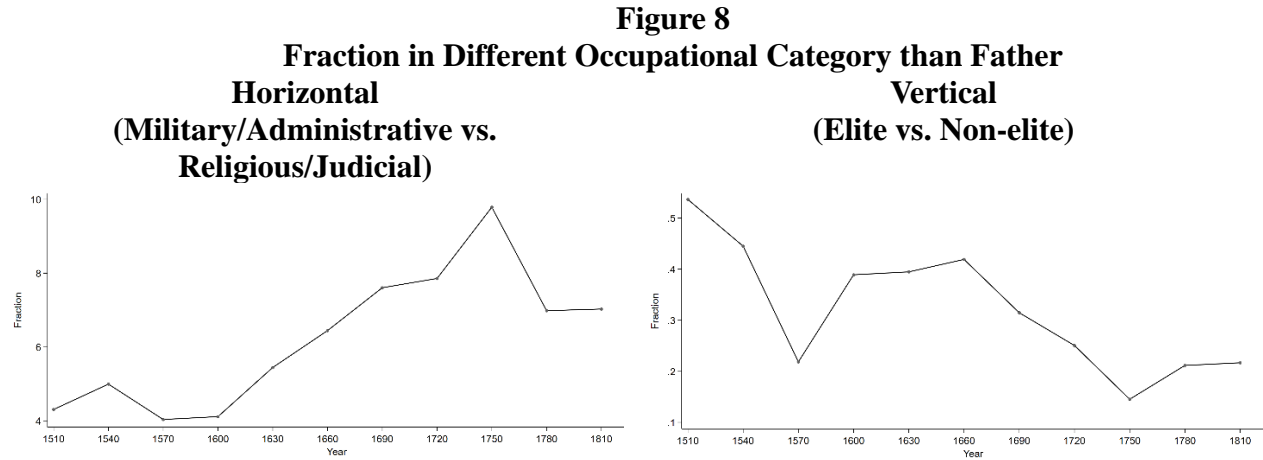
## 6. Mobility Within vs Between Groups

The remaining question is whether the observed mobility occurred horizontally between groups or vertically within their hierarchical structure. To observe this difference, we recalculate measures of absolute and vertical mobility by collapsing the status categories into three groups. Specifically, we first calculate measures of horizontal mobility based on the transmissions of status between broadened categories of military/administrative, religious/judicial, and non-titled individuals, which amounts to omitting the elite/non-elite distinction. In the same vein, we calculate measures of vertical mobility by omitting the difference between military/administrative and religious/judicial dimensions and focusing instead on the transmission of status between elite, non-elite, and non-titled individuals.

### 6.1 Absolute Mobility Within vs Between Groups

In Figure 8 we decompose this mobility into horizontal and vertical mobility. High horizontal mobility means that children have different titles than their parents, but the titles are in the same hierarchical class. We see that over time horizontal absolute persistence doubles. This means children whose parents hold military titles are twice as likely to hold a religious title at the end of the sample, and *vice versa*. This is strong evidence of the consolidation of the Ottoman ruling class. High vertical persistence means that children have different titles than their parents, across hierarchical classes, but they may remain in the same government branch, e.g., father has an elite military title and son has a non-elite military title. Vertical absolute persistence is one third lower at the end of the period. Again, this is consistent with strong consolidation of the Ottoman ruling class. Vertical movements between elite and non-elite titles became scarcer over time, but within the elite class, there is increasing movement between military and religious

titles. Children of the military elite are no longer confined to be military elite, rather they are entering the religious elite, and *vice versa*.

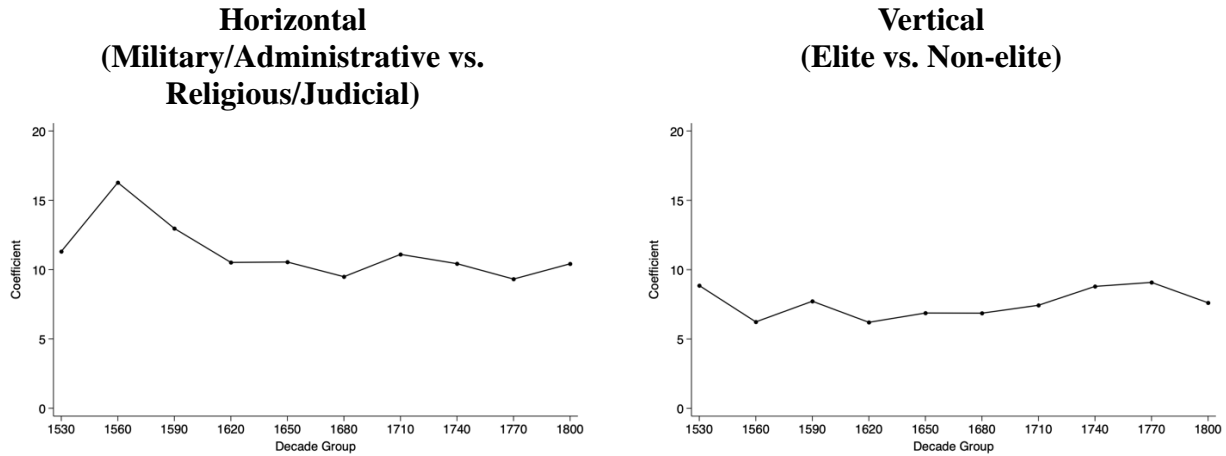


Notes: Fraction of children in a different category than their fathers.

## 6.2 Relative Mobility Within vs Between Groups

Figure 9 presents the results on relative mobility decomposing Figure 7 into effects within and between groups. Similarly to the results on absolute mobility, we see that the Altham statistic for horizontal mobility is decreasing over time, if very slowly. For vertical mobility, however, we see no trend. These results suggest that the trend in relative mobility that we see in Figure 7 is driven by horizontal mobility. They contrast with our results for vertical absolute mobility in Figure 8, where we do observe a consolidation on the elite. Putting together the results suggest that the title inflation that we observed in the raw data, created a reduction in absolute mobility, without creating a reduction in relative mobility. In other words, by the end of the period, virtually all children of elite parents have an elite title, but the “meaning” or the “rarity” of such title was diminished, because there were so many people holding them.

**Figure 9**  
**Altham Statistic**



*Notes:* Altham statistics using three social categories.

Title inflation then might have been a strategy to maintain social peace within the elite, by providing titles to virtually all their children, at the expense of sacrificing the exclusivity, or rarity, of such titles.

## 7. Discussion

The study of social mobility in pre-modern societies has revealed complex patterns of status transmission across generations despite significant data limitations. Court records have proven particularly valuable for understanding social mobility in Islamic societies. Our research on Ottoman Istanbul during the 16<sup>th</sup>-19<sup>th</sup> centuries utilizes court records to examine both absolute and relative mobility patterns. Our findings reveal increasing mobility over time, but importantly, this mobility was predominantly within the elite ranks rather than representing substantial movement from peasant or lower classes into the elite. This pattern of “circulation mobility” among elites rather than “structural mobility” across class boundaries aligns with Coşgel and Ergene's (2012) findings on wealth concentration in Ottoman provincial society and Peirce's

(2003) analysis of how legal institutions reinforced social hierarchies while allowing for limited circulation within status groups. Our results complement Raymond's (1974) observations in Cairo during Ottoman rule, where he found similar patterns of intra-elite circulation with limited opportunities for broader social advancement.

The application of quantitative mobility measures, including absolute mobility rates and the Altham statistic, to Ottoman court records represents a methodological contribution that facilitates comparison with European and Asian contexts. Our finding that relative mobility increased over time while remaining largely confined to intra-elite circulation offers a counterpoint to models that link mobility directly to modernization or industrialization processes. Instead, the Ottoman case suggests that increased mobility could occur without fundamental transformation of social boundaries, echoing Marcus's (1989) observations about Ottoman provincial cities maintaining distinctive social hierarchies despite significant internal dynamism. By placing Ottoman Istanbul mobility patterns in comparative perspective, our research contributes to a more nuanced global understanding of pre-modern mobility regimes across Eurasia.

The Islamic world presents distinctive patterns of social mobility deserving greater scholarly attention. While European and East Asian mobility has been extensively studied, Ottoman society offers a valuable comparative case. Our analysis contributes to filling this gap, revealing patterns of increasing absolute mobility over time but with limited cross-class movement. These findings align with Quataert's (2005) characterization of Ottoman society as maintaining relatively rigid boundaries between major social categories while allowing considerable circulation within status groups. The pattern of intra-elite mobility we document parallels what Kunt (1983) observed in the Ottoman administrative apparatus, where there was

substantial circulation within the governing class but limited entry from lower social strata. This distinctive pattern of mobility—increasing in absolute terms but largely confined within status groups—provides an important counterpoint to Eurocentric models that often link increasing mobility directly to modernization processes.

Our quantitative analysis of Ottoman Istanbul mobility provides methodological parallels to these studies while revealing distinctive patterns. Unlike the gradual opening observed in some European contexts, our findings show increased absolute mobility occurring primarily through circulation within elite ranks rather than through broader class crossing. Although this pattern contrasts somewhat with Ergene and Kaygun's (2014) empirical findings from Kastamonu in the 18<sup>th</sup> century, it recalls Faroqhi's (2011) observations about artisanal groups in Ottoman towns, where she found relatively rigid boundaries between major occupational categories alongside significant internal circulation. Our application to Ottoman court records provides new comparative potential with European and Asian cases, suggesting that mobility regimes followed different patterns in Islamic imperial contexts. The finding that mobility increased over time while remaining largely confined to circulation within the elite challenges linear modernization narratives and aligns with İnalcık's (1973) characterization of Ottoman social structure as maintaining distinctive status boundaries while allowing for flexible adaptation over time.

Research on surnames and long-run persistence has dramatically expanded our understanding of historical mobility.<sup>16</sup> While our Ottoman Istanbul research does not track

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<sup>16</sup> Clark and Cummins (2015) traced rare surnames in England from 1170 to 2012, finding remarkably consistent inheritance of status across eight centuries, suggesting much stronger persistence than conventional two-generation models indicate. Barone and Mocetti (2021) matched Florentine taxpayer records from 1427 with their descendants in 2011, finding that socioeconomic status has persisted for nearly six centuries despite massive political, demographic, and economic transformations. In preliminary research, Hao (2021) examined surname frequencies in the Chinese imperial examination system from the Song to Qing dynasties (960-1912), suggesting long-term persistence of educational advantage among certain lineages.

specific family names over multiple centuries, our findings on intra-elite circulation complement these surname studies by revealing another dimension of persistence: the maintenance of overall social structure despite increased individual mobility. This pattern aligns with Canbakal's (2007) work on 17<sup>th</sup>-century Ayntab (modern Gaziantep), where she found that despite individual cases of mobility, the primary status distinction between subjects and the ruling class remained relatively stable. Similarly, our finding that increased mobility was largely confined within the elite parallels Establet and Pascual's (1994) analysis of inheritance records in 18<sup>th</sup>-century Damascus, which showed substantial circulation of wealth and status within the notable class alongside limited opportunities for broader advancement.

## 8. Conclusion

This study provides the first long-term empirical analysis of intergenerational mobility in the Ottoman Empire, using a uniquely rich dataset from the Istanbul court registers spanning the sixteenth to nineteenth centuries. Our findings challenge the conventional assumption that premodern societies were uniformly stagnant in terms of social mobility. Instead, we document a clear—though complex—pattern of increasing intergenerational mobility over three centuries, with evidence of both absolute and relative gains.

The nature of this mobility, however, was far from egalitarian. The rise in status mobility was largely confined to circulation within the elite ranks rather than reflecting substantial movement between the ruling class and the general population. While honorific titles became increasingly common over time—potentially indicating inflationary dynamics—the opportunities to rise vertically across class boundaries remained limited. In this respect, the Ottoman case

reveals a pattern of elite consolidation rather than democratization of opportunity, echoing broader dynamics observed in other historical imperial contexts.

Our methodological contribution lies in the integration of honorific titles as indicators of socioeconomic status and the use of Altham statistics to measure changes in relative mobility. These tools allow for meaningful comparisons with mobility regimes in other parts of the world. By highlighting the distinctive pattern of intra-elite mobility in an Islamic imperial setting, we provide a critical counterpoint to Eurocentric narratives that link rising mobility solely to industrialization or liberal institutional reform.

Ultimately, this study underscores the importance of expanding the geographical and temporal scope of historical mobility research. It reveals that significant changes in social mobility were possible in pre-industrial societies, though often in forms shaped by distinct institutional, cultural, and political configurations. Future research should further investigate how these patterns played out across other regions of the Ottoman Empire and how they compare to developments in contemporaneous empires such as the Qing, Mughal, or Safavid domains.



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## 10. Appendix A

In this appendix, we provide summary statistics regarding the distribution of the individuals in our records.

### 10.1 Gender and religion

We only use Muslim males for our empirical investigation of intergenerational mobility because women and non-Muslims did not receive comparable honorific titles that can be used in this analysis. Table A1 shows the distribution of all individuals in the original dataset by gender and religion over time.

**Table A1**  
**Gender and Religion of All Individuals in the Full Sample**

| Century | Observations | Percent Male | Percent Muslim |
|---------|--------------|--------------|----------------|
| 16      | 87,998       | 93.9         | 88.5           |
| 17      | 163,492      | 91.2         | 89.1           |
| 18      | 75,738       | 90.5         | 85.3           |
| 19      | 27,077       | 86.7         | 64.8           |
| Total   | 354,305      | 91.4         | 86.3           |

### 10.2 Court districts

In addition to restricting the dataset to Muslim males, we focus on the period after the disbandment of the janissary corps in the year 1826. This event changed the meaning of military/administrative titles as indicators of status. Table B3 shows that our results are robust to expanding the dataset to the original temporal coverage. Our final dataset consists of 271,995 individuals. Table A2 shows their distribution across the Eyüp, Galata Üsküdar, and İstanbul (Suriçi), court districts of as well as in other courts specialized in administrative legal matters over time.

**Table A2**  
**Distribution According to Court**

|         | Eyüp   | Galata | Üsküdar | İstanbul | Other  | Total   |
|---------|--------|--------|---------|----------|--------|---------|
| Century |        |        |         |          |        |         |
| 16      | 2,315  | 16,804 | 37,475  | 15,431   | 1,030  | 73,055  |
| 17      | 21,907 | 22,021 | 12      | 77,636   | 10,604 | 132,180 |
| 18      | 5,930  | 3,464  | 7,176   | 38,309   | 3,177  | 58,056  |
| 19      |        | 869    |         | 7,835    |        | 8,704   |
| Total   | 30,152 | 43,158 | 44,663  | 139,211  | 14,811 | 271,995 |

### 10.3 Case-types

Court entries can be classified into six simple categories according to whether they are related to legal matters concerning commerce, personal crimes, family, probate, and property. In addition, we constructed the category of “Other” for cases that were either too vague or too complex to be classified into a single category. Table A3 shows the distribution of individuals in our dataset according to the type of legal matter that brought them to court.

**Table A3**  
**Distribution According to Case-Type**

|         | Commercial | Criminal | Family | Probate | Property | Other  | Total   |
|---------|------------|----------|--------|---------|----------|--------|---------|
| Century |            |          |        |         |          |        |         |
| 16      | 34,998     | 5,509    | 5,995  | 6,168   | 12,011   | 8,374  | 73,055  |
| 17      | 63,072     | 4,382    | 16,949 | 15,867  | 17,843   | 14,067 | 132,180 |
| 18      | 25,562     | 3,537    | 8,137  | 9,669   | 5,495    | 5,656  | 58,056  |
| 19      | 5,683      | 361      | 494    | 295     | 1,160    | 711    | 8,704   |
| Total   | 129,315    | 13,789   | 31,575 | 31,999  | 36,509   | 28,808 | 271,995 |

## 11. Appendix B: Robustness Tests

Although the Ottoman court registers offer exceptionally rich information on social status and intergenerational mobility, they are subject to potential selection bias, as the individuals recorded were not a random sample of the broader population (Coşgel and Ergene, 2014). Moreover, the selection of registers by the ISCR staff may have introduced potential bias with respect to the courts, time periods, and types of records represented. To assess whether the selection processes may have influenced our findings, in this appendix we conduct a series of robustness checks. Specifically, focusing on our main results regarding the difference between horizontal and vertical categories of absolute (“Fraction in Different Occupational Category than Father,” Figure 8) and relative (“Altham Statistic,” Figure 9) measures of intergenerational mobility, we examine how the trends observed over time change when we recalculate our indicators across different court locations, case types, and temporal coverage.

### 11.1 Court locations

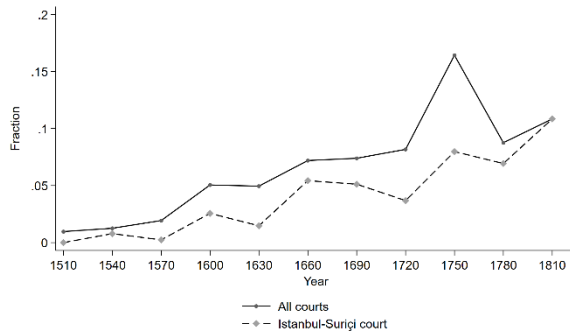
Istanbul had four main court districts during our period, namely the Istanbul-Suriçi, Eyüp, Üsküdar and Galata districts, as shown in Figure 1. Based on their locations, the courts in these districts could cater to different types of cases and clients because of differences in proximity to commercial, administrative, and residential activities. Moreover, some courts could provide specialized services, such as focusing exclusively on cases involving the finances and management of pious foundations or the inventory and distribution of the inheritance of government officials (*kısmet-i askeriye*).

Courts in the Istanbul-Suriçi district are well-represented throughout our period. Other courts, however, feature in an unbalanced manner over time. For example, although several of the 16<sup>th</sup> century registers came from the Üsküdar courts, representation dropped significantly afterwards, such that only three registers came from this court in the 18<sup>th</sup> century and none in the 19<sup>th</sup> century. Although it was the ISCR Project staff that selected the court registers for transliterations in the Latin Alphabet, it is nevertheless a concern that consequently unbalanced representation of court districts in our dataset might have biased our results.

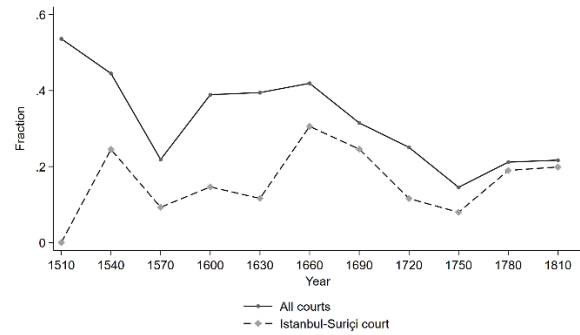
To test the robustness of our results to representation of data from different courts, we show our results separately for all courts and the Istanbul-Suriçi court separately. Since the latter court district provides continual observations to our dataset, we would expect that the exclusion of the other three court districts from the sample would remove the potential bias and still show the long-term trends in intergenerational mobility consistently.



**Figure B1**  
**Robustness to Court Districts**  
**I. Fraction in Different Occupational Category than Father**  
**Horizontal**  
**(Military/Administrative vs. Religious/Judicial)**

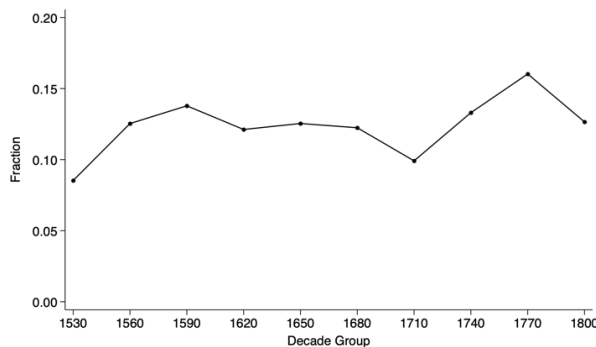


**Vertical**  
**(Elite vs. Non-elite)**



## II. Altham Statistic

**Horizontal**  
**(Military/Administrative vs. Religious/Judicial)**



**Horizontal**  
**(Military/Administrative vs. Religious/Judicial)**



*Notes:* The figures show the difference between Istanbul-Surici district and all courts the fraction of children in a different category than their fathers (Panel I) and the Altham Statistics using three social categories (Panel II).

Figure B1 shows the change in horizontal and vertical measures of absolute (“Fraction in Different Occupational Category than Father”) and relative (“Altham Statistic”) intergenerational mobility separately for all courts and the Istanbul-Surici court district. Despite minor variations, the overall trend is about the same, rising for horizontal and falling for vertical mobility over time, consistent with the results presented in Figures 8 and 9 in the main text. This consistency provides comfort that unbalanced representation from different court districts did not significantly bias our results.

## 11.2 Case types

A similar selectivity issue concerns the different types of cases that were recorded in court registers. For a simple classification, we grouped court entries into six categories, namely those related to family matters, personal crimes, property, probate, commerce, and others. In part a consequence of the unbalanced selection of registers across courts by the ISCR Project, these types may not have been adequately represented in our dataset over time. We previously observed that the fraction of titled individuals evolved consistently over time across case-types, as seen in Table 2. It nevertheless remains a concern that the unbalanced selection of case-types in our dataset might have biased our results.

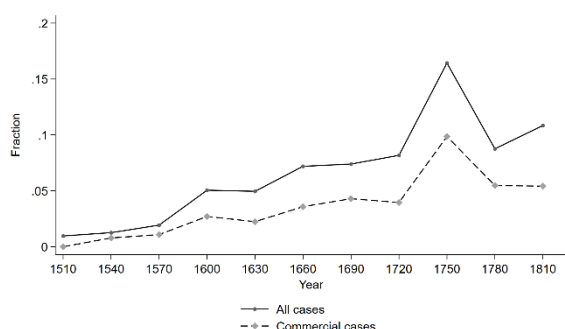
**Figure B2**

### Robustness to Case-Types

#### I. Fraction in Different Occupational Category than Father

##### Horizontal

(Military/Administrative vs.  
Religious/Judicial)



##### Vertical

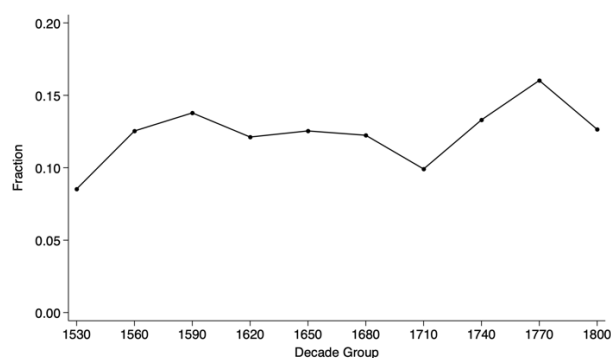
(Elite vs. Non-elite)



#### II. Altham Statistic

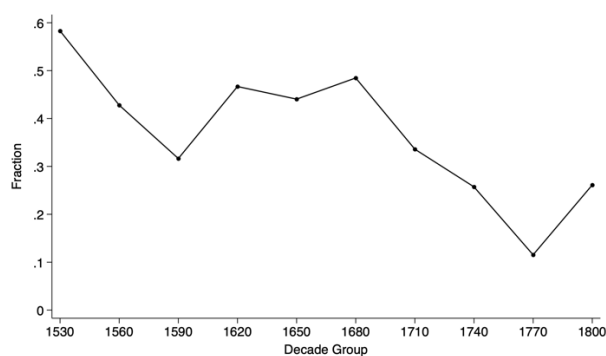
##### Horizontal

(Military/Administrative vs.  
Religious/Judicial)



##### Horizontal

(Military/Administrative vs.  
Religious/Judicial)



For a systematic analysis of the robustness of our results to data from different case-types, we show our results separately for only commercial cases. As seen in Table A3, commercial cases provide the most consistent coverage of court records during our time period. Therefore, we would expect that focusing on these cases would remove the potential bias arising from the unbalanced coverage of the other case-types in the sample. As seen in Figure B2, the overall trend is about the same between commercial cases and all cases in the full sample. Despite minor variations, horizontal mobility is rising, and vertical mobility is falling in both samples over time. The consistency of results indicates that our results are robust to unbalanced representation of data from different case-types.

### **11.3 Temporal coverage**

The temporal coverage of the dataset could also create bias if the observations dropped from the analysis would have changed our results. Recall that we decided to drop all entries corresponding to the period after the year 1826. In this section, we relax this restriction by running our analysis on the original temporal span of the dataset.

**Figure B3****Robustness to Temporal Coverage****III. Fraction in Different Occupational Category than Father**

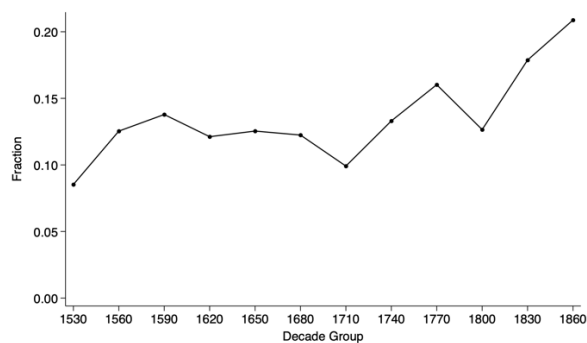
**Horizontal**  
**(Military/Administrative vs.**  
**Religious/Judicial)**



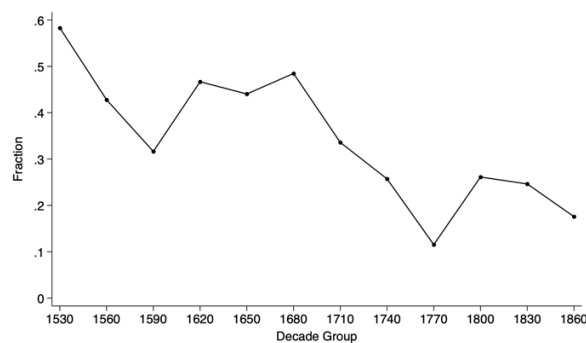
**Vertical**  
**(Elite vs. Non-elite)**

**IV. Altham Statistic**

**Horizontal**  
**(Military/Administrative vs.**  
**Religious/Judicial)**



**Horizontal**  
**(Military/Administrative vs.**  
**Religious/Judicial)**



As seen in Table B3, our basic conclusions remain unchanged to an alternative temporal coverage of the data. Specifically, in terms of both absolute and relative measures, horizontal mobility rose, and vertical mobility fell in Istanbul during the period between 1513 and 1884.