The Wealth Tax of 1942 and the Disappearance of Non-Muslim Enterprises in Turkey

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PRELIMINARY

In 1942, the Republic of Turkey promulgated a controversial tax on personal wealth to finance mobilization of the army and curb inflation. The extraordinary tax was arbitrarily assessed and the burden fell disproportionately on non-Muslim minorities. The precise transformative effect of the tax on Turkey's commercial life is not well understood. This article uses a novel dataset of firms operating in Istanbul to show the tax led to a dramatic rise on the liquidation of enterprises with non-Muslim ownership but no effect on Muslims. At the same time, the tax caused a sharp decline in the formation of new non-Muslim firms and a commensurate increase in the number of Muslim firms. The results show that the Wealth Tax forced the dissolution of otherwise productive, older firms and finalized the nationalization of the economy.

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1. Introduction

The Ottoman Empire covered much of the Middle East until its demise in 1922 and transformation into the Turkish Republic. Istanbul had been a crucial hub of trade, finance, and industry of the region, a role that it maintained under the new regime. While Istanbul had always been a diverse, multi-ethnic and multi-religious city, no particular group dominated its rich commercial life in the early modern period. Much like the rest of the Middle East, however, the city's minorities—Greeks, Armenians, and Jews—came to enjoy a disproportionately larger share of the economy. The nationalist policy makers of the Ottoman Empire, and later Turkey, viewed Muslims' disappearance from trade and industry as part of the larger problem of the growing economic disparity between Europe and the Middle East. Thus, the Ottoman and Turkish governments considered the creation of a Muslim, Turkish middle class an indispensable part of their larger objective of economic modernization.

The decisive moment to achieve this economic nationalization came through during World War II. In order to finance the mounting costs of mobilizing the army, the government issued a new extraordinary tax in November 1942: The Wealth Tax. The law itself had little to say about how the tax would be imposed, but in line with the government's nationalist agenda, the officials were instructed to charge non-Muslims at higher rates. Furthermore, the lack of accurate information about personal wealth and income led to arbitrary assessments, which led to further increases on non-Muslims' tax burden.

This article examines the heterogeneous impact of the tax on Muslim and non-Muslim enterprises by providing novel, firm-level evidence on the survivorship of firms in Istanbul between 1929 and 1950. We find that the tax led to a substantial spike in the liquidation of non-Muslim firms relative to Muslim-owned businesses. At the same time, it also effectively reduced the entry of new non-Muslim enterprises. Thus, the tax was critical in contributing to the disappearance of religious minorities in Istanbul's commercial landscape. The proceeds from the Wealth Tax were used to finance the startup of Muslim companies, further facilitating the "nationalization" of Turkey's business life. We show that the Wealth Tax also had dismal implications for Turkey's economic growth: the law prematurely liquidated older companies, which were likely more productive, and replaced these firms with new Muslim-owned enterprises that ended up exiting the market within years.

This paper is the first study that systematically examines the effect of the Wealth Tax on the economic presence of Turkey's non-Muslim minorities. In doing so, it contributes to the economic and business history of the Middle East in two ways. First, our article is closely related to the scholarship on inter-religious inequalities that emerged in the Middle East during the nineteenth century. The region had long been characterized by a high degree of religious diversity. Up until the end of the early modern period, no one group was substantially better off than the others and did not have a disproportionate presence in the commerce, finance, or industry. For instance, Inalcık (1960), Panzac (1992) and Kuran (2010) all show that Muslims were just as active in long-distance trade during the early modern era. Muslims' share in commerce started to decrease in the eighteenth century, a trend that proved to persist well into the 1800s (Eldem 1999, Owen 1993). Kuran (2004) relates non-Muslims' success to the fact that they had access to superior European legal systems while Muslims did not. Artunç (2015) shows that legal pluralism gave non-Muslims an advantage in trade by allowing them to exercise multiple options in dispute resolution. Whatever the reason, switching to European commercial law did not restore Muslims' competitiveness. This study shows that the policy that ended up helping Muslims' business participation, at least in Istanbul, was expropriation and direct transfer.

Second, our paper contributes to the debates on Turkey's lopsided development and modernization efforts in the 1900s. Owen and Pamuk (1998) show that Turkey had a stagnant growth record until the 1950s. Pamuk and Filiztekin (2008) argue that much of this stagnation was due to poor growth in total factor productivity. Our paper shows that the Wealth Tax contributed to Turkey's poor economic performance. Growth requires commercial expansion. Growth in total factor productivity emerges from higher productivity at the firm level. By targeting non-Muslim enterprises, the Wealth Tax simultaneously removed older, more productive enterprises (which happened to be non-Muslim) and reduced the entry of new non-Muslim businessmen. Given that non-Muslims had higher human capital than Muslims, and older firms are more likely to be more productive by survival bias, the Wealth Tax ended up replacing productive enterprises with unproductive ones, which in turn dissolved rather quickly. Furthermore, the collection procedure itself undermined the security of property rights, which likely reduced investor confidence and depressed savings.

2. Historical Background

In the 1930s, Turkey was still a young Republic, whose policy makers were keen on building a modern state over the institutional vestiges of the Ottoman Empire they inherited. A decade of war between 1913 and 1923, ravaging Anatolia and the Balkans, had brought about the end of the Ottoman Empire and led to the emergence of the new nation-state in an exceptionally difficult economic situation. In the 1920s, Turkey was still a largely agrarian economy with almost no industrial basis.[3] Agriculture and mining were severely depressed by the destruction during war years. The territorial disintegration of the Ottoman polity and the rise of nationalism among the subjects of the empire had also long-lasting demographic consequences. During successive wars, borders had shrunk and a great majority of the non-Muslims had to relocate. The mass expulsions of Armenians during World War I and the Greek-Turkish population exchange after the Greco-Turkish War of 1919-1922 led to a permanent change in the ethno-religious make-up of Anatolia.[4] Furthermore, the government pursued a "national" economic policy, discriminating against non-Muslim subjects of the Empire in the form of harassment, boycott, and exclusion from employment. As a result, by 1923, non-Muslims came to represent only around 2.5 percent of the overall population of Anatolia (Aktar, 2003: 87).

While these dramatic changes in the demographic structure led to a much more homogenous population in Anatolia, "national economic" policies aiming to create a predominantly Muslim business class were only marginally successful. First of all, despite ideological emphasis on economic independence, the economy remained dependent on foreign capital enterprises in the 1920s and even in the 1930s.[5] Second, Istanbul, still the hub of commercial and industrial activity, preserved most of its non-Muslim population who continued to have a disproportionately large

[3] In 1914, there were only 182 industrial establishments of a non-artisanal character, employing a mere 14,060 workers and employees (Ökçün, 1970).

[4] For an assessment of the extent of the demographic reshaping of Anatolia, see Dündar (2001). For an analysis of the effect of the Young Turk economic policies on the Ottoman Armenian communities, see Üngör and Polatel (2011).

[5] According to scholars such as Roger Owen, the dependence on foreign capital and on foreign enterprise continued even during the period of étatist policies in the 1930s. See Owen (1981: 293). Y. Sezai Tezel, one of the doyens of Turkish economic history, also maintains that the dependence on foreign capital must have persisted up until in 1930s.

presence in commercial and industrial life of the country during 1920s and 1930s.[6] In fact, policies directed against non-Muslims in other parts of the country had led many non-Muslims migrate to Istanbul, contributing further to city's exceptionality in terms of the degree of ethnic and religious diversity of its population.[7] The non-Muslim dominance in the economic sphere and the Cosmopolitan nature of Istanbul, however, were at odds with the nationalist outlook of the Turkish government. For one thing, the legitimacy and power of the new state rested on an alliance between the central military-bureaucratic elite and local Muslim notables, most of them landlords and small-town merchants. Non-Muslims, with stronger links to the international merchant community, continued to be perceived as a potential fifth column.[8] More importantly, the property distribution from non-Muslims to Muslims in the earlier decades had proved to be a policy that could serve "both to expedite the creation of a native bourgeoisie and also to make it beholden to the state." (Keyder, 2003: 45).[9] Taking this process further was probably one of the motives underlying the enactment and implementation of the Wealth Tax.

The shift in the government's development strategy was a second feature that underpinned the emergence of the new tax policy. The ruling elite of the Turkish Republic, like their Ottoman predecessors, strove to improve the country's position in the international division of labor through industrialization. In the 1920s, under conditions of an open economy, state had pursued an active policy of supporting private sector. While there was some industrial growth thanks to the post-war recovery, the industrial base remained small.[10] The disappointment with the policies supporting

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[6] According to the 1935 Population Census, 49.6 per cent of the Christian population and 48.5 per cent of the Jewish population in Istanbul were involved in industry or trade whereas only 25.2 per cent of Muslim population were involved in these sectors. A disproportionately large share of Muslim population (28.2 per cent) held occupations in agriculture or administration.

[7] According to the 1935 Population Census, Christians made up 19.2 per cent and Jews made up 5.4 per cent of the population in Istanbul.

[8] Since the late Ottoman era, intervention of Western states in domestic affairs on the grounds of non-Muslim rights and non-Muslims' celebreations of the Ottoman defeats contributed to this perception.

[9] For a recent study that analyzes how early Turkish property distribution shaped the identity of the emerging state, see Morack (2017).

[10] Foreign direct investment had contributed to a certain degree of development in transportation and financial infrastructure, yet it had failed to generate an industrial sector. According to Owen and Pamuk (1998: 244), share of manufacturing in GNP was 9 %, share of total industry including construction was 15 % and share of urban population was 17 % in 1929. In 1939, share of manufacturing in GNP was 22 % and share or urban population was 18 %. The high growth rate of manufacturing output during 1923-29 (7.2%) is attributed to post-war recovery. The

private accumulation at a time when Turkey acquired discretion over its fiscal policies led the government to pursue a new strategy in the 1930s. First, the lapse of the Lausanne treaty in 1929 gave the Turkish government full tariff and fiscal autonomy, which had not existed before.[11] Concurrently, the Great Depression convinced the government of the need to develop alternative sources of income and foreign exchange (Issawi, 1982: 159). As the country faced a severe decline in the prices of agricultural goods and a deterioration in its terms of trade during the depression, the government opted to adopt a more autonomous and active role in promoting industrial sector. A national bank was founded, protective trade policies were introduced, the foreign-owned railway lines and coal mines were nationalized. Various domestic and foreign firms, which went bankrupt during the recession, were taken over by the state (Issawi, 1982: 72-73) and several state economic enterprises were established in key sectors after the first five-year plan was put in force.[12]

The result was a more closed, autarkic economy.[13] More importantly, étatism, that is, broader and direct involvement of the state in the economy, became the guiding principle of developmental policy.[14] This had two implications. First, the expansion of the public sector required new sources of revenue, especially since the global economic recession had rendered foreign capital insufficient to finance industrialization.[15] An extraordinary tax, such as the Wealth Tax, would serve as a means

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wide-scale state support for private enterprise did not create a national, industrial business class envisioned by the Kemalist cadres; but instead enabled enrichment of profiteers and corrupt individuals with ties to bureaucracy. As such, the new middle classes—especially those few privileged dealing with foreign trade—came to be viewed with suspicion especially during the crisis of 1929. See Boratav (1981)

[11] According to the Lausanne treaty, Turkey could apply customs duties on the goods of the signatory countries according to the customs tariffs of 1916 and also had to remove existing non-tariff restrictions on foreign trade. These restrictions along with the Ottoman debt transferred to the Turkish government had made it difficult to pursue a proactive industrial policy in 1920s.

[12] By 1938, nineteen out of the twenty-five factories, projected as part of the first five-year plan, had already been established and industrial production had increased 80 percent since 1929. Barlas, *Etatism* 1998, pp. 98-99. Textile, sugar, paper, cellulose and earthenware were among these industries.

[13] The share of imports in GNP fell from 14.4 % to 6.8 % while the share of exports in GNP fell from 11.4 % to 6.9 % between 1928/29 and 1938/39. See Owen and Pamuk (1988: 245). The external terms of trade also deteriorated around 20 percent during this period.

[14] In fact, etatism was declared one of the governing (and constitutional) principles of the Turkish state in 1936. (Lewis, 1968: 287).

[15] Between 1923 and 1933, foreign investment fell from £63 million to £18 million according to Issawi (1982: 72). Yet, there were also some opportunities for foreign financing for the Turkish government. The creation of

of raising public revenues and transferring resources from the private sector to the state sector.[16] Second, étatism involved extensive regulation and control of private business activities. Maintaining this ideology, the single-party regime implemented tight restrictions on private enterprise, labor organization, and civic engagement in the 1930s.[17] Étatism, in this broad sense, helped propagate the idea that the private sector had to function in line with national interests. The legal restrictions on the formation of private enterprises, forced labor, price controls, and expropriation during this period were all justified by this principle.[18] The enactment of the Wealth tax, which was an executive act of expropriation rather than merely a fiscal tool, must be understood within this broader ideological framework.

The outbreak of World War II created even more room for the nationalist and étatist policies as economic conditions worsened. The country was plunged into a severe crisis during the early years of the war. By 1939, the Turkish government had mobilized around one million men. To meet the rising defense expenditure, it also started to print money, which led to a great deal of inflation. At the same time, the breakdown of international trade resulted in severe scarcity and high prices. The foreign trade commissioners and merchants, in particular non-Muslims, were held responsible for the shortage of goods in the markets.[19] Numerous opinion pieces in the contemporary Turkish press accused non-Muslim merchants of profiteering, speculation, hoarding, and participating in the black market. This was the official justification of the Wealth Tax; the government ostensibly claimed its objective to be the taxation of "extraordinary" profits made during the war and to reduce the amount of money in circulation. While the Wealth Tax Law itself did not make any explicit

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Sumerbank, combination of a state bank and a national holding company, was enabled by an interest-free 18-million-dollar loan for industrial development.

[16] According to Issawi (1982: 190), in 1933-39, state investment (mainly in industry and railways) averaged 4.5 to 5 percent of national income, and the private sector may have contributed an equal amount.

[17] One example of this etatist outlook is the Law of National Protection (Milli Koruma Kanunu, 1940), which allowed government to nationalize private sector, set targets for private production and control prices.

[18] The limited liability firms and corporations were subject to concession (approval of the Ministry of Trade) until 1957. The contemporary legal scholars justified this requirement with reference to étatism.

[19] The ethno-religious division of labor, which was seen as characteristic of the Ottoman Empire, was still prevalent in 1930s. According to Okte, for instance, non-Muslims were predominant in foreign trade sector—and preferred as business associated by the Europeans—while majority of Muslim Turks were engaged in agriculture and state sector. In fact, the 1935 Census confirms this view (fn. 9).

reference to non-Muslims as a separate taxpayer category, the high-ranking officials' accounts as well as taxpayers' testimonies indicate that the bureaucracy assessed the tax burden on each individual's ethno-religious identity. In line with the orders of the prime minister, non-Muslims were assigned disproportionately high and discriminatory rates vis-à-vis Muslims and foreigners.

3. How was the tax imposed?

The Wealth Tax was justified with reference to the exigencies of the World War II. Yet, the way the tax was justified in the mainstream press, the accounts of the officials in charge of implementing the tax, and taxpayers' testimonies reveal that the tax was meant to be more than financial relief. The prime minister, Şükrü Saraçoğlu, presented the law as a tool to eliminate the foreigners and place the Turkish markets in the hands of the Turks (Aktar 2013: 193). Yet, due to the pressures of the foreign consulates, the government eventually came to accept that the foreigners would be taxed at the same rate as the Muslims.[20] The non-Muslims, on the other hand, bore the major burden of the tax. Saroçoğlu alleged that his government was targeting only the profiteering non-Muslims (Ökte, 1951: 53; Akar, 2006). According to Faik Okte, the director of finance for the province of Istanbul during the imposition of the Wealth Tax, the finance department prepared tax assessments based on each taxpayer's "estimated income" in the previous year. The department then prepared separate lists for non-Muslims, who ended up having to pay four times the amound Muslims did, on average.[21] Dönmes (Sabbateans, a sect of Jewish converts to Islam) were to be taxed at a rate that fell in between Muslims and non-Muslims, but the tax department would not prepare separate lists for them (Ökte, 1951: 92, 102). As seen in Table 1, the final list mandated an imposition on 114,368 citizens with a total amount of 465,384,820 Turkish Liras (Ökte 1987: 197). 50 per cent of the taxpayers were from Istanbul and the amount they were assigned made up 68 per cent of the total tax. The tax, on average, was large. The average taxpayer was forced to pay, within two weeks and in cash, 10 times the GDP per capita at the time. As Table 2 shows, most of the tax was

[20] Okte (1951: 123, 213) considers the de facto exemption of foreigners from the tax as a "big mistake" because it contributed to the 'unjust' image of the tax and also because it punished non-Muslims who did not opt to switch to foreign nationalities.

[21] Okte (1951: 86). There were several taxpayer categories. The largest category, the category of extraordinary taxpayers (including the rich merchants and producers) were taxed according to a simple rule: Muslims would pay 1/8 of the revenues they were estimated to have accrued in the previous year. Non-muslims would pay half of the revenues they were estimated to have accrued in the previous year.

collected from non-Muslims. The amount assigned to non-Muslims was 83 per cent of the tax assigned to Istanbul tax-payers (Aktar, 2000: 154).

In practice, the discrimination against non-Muslims was probably much greater than the one-to-four ratio specified by the Finance Department.[22] In order to understand the discriminatory nature of the tax and its consequences, we need to look at the actual implementation of the law. Four aspects of the tax collection process were critical. First, the loopholes in the law created arbitrary practices. The law did not define any standard procedure or objective criteria through which the tax liability could be determined. In fact, the young Turkish bureaucracy at the time had limited information about taxpayers' earnings or assets.[23] On paper, the officials in charge of assigning the tax liability were supposed to estimate taxpayers' incomes in the previous year. These estimations were made with scant information collected from banks, other merchants, and party-affiliate committees consisting solely of Muslim politicians and tradesmen.[24] In fact, prior to the introduction of Wealth Tax, some bureaucrats suggested to enforce an income declaration for a larger group of taxpayers so that wealth tax rates would be assigned accordingly, but this proposal was rejected.[25] Hence, majority of the taxpayers were taxed not according to their declarations but according to the finance department's estimates, most of which were "made out of thin air."[26] This led to an arbitrary practice in the assessment of liability. In fact, the testimonies of the contemporary taxpayers and the head of the Finance Department indicate that personal animosities and political differences played a large role in determining each taxpayer's burden (Okte, 1950: 95).

Second, taxpayers did not have any legal venue to dispute the taxes imposed upon them. They tried to object the amount of tax they had to pay by writing petitions to the administrative authorities

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[22] According to a foreign reporter, non-Muslims paid 10-15 times of the amount paid by Muslims with comparable wealth. See Bali (2012: 375-6).

[23] Okte (1951: 25). Okte gives detailed information on the drawbacks of the financial system in Turkey at the time. In fact, the income tax constituted only 2,4 per cent of the national income prior to the war, which attests to the problems of Turkish public finance.

[24] Okte (1951: 47-48).

[25] Okte (1951: 207) maintains that such a procedure could have prevented the discrimination and injustice that emerged as a result of the Wealth Tax. Also prior to the tax, there was a proposal to increase the earnings' tax, which was also rejected. Okte (1950: 44-45).

[26] Okte (1951: 75) states this clearly: "mesnedimiz hava idi"

objecting. According to Okte, there were 24,316 such petitions and, as a result, more than 19 million Turkish liras were reduced from the oritiginal total assignment until the tax was abolished on March 15, 1944, when the defaulters were released from the labor camps and the tax was written off. most reductions were due to “error of fact” and “duplicate assignments.” The state simply did not recognize its citizens’ rights in legally disputing fiscal obligations.

Third, the law undermined the security of property rights. If the tax was not paid in time, the authorities could confiscate not only the taxpayers’, but also their co-living relatives’ assets, which was in conflict with the basic premises of the law of obligations. In the first few weeks of the law, such taxpayers were forced to sell their assets at very low prices, which Okte contends had always been one of the objectives of the government.[27]

Fourth, the short deadline for paying the assessment created liquidity problems for taxpayers, forcing them to liquate their assets at less-than-market values. The tax had to paid within two weeks and payments had to be made in cash (Ökte 1987, p. 25). Those who were not able to pay could be sent to the forced labor camps (almost all of those who were sent to the camps, 1229 persons, were non-Muslims). Thus, the tax hit those with liquidity constraints—specifically, entrepreneurs whose assets were tied in illiquid investments—much worse and paved the way for a substantial wealth transfer.

The nature of the tax, as we described here (the arbitrariness of the tax liability assessment, the lack of a legal plea process, the unreasonably short time frame for collection, and the expropriation of property for unpaid taxes), made it an appropriate instrument for eliminating non-Muslims from Turkish economy and enabling massive wealth transfer from non-Muslims to Muslim private sector and Turkish state.[28] Aktar (1999) analyzed the deeds of real estate sales related to Wealth Tax payments in Istanbul (28 Aralık 1942-30 Haziran 1943).[29] He shows that almost 40 per cent of the total value of real estate sold in order to pay the Wealth Tax was sold by the Jews. They are

[27] Bali (2012: 360-365).

[28] According to Okte (1950: 52), this was indeed one of the aims of the tax.

[29] During this period, according to the Wealth Tax Law, the Land Registry Office required a document from the Ministry of Finance departments indicating that the land/property in concern is not related to Wealth Tax liability. (Aktar 2000: 201). The total value of sales concerning wealth tax property was almost half of the total value of sales (16 % of all items sold were Wealth Tax related, their average value was mush higher). Aktar (2000: 203-204).

followed by Armenians (30 %) and Greeks (12.4 %). The non-Muslim firms' sales of their assets constitute also 10 per cent of the total value of assets. However, the number of sold items in this category is only four. Most of the assets sold by non-Muslims were bought by Muslims (67.7 %) and state/municipal enterprises (30 %).[30]

Wealth tax not only created serious economic hardships for non-Muslims in Turkey, but also raised their worries about future co-existence. In addition to the feelings of injustice and resentment the tax induced among non-Muslim communities, it also became a source of humiliation and fear. Thousands who could not pay the tax were sent to labor camps. According to Okutan (2004: 195), over 30,000 Jewish and 20,000 Orthodox Christian citizens left Turkey following the Wealth Tax.[31] Our study focuses on the one of the more direct effects of the Wealth Tax. Using hitherto unexamined data, we look at the impact of wealth tax on the entrepreneurial activity.

4. Data on Enterprises

This paper makes use of a novel dataset of enterprises established in Istanbul between 1926 and 1950 constructed from sources that were until now unknown, let alone considered. We collected and digitized business entries published in the official directories of the Istanbul Chamber of Commerce and Industry. Each directory, called *Adres Kitabı*, presents a comprehensive list of all enterprises operating at the year the directory was prepared. As required by the Commercial Code, each business was required to register their firm with the courts and the chamber of commerce. When these establishments were liquidated, their registries were struck down. These cross-sections are thus as close as possible to describing the population of each cross-sectional population.

It is not clear how frequently the Chamber published these directories. They are not reported in the Chamber's official list of publications. For this paper, we consulted the collections of the National Library in Ankara, Beyazıt Library in Istanbul, the archives of the Chamber of Commerce in Istanbul, and the New York Public Library and were successful in obtaining the directories for the years 1929, 1935, 1938, 1941, 1944, and 1950. There are two other directories that we did not use

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[30] Aktar (2000: 203-204).

[31] Most Turkish citizens of Jewish descent (estimate to be more than 30,000) migrated to Israel after 1948 (Aktar and Özel 1999).

for this study: 1917 and 1923, as well as a retrospective list published in 1926 (which includes all enterprises every registered in Istanbul). Our research did not yield any other similar source.

Each directory was organized into distinct commercial or industrial activities. The sectors were systematically defined and detailed. The directory then listed each firm that engaged in that activity. A firm could—and did—engage in multiple activities. For each enterprise, the directory provided the following details: its registration (*sicil*) number, its name, its address, and its capitalization category. There were four categories in ascending order of capitalization: the fourth to first classes and the "exceptional" class (*fevkalade*). The exceptional class consisted of firms whose capitalization exceeded TL 300,000 at the time. A business was assigned to first class if its capitalization was between TL 200,000 and TL 300,000. Second-class enterprises fell between TL 100,000 and 200,000. Third class was defined for capitalizations between TL 150,000 and 100,000. Anything below TL 15,000 was assigned into fourth class. These cutoffs were valid for all directories through 1941. The directory of 1944 did not report the capital class. The 1950 directory revised the cutoff as follows: fourth class lower than TL 10,000, third class between TL 10,000 and 50,000, second class between TL 50,000 and 100,000, first class between TL 100,000 and 200,000, and "exceptional" higher than TL 200,000.

In order to explore the links between characteristics of firm ownership, capitalization, business entry and exit, as well as the impact of the Wealth Tax, we used the directory information to tease out more details. First, we assigned each firm an enterprise form based on the naming conventions required by the Commercial Code of 1926. Any single proprietorship must use the owner's name and nothing else. Any partnership must either list all partners with unlimited liability (i.e. the general partners), or have the name of one general partner followed by a phrase such as "brothers" (*"biraderler"*) or "and company" (*"ve şürekası*") to indicate multi-ownership. Any private limited liability company's name must end with the designation "Limited" or "Ltd." for short. Similarly, any corporation's name had to contain the phrase *"Türk Anonim Şirketi"* or "T.A.Ş." for short, literally identifying the company as a Turkish corporation. These rules allowed us to classify each entry as a single proprietorship, partnership, private limited liability company, or corporation.[32]

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[32] Unfortunately, we could not distinguish general partnerships (*kollektif*) from limited partnerships (*kommandit*). Limited partnerships were required to only use the general partners' names in the legal name of the company.

For single proprietorships and partnerships, we were also able to use the name of the owner(s) to assign each firm an ethno-religious identifier. Differences between Turkish, Greek, Armenian, and Jewish (most of whom were Sephardic) names are evident. As a further robustness check, we also utilized the records of the Istanbul Jewish Genealogy Project, which has collected the surnames of the Jewish community as recorded in Istanbul's synagogues during the early twentieth century. Our methodology allowed us to designate single proprietorships and partnerships as Turkish (Muslim), Greek, Armenian, Jewish, Europeans, and any mix of these groups.

For limited liability companies and corporations, the best we could do was to distinguish foreign companies from domestic ones. Any PLLC or corporation had to use a Turkish name, but beyond that, these names did not systematically reveal anything about the owners, which is consistent with the nature of incorporated enterprises.

Finally, we exploited the registration numbers themselves to infer an establishment year for each firm. In 1926, the recently-promulgated commercial code mandated the assignment of registration, or *sicil*, numbers for any business. As a result, each enterprise—whether alive or long since liquidated—that ever existed in Istanbul's registry, was retroactively assigned a registration number. This list was then published between 1926 and 1927. We were not able to ascertain any particular pattern to the assignment of registration numbers for firms established before 1925. However, starting from 1926, the numbering was strictly chronological. Furthermore, each city had its own *sicil* and thus a particular set of registration numbers. This registration numbering system remained de-centralized well until 1956. Since numbering was local, any registration number between 1 (the smallest in our dataset) and 43,125 (the largest) is assigned to a single distinct business in Istanbul. No number was skipped (though they are not necessarily in our dataset), and no number was assigned to a firm whose legal office was outside of Istanbul. Further consulting the Chamber's records, we were able to define cutoff registration numbers for each year, thus yielding a "birth year" for each enterprise.

Unfortunately, the directories did not give this information consistently. The volumes of 1929, 1935 and 1938 did not report firms of fourth capitalization class. The 1944 directory did not report

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General partnerships, on the other hand, were not obligated to include the name of every single individual in the legal name. Thus, a company name such as "Gregg & Co." could very well be either a general or a limited partnership.

capitalization class or *sicil* numbers. Although the nominal cutoffs for capitalization categories remained constant during our period except 1950, rampant inflation during World War II will make comparisons between 1941 or earlier registries and 1950 suspect. Moreover, our method does not reveal anything about the identity of limited partners (whose names did not appear in the firm's legal name). Hence, while unlikely, there could be potentially many more companies whose partners were of different ethno-religious backgrounds. Finally, our ethnic classification cannot identify the small number of Sabbateans (*dönmes*), who were subject to extraordinary assessments (Ökte 1950: 92, 99). Since *dönmes* used Muslim names, they have been categorized as Muslims in our analysis. This omission due practical difficulties might, thus, bias the results against our hypothesis by potentially overestimating the impact of the tax on Muslims.

5. Istanbul's Commercial Life between 1926 and 1950

Istanbul had long been the commercial, financial, and industrial heart of the Ottoman Empire. While no longer the capital under the nascent Turkish Republic, the city retained its prominent position as the largest port for international trade, center of commodity trading (both points also shared by Izmir), and the largest financial market in the country. As such, Istanbul's commercial life reflected the broader developments in Turkey's economy. Figure 1 shows that for much of the interwar period, business entry remained stagnant after falling sharply in 1927. One can easily identify the big jump in 1942 and 1943. As we will show later, this is the Wealth Tax in action, which led to the liquidation of non-Muslim businesses whose assets were used to finance "Turkish"-Muslim startups.

Most firms were also organized as single proprietorships or unincorporated partnerships, as reported in Figure 2. The preponderance of single proprietorships is not surprising as it is the most common way to organize small businesses even today. What is perhaps more surprising is the lack of popularity of the private limited liability company, which quickly became the dominant legal form in whatever European economy it was introduced.[33] While this is the subject of a different

[33] See for a comparison of the historical take-up of private limited liability companies in Germany, France, the United Kingdom, and the United States.

line of research, restrictions on forming private limited liability companies were likely responsible for their small share in the distribution.[34]

6. Ownership Composition

The literature on Ottoman economic history—and Middle Eastern, more broadly—has long underlined non-Muslims' predominant role in the economy. There is wide agreement that Muslims did not participate in business significantly before the execution of nationalist policies after 1909. After a decade of war, most Anatolia had become decidedly more Muslim. Istanbul remained the exception, featuring a substantial minority population of about 10 percent well until the late 1950s. How were these different groups represented in the business ownership?

Table 3 shows the breakdown of single proprietorships and partnerships by ethno-religious identity of the owners across different cross samples. While Muslims were certainly active in trade, minorities enjoyed a much larger share relative to their size. This can be seen further in Table 4, which uses the 1935 and 1945 population censuses to give an estimate of how many enterprises owned by a particular ethnic group existed per 1000 people of that group. Muslims had about 1 business per 1000 Muslims living in Istanbul as opposed 2-3 enterprises for Christians and more than 6 for Jews. The slow increase in Muslim composition should be attributed to the wave in-migration of unskilled workers to Istanbul between 1935 and 1945.

A comparison of different cross-sectional samples reveals marked differences in the evolution of Muslim and minority enterprises. First is heterogeneous impact of the Great Depression, which affected Muslim enterprises significantly more severely, leading to a sharp decline in Muslim enterprises' total share. Throughout the 1930s, Muslim participation in business slowly recovered though Muslims' competitiveness was not restored completely until the second big shock: the Wealth Tax. The assessment seems to have dramatically altered the make-up of firm owners in Muslims' favor. Although minority firms reverted back somewhat by 1950, their fate had largely been sealed.

[34] Forming a private limited liability company required a special permission from the Ministry of Commerce. Forming a corporation required a special permission from the Board of Ministers.

Heterogeneity across enterprises of different ethno-religious groups went beyond a matter of numbers. Table 5 displays ownership characteristics, capitalization, and distribution among industries of all distinct single proprietorships and partnerships that appeared in the directory populations. The breakdowns presented in Table 5 are remarkably stable across specific cross-sections, justifying this pooled representation of the data. Consistent with earlier discussion, most of these businesses were single proprietorships rather than partnerships. Muslims, Greeks, and Armenians were more similar in this regard. Jewish entrepreneurs, on the other hand, were much more likely to pool their assets to form partnerships. About half of all Jewish enterprises consisted of partnerships, consistently across each directory, as opposed to the share of 64-70 percent found in other groups.

Second, contrary to the claims previously made in the literature, Muslim companies were richer. True, all firms were small. The median business in any group was a single owner with a third-class establishment. However, Muslims had a significantly lower share at this lower tail compared to the other groups. In other words, while Muslim participation was more meager relative to their share in the population, they had a higher proportion of more heavily capitalized firms. These larger businesses were mostly Muslim; 60 percent of first-class and 76 percent of exceptional-class firms were owned by Muslims.

Finally, while most firms were overwhelmingly mercantile establishments, there was partial specialization among ethnic groups. Muslims had a higher concentration in manufacturing and non-Muslims in trade. Within trade, Muslims and Greeks were relatively more active in trading foodstuff and agricultural products, while Armenians and Jews were found more in the trade of various textiles and garments. Regardless, the idea that entire sectors being overtaken by one specific group is decidedly false.

7. The Differential Impact of the Wealth Tax

So far, the raw data outlined the differences in owner characteristics of each cross-section and how firm ownership in Istanbul changed over time. Even though the evidence suggests that the tax was responsible for the sharp decline of non-Muslim enterprises from 1941 onwards, this section explores the issue in more detail in order to disentangle how much of the tax directly targeted non-Muslims, rather than incidentally affecting them through its impact on other factors. For example,

the tax was large and had to be paid within a manner of weeks. This method of imposition would be more likely to cause liquidation among smaller enterprises or those that face more strict liquidity constraints.

Ideally, one would undertake a continuous duration model, such as time-acceleration or Cox proportional hazards, to estimate the affect of covariates on survival time or time-to-failure. Unfortunately, our data do not permit this technique. We do not observe firms over the entirety of their life cycles. Without knowing the exact formation and liquidation dates, the continuous duration models are infeasible.

The second challenge arises due to the way the data became available. What the directories give are snapshots at specific intervals. If the directories were annual, we could have adopted a straightforward interpretation of annual survival. This, however, is not the case. Instead, we should interpret our model as either distinct survival events between directories (our preferred specification), or survival likelihood conditional on surviving from establishment to the closest directory date. The empirical strategy, no doubt, invites some degree of selection. For instance, 779 new firms were added to the directory in 1938. The registration numbers indicate that about 2,700 firms actually entered the market between 1935 and 1938. Hence, our dataset is missing approximately 2,000 enterprises that formed and got liquidated within three years between these two consecutive directories.

Finally, the third problem involves the inconsistency of the intervals between the directory publications. This interval can be three years (1935, 1938, and 1941) or six years (1929 and 1935). In order to make meaningful comparisons, we restrict attention to survival windows: the likelihood of a firm surviving for three years (or six, etc.) conditional on appearing for the first time in the directory.

We start by treating survival between each consecutive registry as a discrete event. This is a simple logit estimation of survival likelihood between any two directory listings. The set of covariates include dummies for enterprise forms, with the single proprietorship being the reference group, dummies for ethno-religious groups, capital class, the firm's age, and industry dummies. Our main interest is survival between the directories 1941 and 1944, during which the Wealth Tax was imposed.

Table 6 reports the results of survival estimations across consecutive directories. Enterprises had different survival odds based on owner characteristics depending on the period. Conditional on capitalization, age, enterprise form, and industry, Muslims had a much greater likelihood of liquidation than non-Muslims did between 1929 and 1935. Differences between ethnic groups did not materialize until the 1940s. Non-Muslim enterprises active in 1941 were much less likely to survive into 1944. The average marginal effect of survival between 1941 and 1944 is about 9 percent lower for non-Muslim firms relative to Muslim businesses. This the impact of the Wealth Tax. The enterprises that survived this immense shock then had survivorship bias as non-Muslim firms were much more likely to survive from 1944 to 1950 in comparison.

Our second estimation strategy is to use essentially difference-in-differences. We focus on three-year, six-year, or nine-year survival windows from the time the firm first appeared in a directory. For instance, to estimate 6-year survivorship consistently, we consider whether firms that first appeared in 1935 were re-listed in 1941, those that first appeared in 1929 survived until 1935, etc. These allows us to look at the underlying baseline hazards. For some firms, this three-year (or six-year, or nine-year) window will coincide with the year 1942 during which the tax was imposed. Thus, when we estimate six-year survival, firms that first appeared in 1938 will receive the tax shock but those that first appeared in 1935 will not (because the latter's six-year survival window terminates in 1941 before the tax was imposed). Our hypothesis states that the tax had a differential effect on Muslim and non-Muslim firms. Thus, we estimate the logit model of the form

$$y_i^* = \alpha + \beta Tax_i + \sum_j \gamma_j \, Ethnic_i + \sum_j \lambda_j \, Ethnic_i \times Tax_i + controls + u_i$$

where the error term u_i has the logistic distribution. y_i takes a value of 1 if the firm survived a fixed interval after first appearing in the registry. Tax_i is a dummy variable that takes a value of 1 if the timing of the tax was within the survival window of firm i and this firm was active at that time. Our variables of interest are the interaction terms between the tax dummy and ethnic identifiers. We have the usual control variables as before: enterprise form dummies, capital class, age, industry fixed effects. Age now indicates the firm's age at the time it first appeared in the relevant directory and thus cannot exceed two if we look at three-year survival, or five for six-year survival.

Table 7 displays the results of the difference-in-difference estimation of 3-year, 6-year, and 9-year survival. Overall, the tax seems to have actually helped Muslim firms' longevity but had a substantial and negative effect on minority firms. Non-Muslim enterprises enjoyed lower failure rates than Muslims did, on average. This could be a reflection of non-Muslims firms' higher productivity. It could also be a consequence of the Great Depression and survivorship selection of non-Muslim enterprises after 1942. That is, six-year and nine-year survival coefficients for baseline ethnic identifiers might be picking up higher Muslim dissolution rates in the periods 1929 to 1935 and 1944 to 1950. Regardless, the tax effect is large, particularly for the six-year interval. The tax spelled certain liquidation for non-Muslim firms, especially over the longer run.

Our final specification treats new entries in each directory as distinct cohorts and estimates cohort-specific hazard rates. Descriptive data give a preview of the result. Table 8 reports distribution of each cohort, i.e. firms that first appeared in a specific directory, among the directories in which they were last listed. For instance, the first column shows that 16.52 percent of all firms that first appeared in 1935 were last listed in the 1938 directory. To maintain consistency across each cohort, we restrict the 1935 cohorts to firms that were established after 1932. Hence the 1929 cohort describes firms established between 1926 and 1929, the 1941 cohort those that were "born" between 1938 and 1941, etc. Table 8 is, thus, a lifetable of sorts. It is clear from each cohort's survival distribution that the Wealth Tax was a severe negative shock. For each cohort, 33 to 63 percent of the overall cohort dissolved and got liquidated between 1941 and 1944, or 57 to 62 percent of each cohort that survived until 1941.

We now take cohort-specific conditional survival more seriously and use the previous logit framework to estimate conditional survival probabilities for each cohort separately. We include our previous set of controls, with Age again denoting the age of the firm at the time it first appeared in a directory (i.e. that firm's cohort). Tables 9 and 10 report the estimation results. For instance, for the 1929 cohort, the first column 1935 reports the coefficient estimates from a logit regression of appearing in the 1935 directory, the second column 1938 reports the estimates for a logit regression of being listed in 1938 conditional on also being listed on 1935. Thus, we estimate the hazard function of each cohort. In our discrete time model, hazard is exactly the conditional probability of dying at the given time conditional on surviving up to that point.

Tables 9 and 10 show that while the cohorts do exhibit some differences, the Wealth Tax had a robust, negative effect on minority firms' survival relative to Muslim firms. The effect was especially larger for the older cohort of 1929, where the average marginal effect of being a Greek, Armenian, or Jewish firm was about 10 to 13 percent higher chances of dissolution. These effects dropped to 6–7 percent for younger cohorts, still large but not as severe. The Wealth Tax hit the older firms particularly hard.

Furthermore, our cohort-specific estimates also show that highly capitalized firms were better able to withstand the tax burden. High capitalization is actually negatively associated with survival across all cohorts. The negative correlation is robust and significant. So is the positive effect for surviving through 1942. The average marginal effect of having a capital class of one step higher was associated with a more than 30 percent lower chance of liquidation. As capitalization for partnerships and single proprietorships was correlated with personal wealth, the results indicate that wealthier individuals could stave off the tax more effectively and protect the assets of their enterprises. The shielding effect of capital might have emerged for two reasons. First, the chaos and arbitrariness in which the tax was imposed prevented the assessors from making sound inferences on the taxpayer's wealth. Second, richer individuals or firms with higher capitalization might have faced slacker liquidity constraints, and thus could actually come up with the demanded payments within the required 15-day window.

Finally, corporations were also disproportionately affected by the Wealth Tax, as can be seen in many of our specifications. From Okte's account, we know that the government tried to impose harsh taxes on corporations. Our results show that even the tax targeted specifically the older corporations: the law led to substantial rates of liquidation for corporations over the longer survival window of 9 years, almost exclusively driven by the 1926 and 1929 cohorts. The tax did not have a significant effect on the survival of younger corporations that were established after 1935. Older corporations, like any old company, were likely more productive and larger in size. They were also more likely owned by non-Muslims compared to the newer corporations due to their longer history with this type of enterprise forms (Kuran 2011), suggesting that the assessors were once again concerned with going after minorities' assets. In doing so, the assessors removed large and productive enterprises from the market.

The Wealth Tax led to the liquidation of a disproportionately larger number of minority enterprises relative to Muslim firms. A natural question that follows the change in exit rates is whether a similar impact manifested in entry rates as well. Table 11 shows the distribution of new firms that first appeared in each cross-section among ethnic groups. The share of Muslims in new business entries fluctuated around 50 percent. However, in 1944, Muslim share jumped to over 80 percent, before returning to its pre-tax share. The tax thus both removed the existing non-Muslim firms from the market and—directly or indirectly—discouraged the formation of new ones. In addition, as Figure 1 indicates, there was a dramatic increase in the number of startups in 1942 and 1943. The overwhelming majority of these enterprises likely had Muslim ownership as well. The historical evidence suggests that there was a direct link between the reduction of non-Muslim entries and the sharp rise in the formation of Muslim startups as the proceeds made from the liquidation of non-Muslim businesses to were used to finance Muslim entrepreneurs. The political environment of 1942 thus created an important blow to Greek, Jewish, and Armenian participation in Istanbul's commercial life.

8. Consequences

The removal of non-Muslim enterprises had a number of implications for the Turkish economy. To the extent that non-Muslims had higher human capital, a claim that the literature generally accepts, and that human capital matters for firm productivity, the tax must have contributed to the poor growth of total factor productivity in Turkey.

More evidently, the tax led to the liquidation of a large proportion of old enterprises, those that survived at least five or more years. As Table 12 shows, the share of the younger tail (first two years) increased substantially and the share of older firms fell in 1944 compared to the preceding cross-sections. This is simply because the vast majority of old enterprises had non-Muslim ownership: roughly 60 to 65 percent in 1935, 1938, and 1941. Our cohort-specific estimates have shown that the tax had a particularly severe effect on the older cohorts of 1929 and 1935. If old companies are indeed more productive (as is usually the case empirically) then their unnecessary liquidation would have been a serious blow to the Turkish economy, especially in sectors with a higher degree of linkages. We hope to address these questions more precisely in the future.

To the extent that human capital mattered for entrepreneurship and firm productivity, the removal of non-Muslims from Istanbul's commercial life and their replacement with Muslim-owned firms further exacerbated the fall in total factor productivity. Disparities in human capital between Muslims and non-Muslims had persisted well into the Republic, as can be seen from the differences of literacy rates across religious groups in 1935 (Table 13). The narrative evidence also suggests that the state notoriously mismanaged the commercial and industrial properties it confiscated. For instance, the ships of Banzilay and Benjamen Company were "sold" to the Turkish Maritime Lines, a state enterprise which, having lacked the technical expertise to operate these ships, left them to rust (Okte 1950: 184).

As such, the Wealth Tax succeeded in fulfilling one of the government's dual objectives in "restoring" the economy to the Muslims through transfers and confiscations. In doing so, it arguably postponed the realization of the government's more salient goal: economic modernization and convergence with the West.

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Table 1: Tax Assessment, Istanbul and Turkey

	Istanbul	Turkey
Number of real individuals	61,787	114,368
Percent of overall	54.0	100.0
Amount imposed (nominal TL)	317,275,642	465,384,820
Percent of overall	68.2	100.0
Amount collected (nominal TL)	221,307,508	314,920,940
Percent of overall	70.3	100.0
Tax imposed per capita (nominal TL)	5,135	4,069
Tax per capita / income per capita	15.06	11.93
Tax collected per capita (nominal TL)	3,583	2,754
Tax collected per capita / income per capita	10.50	8.08

Source: Tax figures are taken from Ökte (1951) and Aktar (2000). Income per capita is taken from TUIK's database.

Table 2: Tax Assessment by Category

Groups	Percent of taxpayers	Percent of assessment	Tax per capita (TL)
Muslim (I)	0.74	4.95	37,597
Non-Muslim (I)	4.10	54.36	74,120
Muslim (II)	1.48	0.90	3,386
Non-Muslim (II)	2.01	2.97	8,232
Muslim merchants	4.14	1.16	1,566
Non-Muslim merchants	38.60	20.83	3,015
Corporations	0.25	2.14	47,113

Notes: Each row refers to a different tax "group" that assessors created to facilitate tax collection.
Source: Ökte (1951), Aktar (2000).

Table 3: Single Proprietorships and Partnerships by Religion (Percent)

	1926	1929	1935	1938	1941	1944	1950
Muslim	39.23	44.86	38.72	41.61	46.4	67.41	56.97
Greek	18.82	14.09	16.83	15.57	14.27	8.51	11.05
Armenian	13.55	10.6	11.88	11.38	9.90	5.70	7.26
Jewish	21.21	21.86	24.42	24.52	23.01	13.93	18.63
Mixed NM	0.19	0.67	0.61	0.25	0.28	0.16	0.25
M-NM	0.65	0.98	0.99	1.16	1.02	0.69	1.18
Other	6.35	6.94	6.55	5.51	5.11	3.59	4.65

Notes: The sample excludes firms of capital class 4, which are only reported for the cross-sections 1926, 1941, and 1950.
Source: Istanbul Ticaret Odası, *Adres Kitabı*, 1929, 1935, 1938, 1941, 1944, 1950.

Table 4: Number of Firms per 1000 people of Each Group				
	1935	1941	1944	1950
Muslim	0.94	0.96	2.06	2.31
Christian	2.10			
Greek		3.38	2.40	5.90
Armenian		3.55	2.34	5.70
Jewish	6.93	9.04	6.41	13.81

Notes: Figures indicate the number of enterprises of a particular ethno-religious group in the directory of that year per 1000 people of that group living in Istanbul as indicated in the closest population census. There are two populations censuses we use: 1935 and 1945. The census of 1935 does not distinguish between different Christian groups, so our figure in the first columns aggregates over Greeks, Armenians, and Europeans. Figures for 1941, 1944, and 1950 use the 1945 census, which does report the number of "Orthodox" and "Gregorian" (as well as other Christian denominations) separately. We assume that the vast majority of Armenians were Gregorian and Greeks were Orthodox (though these groups certainly had a small number of Catholic or Protestant members). Firms with capital class of 4 are excluded.
Source: Turkey, Population census of Turkey, 1935, 1945; Istanbul Ticaret Odası, *Adres Kitabı*, 1929, 1935, 1938, 1941, 1944, 1950.

Table 5: Firm Ownership, Legal Forms, Capital, and Industry, 1926-50

	Turkish	Greek	Armenian	Jewish
Observations	4353	948	633	1381
Percent	55.82	12.16	8.12	17.71
Enterprise forms (column %)				
Single	68.76	67.72	73.14	52.28
Partnership	31.24	32.28	26.86	47.72
Distribution of capital class (column %)				
3rd class	76.7	83.55	81.73	78.65
2nd class	14.71	11.47	12.18	12.96
1st class	6.66	4.55	5.77	7.73
Exceptional	1.93	0.43	0.32	0.66
Distribution of industry (column %)				
Manufacturing	9.21	7.28	6.64	5.65
Trade	74.13	83.86	87.05	88.05
Textiles & garments	21.85	17.83	28.91	31.79
Food & raw inputs	26.53	29.85	15.80	19.26

Notes: The sample includes all cross-sections of single proprietorships and partnerships, with the exclusion of firms with capital class 4. Industries are not mutually exclusive. Textiles & garments refer to dry goods that include anything from spun cotton to finished clothing, from plastic shoes to leather hats. Food & raw indicates any food item (fresh or processed), any agricultural good (whether food item or industrial input), skin, untanned leather, mohair, etc.
Source: Istanbul Ticaret Odası, *Adres Kitabı*, 1929, 1935, 1938, 1941, 1944, 1950.

Table 6: Survival across Registries

	(1)	(2)	(3)	(4)	(5)	(6)
Cross-section	1926	1929	1935	1938	1941	1944
Dep. var.	1929=1	1935=1	1938=1	1941=1	1944=1	1950=1
Partnership	0.808***	-0.861***	-0.600***	-0.745***	-0.343***	-0.832***
	(0.124)	(0.101)	(0.128)	(0.128)	(0.112)	(0.0837)
PLLC	1.978***	-0.251	-0.268	-0.247	-0.469**	-0.0174
	(0.519)	(0.313)	(0.270)	(0.267)	(0.223)	(0.164)
Corporation	2.476***	-0.0341	-0.0528	-0.269	0.140	0.744***
	(0.351)	(0.209)	(0.293)	(0.295)	(0.303)	(0.182)
Capital	-0.316***	0.0772	0.120	0.121	0.192**	
	(0.0728)	(0.0665)	(0.0889)	(0.0919)	(0.0912)	
Age		-0.0226	-0.111***	-0.0330	0.0212	-0.109***
		(0.0342)	(0.0330)	(0.0319)	(0.0303)	(0.0173)
Greek	-0.330**	0.997***	0.319*	0.148	-0.510***	1.501***
	(0.139)	(0.153)	(0.181)	(0.186)	(0.155)	(0.129)
Armenian	-0.125	1.012***	0.280	0.0930	-0.684***	1.392***
	(0.162)	(0.171)	(0.214)	(0.212)	(0.174)	(0.158)
Jewish	0.474***	0.884***	0.280*	0.0359	-0.481***	1.258***
	(0.145)	(0.131)	(0.162)	(0.163)	(0.136)	(0.105)
Mixed NM	0.0205	0.493	-1.337*	0.638	-0.401	2.012**
	(0.880)	(0.614)	(0.694)	(1.095)	(0.923)	(0.851)
Mixed M-NM	0.614	0.0348	-0.801	-0.867*	-0.716	0.377
	(0.715)	(0.535)	(0.502)	(0.468)	(0.474)	(0.458)
Other	0.704***	0.248	-0.178	0.181	0.0233	1.118***
	(0.239)	(0.191)	(0.243)	(0.303)	(0.277)	(0.199)
Constant	-0.234	-0.372*	1.345***	1.242***	0.518**	0.705***
	(0.217)	(0.200)	(0.263)	(0.266)	(0.258)	(0.0812)
Observations	2,306	2,243	2,116	2,204	2,441	4,878
Pseudo R2	0.211	0.0789	0.0588	0.0487	0.0589	0.128

Notes: Columns report the coefficient results of logistic regressions where the dependent variable is a dummy variable indicating whether a business survived from one directory to the other, as indicated by each column. All estimations include an unreported set of industry dummies. Firms with capital class of 4 are excluded.
Robust standard errors in parentheses.
Significance levels: *** p<0.01, ** p<0.05, * p<0.1

Table 7: Survival over 3, 6, or 9 Years

	(1)	(2)	(3)
Cross-sections	1926, 1935, 1938,1941	1929, 1935, 1938	1926, 1929, 1935, 1941
Dependent variable: whether survived	3 years	6 years	9 years
Partnership	0.200**	-0.918***	-0.860***
	(0.0855)	(0.112)	(0.0998)
PLLC	0.627***	-0.411	-1.004***
	(0.229)	(0.252)	(0.346)
Corporation	1.715***	0.0647	-0.836**
	(0.248)	(0.280)	(0.328)
Capital	-0.188***	0.125	0.227***
	(0.0537)	(0.0849)	(0.0787)
Greek	-0.295***	0.533***	0.563**
	(0.108)	(0.199)	(0.220)
Armenian	-0.142	0.653***	0.799***
	(0.125)	(0.240)	(0.245)
Jewish	0.278**	0.611***	0.719***
	(0.111)	(0.178)	(0.206)
Tax	0.518***	0.930***	-0.150
	(0.175)	(0.170)	(0.163)
Greek*Tax	-0.637**	-1.022***	-0.332
	(0.370)	(0.369)	(0.326)
Armenian*Tax	-0.367	-1.047**	-0.694*
	(0.541)	(0.417)	(0.362)
Jewish*Tax	-1.080***	-0.697**	-0.504*
	(0.307)	(0.295)	(0.280)
Legal*Tax	-1.125***	0.0146	0.333
	(0.385)	(0.375)	(0.322)
Constant	0.0616	-0.693**	3.323***
	(0.165)	(0.354)	(0.252)
Observations	4,328	2,099	4,561
Pseudo R2	0.131	0.123	0.422

Notes: Columns report the coefficient results of logistic regressions where the dependent variable is a dummy variable indicating whether a business survived a fixed period of time after first appearing in a directory. This fixed period is three years in column 1, six years in column 2, and nine years in column 3. Each estimation includes (but does not report) the full set of industry dummies, other owner characteristics (e.g. mixed companies) and their interactions with the tax shock (e.g. mixed company interacted with tax treatment). "Legal" refers to corporations and PLLCs together. Firms with capital class of 4 are excluded.
Robust standard errors in parentheses.
Significance levels: *** p<0.01, ** p<0.05, * p<0.1

Table 8: First and Last Directories (% of First Directory)							
First	Last Directory						
Directory	1926	1929	1935	1938	1941	1944	1950
1926	37.67	28.07	6.83	4.17	5.52	7.96	9.78
1929		49.17	11.05	5.34	6.48	10.67	17.28
1935			19.65	16.52	17.6	20.41	25.81
1938				17.96	16.14	28.01	37.89
1941					25.12	41.76	33.11
1944						52.63	47.37

Notes: The figures describe the distribution of the last directories firms of a particular cohort appear. For example, row 1929 report that out of all firms that first appeared in the 1929 directory, 49.17 percent only appeared in 1929, 11.05 percent appeared last in 1935, and so on. Firms with capital class of 4 are excluded.
Source: Istanbul Ticaret Odası, *Adres Kitabı*, 1926, 1929, 1935, 1938, 1941, 1944, 1950.

Table 9: Cohort-Specific Survival Estimates, 1929 and 1935

Cohort	1929					1935			
Dep.var.	1935	1938	1941	1944	1950	1938	1941	1944	1950
Partnership	-1.373***	-0.686**	-1.487***	-0.638**	-1.225***	-1.332***	-1.082***	-0.417**	-0.678**
	(0.159)	(0.290)	(0.395)	(0.277)	(0.368)	(0.267)	(0.255)	(0.197)	(0.306)
PLLC	-0.244	-0.123	-0.0608		0.0376	-0.197	0.150	-0.619	0.0769
	(0.399)	(0.730)	(1.169)		(0.682)	(0.542)	(0.516)	(0.464)	(0.579)
Corporation	0.895**	-0.226	0.618	-5.203***	1.026	0.731	1.820**	-0.312	0.925
	(0.365)	(0.570)	(0.940)	(0.905)	(0.771)	(0.808)	(0.912)	(0.902)	(0.838)
Capital	-0.634***	-0.579***	-0.731***	2.140***	-0.375**	-0.878***	-1.190***	1.643***	-0.772***
	(0.0973)	(0.143)	(0.203)	(0.201)	(0.179)	(0.157)	(0.155)	(0.161)	(0.181)
Age	-0.166***	0.00952	0.198	0.108	-0.118	-0.518***	0.0243	-0.0612	-0.493***
	(0.0595)	(0.0993)	(0.152)	(0.0858)	(0.117)	(0.150)	(0.143)	(0.0922)	(0.151)
Greek	0.713***	0.242	0.0118	-0.843***	1.030**	0.614	0.607	-0.614***	0.161
	(0.227)	(0.410)	(0.540)	(0.277)	(0.516)	(0.412)	(0.384)	(0.216)	(0.387)
Armenian	1.270***	0.302	0.357	-0.823***	1.998**	0.514	0.316	-0.569**	0.662
	(0.293)	(0.452)	(0.620)	(0.301)	(0.789)	(0.487)	(0.432)	(0.250)	(0.513)
Jewish	0.968***	-0.0192	0.0257	-0.572**	0.804*	0.315	-0.0180	-0.464**	-0.0557
	(0.216)	(0.342)	(0.482)	(0.268)	(0.412)	(0.331)	(0.303)	(0.204)	(0.331)
Constant	2.218***	3.546***	5.578***	-3.418***	1.524**	4.714***	3.853***	-2.454***	3.032***
	(0.304)	(0.503)	(0.810)	(0.464)	(0.597)	(0.452)	(0.391)	(0.279)	(0.447)
Observations	1,165	782	690	640	310	1,183	1,066	987	424
Pseudo R2	0.173	0.0999	0.187	0.252	0.121	0.187	0.196	0.183	0.163

Notes: Columns report the coefficient results of logistic regressions where the dependent variable is a dummy variable indicating whether a business of a particular cohort appeared in the directory indicated by the column conditional on appearing in the previous directory. All estimations include an unreported set of industry dummies, other owner characteristics (e.g. mixed companies), and a constant term. Firms with capital class of 4 are excluded.
Standard errors in parentheses.
Significance levels: *** p<0.01, ** p<0.05, * p<0.1

Table 10: Cohort-Specific Survival Estimates, 1938, 1941, 1944

Cohort	1938			1941		1944
Dep.var.	1941	1944	1950	1944	1950	1950
Partnership	-1.105***	-0.734***	-0.826***	-0.619***	-1.239***	-0.833***
	(0.245)	(0.163)	(0.256)	(0.156)	(0.241)	(0.158)
PLLC	0.222	-0.226	-0.356	-0.865**	0.482	0.407
	(0.593)	(0.393)	(0.440)	(0.365)	(0.466)	(0.304)
Corporation	1.644*		3.080***	0.376	1.509**	1.449***
	(0.851)		(0.881)	(0.813)	(0.657)	(0.336)
Capital	-1.318***	2.332***	-1.132***	2.143***	-0.762***	
	(0.164)	(0.149)	(0.179)	(0.132)	(0.140)	
Age	-0.422***	-0.0463	-0.208	0.0278	-0.282**	-0.708***
	(0.133)	(0.0787)	(0.129)	(0.0798)	(0.126)	(0.0475)
Greek	0.0558	-0.213	0.952**	-0.408**	0.697*	3.480***
	(0.366)	(0.189)	(0.405)	(0.205)	(0.363)	(0.511)
Armenian	0.281	-0.306	0.355	-0.355	1.661***	2.461***
	(0.471)	(0.224)	(0.419)	(0.251)	(0.560)	(0.503)
Jewish	-0.311	-0.0151	0.352	-0.545***	0.851***	3.104***
	(0.294)	(0.177)	(0.292)	(0.177)	(0.301)	(0.376)
Constant	5.698***	-3.709***	3.281***	-3.575***	2.386***	1.227***
	(0.446)	(0.259)	(0.428)	(0.251)	(0.372)	(0.122)
Observations	1,474	1,417	623	1,595	621	2,000
Pseudo R2	0.218	0.234	0.223	0.250	0.205	0.318

Notes: Columns report the coefficient results of logistic regressions where the dependent variable is a dummy variable indicating whether a business of a particular cohort appeared in the directory indicated by the column conditional on appearing in the previous directory. All estimations include an unreported set of industry dummies, other owner characteristics (e.g. mixed companies), and a constant term. Standard errors are reported in parentheses. Firms with capital class of 4 are excluded.
Standard errors in parentheses.
Significance levels: *** p<0.01, ** p<0.05, * p<0.1

Table 11: Distribution of New Firms by Ethno-Religious Group (Percent)

	1929	1935	1938	1941	1944	1950
Muslim	51.74	41.44	50.58	62.12	85.42	57.61
Greek	12.71	16.22	10.81	9.66	3.66	10.54
Armenian	8.62	9.63	8.69	4.36	2.44	6.48
Jewish	17.85	23.83	23.75	18.56	6.36	18.77
Mixed NM	1.51	0.76	0.19	0.38	0.06	0.31
Mixed M-NM	1.36	1.52	2.51	1.7	0.58	1.81
Foreign	6.2	6.59	3.47	3.22	1.48	4.49

Notes: Mixed NM refers to mixed partnerships whose owners are of different non-Muslim background (e.g. Greek-Armenian partnership). Mixed M-NM refers to a mixed partnership in which at least one owner is Muslim and at least one owner is a non-Muslim (including European). 1941 and 1950 cross-sections do not include firms with capital class of 4.
Source: Istanbul Ticaret Odası, *Adres Kitabı*, 1929, 1935, 1938, 1941, 1944, 1950.

Table 12: Distribution of Firms by Age (Percent)

Age	1929	1935	1938	1941	1944	1950
0--1	7.59	8.56	9.37	7.28	11.61	12.52
1--2	9.89	8.84	8.03	9.47	15.8	8.87
2--3	8.78	8.7	8.77	7.36	11.45	7.31
3--4	7.15	6.5	7.34	7.52	4.03	9.35
4--5 (4+)	66.59	6.45	6.48	5.69	4.41	6.83
5+		60.96	60	62.67	52.71	55.12
Total	100	100	100	100	100	100

Notes: 1941 and 1950 cross-sections do not include firms with capital class of 4.
Source: Istanbul Ticaret Odası, *Adres Kitabı*, 1929, 1935, 1938, 1941, 1944, 1950.

Table 13: Literacy rates by religion in Istanbul, 1935 (percent)

Religion	Gender	Can read	Can read and write
Muslim	Male	62.27	63.35
	Female	43.20	45.31
Christian	Male	68.90	70.92
	Female	51.94	54.36
Jewish	Male	68.04	68.87
	Female	54.58	55.12

Source: Genel Nüfus Sayımı, Devlet Basimevi, 1936, p.40

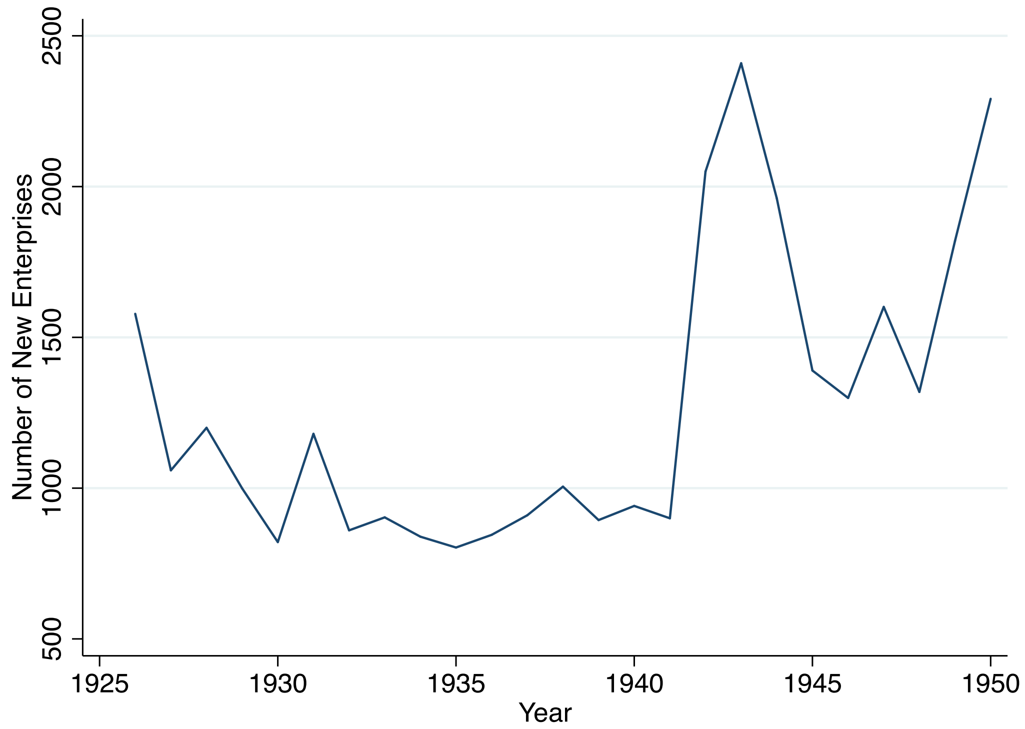

Figure 1: New Enterprises in Istanbul by Year, 1926-50

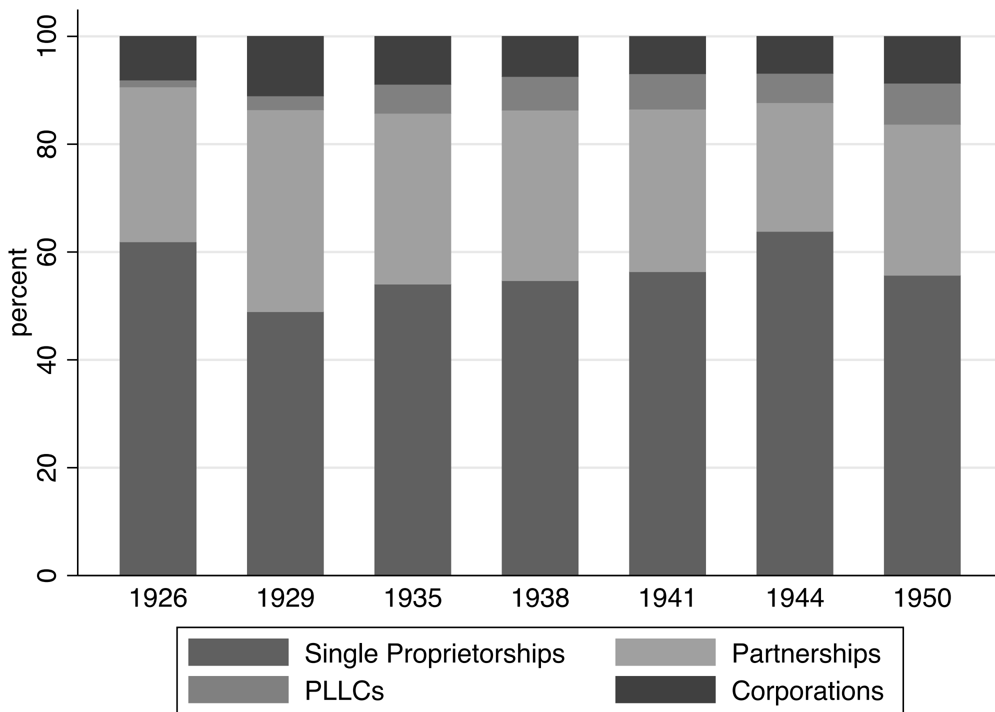

Figure 2: Distribution of cross-sections by enterprise forms, 1926-1950