

No. 09-08
May 2009

WORKING PAPER

FISCAL CRISIS AND INSTITUTIONAL CHANGE IN THE OTTOMAN EMPIRE AND FRANCE

By Eliana Balla and Noel D. Johnson

MERCATUS CENTER

GEORGE MASON UNIVERSITY

The ideas presented in this research are the authors' and do not represent official positions
of the Mercatus Center at George Mason University.

Fiscal Crisis and Institutional Change in the Ottoman Empire and France

Eliana Balla
Department of Banking Supervision and Regulation
Federal Reserve Bank of Richmond
eliana.balla@rich.frb.org

Noel D. Johnson
Department of Economics
George Mason University
Enterprise Hall, MSN 3G4
Fairfax, VA 22030-4444
njohnsoL@gmu.edu

Acknowledgements

We thank the following people for their assistance in researching and writing this project: Douglas Allen, Murat Çizakça, Metin Coşgel, Shahid Ebrahim, Alejandra Edwards, Steven Fazzari, Edgar Kiser, Timur Kuran, Jean-Laurent Rosenthal, Sanjay Subrahmanyam, seminar participants at ISNIE 2004, the National Tax Association Meetings, UCLA's Von Greppe seminar, the University of Manitoba, California State University – Long Beach, UC Riverside, and three anonymous referees from the Journal of Economic History. Any mistakes are the fault of the Authors. Contact author is Johnson at njohnsoL@gmu.edu. An earlier version of this paper was a chapter in Eliana Balla's dissertation. The views expressed in this paper belong to the authors and do not represent those of the Federal Reserve Bank of Richmond or the Federal Reserve System.

Abstract

Why is it that some countries adopted growth enhancing institutions earlier than others during the early-modern period? We address this question through a comparative study of the evolution of French and Ottoman fiscal institutions. During the sixteenth century both countries made extensive use of tax farming to collect revenue, however, uncertain property rights caused by fiscal pressure led to different paths of institutional change in each state. In France, tax collectors successfully overcame the collective action costs of imposing constraint on the king. In the Ottoman Empire, tax collectors faced prohibitive transaction costs to organizing in a similar manner.

JEL Classifications: N40, P48, H11

Key Words: Tax Farming, Economic History, Early-Modern France, Ottoman Empire

Good institutions are vital to economic growth. Unfortunately, most of today's countries do not have institutions which, in the words of North and Thomas, "...bring private returns into parity with social returns".¹ Given the role of history in constraining today's choices, this observation should come as no surprise.² Few regions of the world illustrate it more clearly than the Middle East and the history of much of the Middle East is that of the Ottoman Empire. Among Ottomanists there is in fact a significant debate over the extent to which Ottoman public institutions were capable of adapting to changing economic circumstances during the early-modern period.³ We contribute to this debate by contrasting the differential response of the French and Ottoman States to similar fiscal crises during the early seventeenth century. The fundamental question we seek to illuminate is why French fiscal institutions evolved in response to this crisis in ways that ultimately increased the amount of constraint on French rulers, whereas Ottoman institutions did not.⁴

We take as our starting point the fiscal crises faced by the Ottoman Empire and France at the beginning of the seventeenth century. These crises led to institutional failure in both countries as rulers increasingly violated the property rights they had previously granted to tax collectors. In France, a cartel of tax collectors known as the Company of General Farms

¹ North and Thomas, "Rise," p. 22.

² There is an extensive literature identifying the deep relationship between historical institutions and present-day performance. For examples, see Acemoglu et al., "Colonial Origins"; La Porta et al., "Law"; and Sokoloff and Engerman, "History Lessons."

³ For the argument that Ottoman public institutions were adaptive, see Pamuk, "Evolution." For the view that Ottoman public institutions were less capable of adapting, see Timur Kuran, "Islamic Commercial Crisis."

⁴ We follow North in defining institutions as the formal and informal "rules of the game" governing exchange. See North, *Institutions*. The obvious starting point when discussing the credibility of early-modern European institutions is North and Weingast, "Constitutions and Commitments," but we differ from North and Weingast in our emphasis on the possibility of constraint arising through the fiscal system, as a precursor to full-blown constitutional change. This argument resonates with work on England by Stasavage, "Credible Commitment."

emerged and imposed greater constraint on the king.⁵ In the Ottoman Empire, by contrast, fiscal crisis did not lead to the emergence of a similar coalition. Instead, uncertain property rights led to a breakdown in the fiscal system with neither the sultan, nor the tax collectors, respecting agreements during much of the eighteenth century. We attribute the differential evolution of institutions in France and the Ottoman Empire to the fact that tax collectors in the Ottoman Empire faced higher costs of organizing than did their French counterparts because they started with a different set of institutions. In France, the ability of tax collectors to pool capital allowed them to organize on a scale large enough to act as a credible threat against the crown. Their capital could be pooled at relatively low cost since in seventeenth century France there were already nascent institutions which distinguished between a “natural” and a “corporate” person, created tradable shares in an organization, and separated ownership from control rights for investors. By contrast, in the Ottoman Empire the combination of inheritance law and the ability to immobilize property in the Islamic trust (*cash waqf*) significantly *raised* the costs of accumulating and pooling capital in private enterprises. These factors prevented Ottoman tax collectors from emerging as a unified source of credit and thus kept them from imposing constraint on the fiscal activities of the sultans.

We build on an existing literature which emphasizes the role played by private sector institutions in establishing credible public sector institutions.⁶ As the history of early-modern France and the Ottoman Empire suggest, public sector reforms are unlikely to succeed unless the

⁵ Our argument that coalitions emerged through the fiscal system in France is consistent with work by Bien, “Offices”; Bossenga, “Politics”; and Potter, “Coalitions.” However, while these authors emphasize the role played by corporate bodies in acting as financial intermediaries for the crown, they do not interpret their rise as a source of constraint on the king’s actions. We argue, by contrast, that the role played by the Company of General Farms as a financial intermediary went hand in hand with its ability to credibly protect its property rights over the tax system.

⁶ See Acemoglu et al., “Rise”; Root, “Tying the King’s Hands”; Kuran, “Absence.”

necessary private sector institutions are in place. Specifically, tax collectors in France would not have been able to overcome the collective action costs of organizing to constrain the crown if they had not been able to act as a quasi-private corporation and pool large amounts of capital. Without such private sector institutions, Ottoman tax collectors remained relatively disorganized, and no significant constraint against the sultan ever emerged from the fiscal system.⁷

We also shed light on the historical debate concerning the “flexibility” of public institutions in the Ottoman Empire. The contrasting the experiences of the Ottoman Empire and France suggest a much subtler interpretation of what is meant by “flexibility” than currently implied by the literature. The ability of French tax collectors to organize and impose constraint on the absolute monarch actually *decreased* the flexibility of the *ancien régime* government. Louis XVI thus faced higher costs to manipulating fiscal institutions than did Louis XIV. In this sense, it does not make sense to argue that *ancien régime* public sector institutions were more “flexible” than those of the Ottoman Empire during the eighteenth century. After all, it was the French public sector that experienced a catastrophic failure in 1789, not the Ottoman public sector. In the long-run, however, it was the inflexibility of French institutions at the end of the eighteenth century which gave the Revolution traction by limiting the options available to the monarchy. In the Ottoman Empire, by contrast, successive governments were able to engage in incremental reforms more or less at will, for over another century.

Tax Collection in France and the Ottoman Empire at the End of the Sixteenth Century

⁷ We do not claim there was no constraint in the Ottoman Empire. As we discuss below, the military, the clergy, and others constrained the sultans. But no significant constraint ever emerged within the fiscal system.

At the end of the sixteenth century the French fiscal system was relatively decentralized. Tax rates and bases varied greatly, reflecting the different terms under which various regions submitted themselves to royal authority. Consequently, taxes were also collected in many different ways. There were two basic organizational forms for tax collection. “Direct” taxes, on wealth such as the *taille* were collected by agents of the crown, usually venal office holders. The crown determined, at the beginning of each fiscal year, how much it required from a given tax, and then it was the duty of the collector to get that amount in addition to a percentage “cut” out of receipts. Thus, there was really no tax rate, as such, for direct taxes. The collectors decided, within certain bounds, how much to collect from whom. “Indirect” taxes on transactions, such as the *gabelles* (salt taxes), *aides* (sales taxes, usually on wine and spirits) and, *traites* (internal and external customs duties) were typically leased to individuals known as tax farmers. Under tax farming, the tax farmer agreed to make a fixed payment to the crown in exchange for the residual claim to any tax revenues collected above the fixed amount. Tax farms had clearly defined rates on transactions which could be (and often were) subject to adjudication in tax courts. At the end of the sixteenth century, the tax farms composed about a third of royal revenues and the *taille* brought in another fifty percent. After 1661 the tax farms increased in importance and brought in between forty and fifty percent of tax revenues a year.⁸

Given the variety of taxes involved, each with its own tax base and method of collection, it was costly for the crown to determine exactly how much each tax was really worth. Local collectors, on the other hand, had at least a vague notion of how much the tax was worth to them. One way for the crown to overcome this information asymmetry was to allocate the tax contracts using competitive auctions. Tax farming as a means to minimize the king’s cost of collecting

⁸ See Durand, *Fermiers*; Briggs, *Early Modern France*, Appendix Graph 3.

taxes is consistent with the set of institutions that governed the sixteenth century tax farm system. For example, there were many laws designed to ensure competitive auctions.⁹ The number of investors in a single farm was restricted and liability for any investor was unlimited.¹⁰ The laws had the effect of making it very costly for a cartel of tax farmers to pool their capital and exert market power. There is convincing evidence that, during the sixteenth century, these regulations were binding in the sense that auctions were competitive.¹¹

The Ottoman fiscal system shared many similarities with that of France during the sixteenth century.¹² It too was complex and relatively decentralized. The costs of tax collection by state agents alone were considerable given the size of the empire, its diverse population, and the large number of taxes that varied by territory.¹³ As in France, it was common for Ottoman rulers to subcontract with private agents.¹⁴ Two forms of lease contracts were used in the Ottoman Empire, military lease contracts (*timar*) and tax farming contracts (*iltizam*). Two-thirds to three quarters of Ottoman revenues came from the Timar System during the sixteenth century.¹⁵ Timar-holders were leased taxation rights in exchange for their regular military services. Timar contracts specified that, after a fixed payment to the timar-holder was met, the residual from tax collection was to be sent to the Treasury in Istanbul. Two-thirds to three

⁹ For example, see Roux, *Fermes*, pp. 37, 44.

¹⁰ See Bonney, "Failure."

¹¹ The farms changed hands frequently and there were many bids during the auctions. See Bayard, *Monde*, pp. 104-16.

¹² If anything, Ottoman fiscal institutions were more effective at extracting revenue from the population. In per capita terms, the Ottoman state was raising up to 60 percent more revenues than France around 1600, according to the authors' calculation using revenue estimates from Inalcik and Quataert, eds., *Economic and Social History*, pp. 78, 82; and population data from Maddison, "Comparison."

¹³ The most important tax collected by state agents was the *cizye* tax, a head tax paid by non-Muslims living in a Muslim state.

¹⁴ This is supported by studies like that of Coşgel and Miceli who find that direct and indirect tax assignments were driven by a transactions costs rationale. See Coşgel and Miceli, "Risk."

¹⁵ Inalcik and Quataert, eds., *Economic and Social History*, p. 78.

quarters of Ottoman revenues came from the *Timar* System during the sixteenth century.¹⁶

Timar-holders were cavalrymen with taxation rights given in place of salaries for their military services.¹⁷ *Timar* contracts specified that, after the obligation to the *timar*-holder was met, the residual from tax collection was to be sent to the Treasury in Istanbul.

Most taxes collected through *timar* contracts were in kind. A second form of lease contracts was auction-based tax farming (*iltizam*) which served as the primary source of liquid funds to the central administration. A typical tax farming contract was constituted as a classical Islamic partnership (*mudaraba*).¹⁸ Participants in these tax farm contracts came from diverse backgrounds. There are records of Christians and Jews, in addition to Muslims contributing capital to the partnerships. As in sixteenth century France, Ottoman tax farming contracts during the same period were typically limited to two, three, or four members.¹⁹ Tax farmers were usually unable to pay the full auction price for the contract; instead they paid a portion upfront and the remainder in installments. The guarantors of these installments (*kefils*) offered collateral either in wealth or in person. Contracts lasted one to three years, after which the tax farm was again auctioned out. The tax farmers were legally liable to the sultan, and their accounts were regularly checked by bureaucrats.²⁰

As in France, the transaction costs of measuring and monitoring collections goes far towards explaining why *timar* contracts were used to collect some taxes and why tax farming contracts (*iltizam*) was used in other cases. Farming was the dominant form of taxation of mines,

¹⁶ İnalçık and Quataert, eds., *Economic and Social History*, p. 78.

¹⁷ *Timar* means horse-grooming. The term connoted revenues sufficient for a cavalryman. A *timar*-holder's main role was to provide protection in the provinces, and they joined the sultan's army during wars. Only members of the military class were eligible to hold the contracts. See İnalçık, *Studies*, p. 311; and İnalçık, *Ottoman Empire*, pp 107-115.

¹⁸ For an analysis of the *iltizam* system see Çizakça, "Tax Farming."

¹⁹ See Çizakça, *Comparative Evolution*, for an extensive description of Ottoman tax farm business partnerships.

²⁰ Çizakça, *Comparative Evolution*, pp. 140-42, 149.

mints, salt works, mills, dyeing establishments, customs dues, and market taxes, all sources of revenue deemed difficult to forecast or collect.²¹ It was also more prevalent in outlying regions of the Empire, providing about twenty percent of revenues in Anatolia, twenty-five percent in the European provinces, and eighty percent in Egypt during the fiscal year 1527-28.²²

As will be explained below, over the course of the seventeenth century, tax farming in both the Ottoman Empire and France grew in importance. In France, tax farming went from providing around a third of revenues at the beginning of the seventeenth century, to providing close to half of “ordinary” revenues at the beginning of the eighteenth century. Similarly, by the beginning of the eighteenth century, tax farming accounted for an estimated thirty to fifty percent of the sultan’s revenues.²³ However, there were also significant differences in how the organization of tax farming evolved in each country. In France, all the various tax farms were consolidated into a single, quasi-private, organization known as the Company of General Farms. During the eighteenth century, the Company became one of the most influential stakeholders in the French fiscal system, and protected that position with a great deal of success. The organization of Ottoman tax farming, by contrast, moved towards greater decentralization during the seventeenth and eighteenth centuries.

By the middle of the eighteenth century, after decades of deteriorating property rights, the relationship between the tax farmers and the sultan had broken down to such an extent that many tax farmers were operating their farms in the provinces with virtual autonomy from the center.

How do we explain the relative security of property rights over fiscal contracts in eighteenth

²¹ See Darling, *Revenue*, p. 153; and İslamoğlu-İnan ed., *Ottoman Empire*, pp. 58-59. It is probably no coincidence that salt and customs taxes also composed the bulk of French tax farm revenues.

²² Çizakça, *Comparative Evolution*, p. 141.

²³ Salzmänn, “Ancien Régime,” p. 405.

century France, at least when measured relative to the Ottoman Empire? More specifically, what caused the emergence of a durable and powerful political coalition from within the French fiscal system, whereas no such coalition crystallized in the Ottoman Empire?

The Fiscal Crisis of the Seventeenth Century and Its Effect on Fiscal Contracts

War and the financial necessities it created was the driving force behind institutional change in early-modern public finance.²⁴ Figures 1 and 2 show the effect of increased military spending on French and Ottoman budgets at the end of the sixteenth and into the seventeenth century.²⁵ In France, not only did spending increase dramatically just before and during wartime, as in 1635 with the entry into the Thirty Years War, in 1672 with the Dutch War, and in 1689 with the Nine Years War, but the size of expenditures increased with each successive crisis.²⁶ These deficits were large. In 1680 the king was borrowing about twice his revenues. In the Ottoman Empire the first deficits appeared towards the end of the sixteenth century and lasted through the seventeenth century. Ottoman deficits were particularly large during times of war.²⁷ For example, in 1597-8, as the Ottomans were fighting the Habsburgs, the sultan

²⁴ For an overview of the “Military Revolution” see the articles contained in Rogers, ed., *Military Revolution*; for the increased pressure on state budgets in Europe see in particular see chapters 2, 7, and 11. See also Bean, “War.”

²⁵ The data for Figure 1 are from Guery, “Finances,” Appendix Table I. The budget numbers are converted into wheat equivalents using data in Baulant and Meuvret, *Prix*.

²⁶ Major wars and civil disturbances include: Infrequent fighting against the Protestants throughout the 1620’s; The Thirty Years War, 1635-1648; The Fronde, 1648-1653; The War of Devolution, 1667-1668; The Dutch War, 1672-1679; The Nine Years War, 1689-1697; The War of Spanish Succession, 1701-1713. This trend continues into the eighteenth century. See Riley, “French Finances.”

²⁷ Major wars of the seventeenth century include the Iranian Wars (1603-1639), War with Venice over Crete (1654-1669), War with the Habsburgs (1593-1606) and (1683-1699), various Ottoman interventions in Eastern Europe (Poland, Ukraine, Transylvania, and Hungary) (1600-1681). 62.5 percent of expenditures were war related in the budget of 1669-1670. See İnalçık and Quataert, *Economic and Social History*, p. 542.

borrowed twice his revenues, and in 1690-1, while again fighting the Habsburgs, he borrowed about 50 percent of his revenues.²⁸

While certainly a fascinating area for future research, we do not delve into the multifaceted reasons behind the fiscal pressures that struck Europe and Asia towards the end of the sixteenth and the beginning of the seventeenth century.²⁹ We are primarily interested in their impact on French and Ottoman fiscal institutions. We content ourselves with the observation that many of the organizational and technical innovations which boosted costs were common to both the Ottoman Empire and France. As such, the seventeenth century military revolution constituted a common, negative, shock to the fiscal systems of both countries. What is of particular interest to us is that this negative shock had a similar effect on property rights in both countries. Faced with increasing expenditures and constant revenues, both Ottoman sultans and French kings began to borrow and default more on fiscal contracts.³⁰ The effect of this decrease in the security property rights on institutional evolution in each country, however, was very different.³¹

We should emphasize that large deficits, in and of themselves, did not constitute a “fiscal crisis” in France or the Ottoman Empire. But deficit spending did significantly alter fiscal

²⁸ The data for the real Ottoman budget in Figure 2 was compiled by the authors using the following sources: the nominal budget data came from İnalçık and Quataert, *Economic and Social History*, p. 99, for 1520-1608, and from Çizakça, *Comparative Evolution*, p. 144, for 1660-1700. Wheat prices came from the data appendix in Özmucur and Pamuk, “Real Wages.” 1 kile equals 26.24 kg.

²⁹ By this time, Ottoman territorial expansion had stopped and its military power had declined. Among the main reasons for the decline provided in the literature is the change in the technology of war that shifted the balance from mounted to foot soldiers, with the cavalymen no longer useful against musketeers. See Barkey, *Bandits*, pp. 43-53; and İslamoğlu-İnan, ed., *Ottoman Empire*, pp. 54-58.

³⁰ By “fiscal contract” we mean both debt contracts and contracts with tax collectors. As will be explained below, these two types of contracts were often interrelated.

³¹ Our arguments here bear similarities to Potter, “War,” in that we also feel that increases in spending on war did not have the same effect on all states. In France, property rights of fiscal agents were increased in the long run, whereas in the Ottoman Empire this did not occur.

contracts and ultimately led to more uncertain property rights. The growing insecurity of property rights is what we consider a “fiscal crisis”.

The link between increased deficits and uncertain property rights is well illustrated by the evolution of French tax farm contracts during the first half of the seventeenth century. Many of the earliest loans to the crown came from tax collectors, especially tax farmers. The most straightforward way to do so was for the tax farmer to forward payments on his lease price to the king before they were due. Such early payments were called *anticipations* on future tax receipts.³² In 1623 *at least* 1,300,000 livres were borrowed through the Aides in anticipation of tax revenues worth about 2,300,000 livres.³³ The king was thus anticipating about half of his receipts from the Aides before they were collected. In a like manner, the king borrowed at least 1,668,212 livres from the Tailles in 1688 in anticipation of future payments of about 2,000,000 livres.³⁴ Figure 3 shows the real value of loans through the three largest Tax Farms between 1614 and 1647.³⁵ These data indicate that lending was a major role of the Farms by the first half of the seventeenth century.

As lending funds became a larger role for French tax farmers during the seventeenth century the incentives surrounding their contracts with the crown changed. The transaction costs of acting as “bankers” for the king were very different from those associated with being his tax collectors. As the king’s borrowing through the Farms increased, his incentive to “renegotiate” leases with his Farmers *ex-post*, also increased. Evidence of these renegotiations during the first

³² See Marion, *Dictionnaire*, p. 50; and Matthews, *Royal General Farms*, p. 14. *Anticipations* were assets of the Tax Farmer and were redeemed through deductions in the contracted lease payments known as *charges*. In other words, the Farmer was “paid” for his loan through a reduction in one of his liabilities, the lease payment owed the crown.

³³ Bonney, “Failure,” p. 31. Bonney draws his data from the records of the Conseil de Finance which was charged with overseeing the administration of the Farms during this period. He emphasizes that the figures are almost certainly lower bounds on lending activity through the Tax Farms.

³⁴ France, *Archives Nationales* KK355, 1688.

³⁵ Data compiled from the appendix to Bonney, “Failure.”

half of the seventeenth century is significant. Of the 68 largest Tax Farms between 1598 and 1655, twenty-six had their leases broken.³⁶ The largest tax farms by capitalization experienced the greatest rate of renegotiation.³⁷ For example, between 1598 and 1655, 64.7% of contracts on the *aides* were ruptured.

Competitive tax farming made sense when the only role for tax collectors was to collect taxes. It created incentives which encouraged the individual with the lowest cost of collection to do so and ensured that the crown would reap most of the benefits of this specialization. However, competitive allocation of tax farm contracts was inconsistent with the increasing role of the farmers as financial intermediaries. As things stood in the first half of the seventeenth century, the king could default on a loan by revoking a farmer's lease and then re-lease it to one of his competitors at a relatively low cost.³⁸

In the Ottoman Empire the costly wars of the last decades of the sixteenth century and the seventeenth century also introduced large budget deficits, just as in France. In their attempts to raise more revenues, the sultans ran roughshod over the property rights of public officials, the clergy, and fiscal agents. Existing institutions, including a system of emergency war loans from the wealthy, were no longer sufficient.³⁹ So the sultan forced loans from the wealthy and confiscated funds from the pious foundations (*waqf*) and trust funds of minors.⁴⁰

At the end of the sixteenth century, the Ottoman state resorted to debasing its currency for the first time in over one hundred years. The Venetian golden ducat was worth 60 *akçes* in

³⁶ Bayard, *Monde*, p. 128.

³⁷ These farms were the *Aides*, *Cinq Grosses Fermes*, and the *Grande Ferme des Gabelles*.

³⁸ For additional examples of the uncertainty of property rights over tax farm contracts pre-1661, and the crown's role in this uncertainty, see Johnson, "Banking on the King", pp. 977-79.

³⁹ İnalcık, *Studies*, pp. 314-16.

⁴⁰ İnalcık and Quataert, *Economic and Social History*, pp. 98-100.

1584, 120 in 1588, 150 in 1618, and remarkably 310 in 1624.⁴¹ Seignorage was recognized as a form of expropriation and was met by popular dissent. Following the first debasement in 1589, the Janissary Corps revolted. A very powerful political group, when their salaries were paid in debased currency, they demanded and succeeded in having the chief treasurer and other officials responsible for the policy executed. This was the first of such uprisings followed by many in the seventeenth century. Sultan Osman II (1618-1622) was assassinated in one such revolt.⁴²

In response to fiscal pressures, the availability of liquid funds became a high priority as the central administration struggled to cover military salaries. As a result, during the early seventeenth century, competitive tax farming became the primary method of tax collection.⁴³ Uncertainty with regard to these tax farming contracts, similar to that seen in France, was prevalent. Figure 4 shows the difference between the intended duration of Ottoman tax farming contracts and their actual duration between 1535 and 1620.⁴⁴ Of the 206 tax farm contracts during the period, ten percent were revoked in less than a year. A good example is the Tax Farm of Salonica Salt Works which in 1618 was taken over by 4 different partnerships within one

⁴¹ Ibid., p. 964.

⁴² The Janissary Corps was the product of the levy of European Christian youth who were then raised by Ottoman families, converted to Islam, and given a military education. Janissaries had been recognized in the fifteenth and sixteenth centuries as the most effective soldiers of Europe. The Janissary revolts indicate the existence of at least one powerful group who posed a credible threat to the sultan. Yet this is not an example of a growth-enhancing constraint on the ruler and is therefore outside the scope of this paper. With regard to their hand in the tax farms, we thank an anonymous referee for pointing out that lobbies connected to the Janissaries sometimes closed auctions off to various groups, including non-Muslims and various Muslim groups.

⁴³ Darling, *Revenue*, p. 153; and İslamoğlu-İnan, *Ottoman Empire*, pp. 58-59.

⁴⁴ Intended vs. actual duration data come from Çizakça, "Tax Farming," pp. 233-50, which tracks 134 tax farms and their associated contracts over the period 1534-1687. Not all contracts sampled by Çizakça contain information on both the actual and the intended duration of the lease. A simple OLS regression of "*actual duration*" on "*year*" and "*intended duration*" yields the following: $actual\ duration = 17.84 - 0.01*year + 0.27*intended\ duration + error$. All the coefficients are significant at the 1% level (robust standard errors used). The negative sign on *year* is consistent with increased insecurity of property rights during the seventeenth century, holding constant the intended contract length. Not all broken contracts were likely the result of predation by the state. Some broken contracts could have been the result of a premature dissolution of the partnership that owned the lease. However, the increased likelihood of premature dissolution is consistent with our story.

year. The first of these was a partnership of four Jewish tax farmers; the last one involved two Christians and one Jew.⁴⁵ Çizakça's sample of tax farm contracts is consistent with the observation that "[t]he central administration was not obliged to leave the tax farm in the hands of any contractor for the duration of the farm. Whenever a better bid was made, the tax farmer either paid the difference or lost his right to collect."⁴⁶ So the sultan could simply default on a contract by revoking a tax farmer's lease and then re-lease it to one of his competitors. The effect was to increase the uncertainty of property rights over tax farm contracts.

The Response by Fiscal Agents to Uncertain Property Rights

The highly decentralized tax systems in both France and the Ottoman Empire during the first half of the seventeenth century made it easier for rulers to manipulate the rules of the game. Faced with incentives to renege on or tamper with fiscal contracts, rulers confronted only weak resistance from within their existing tax systems. The long-run response to increasingly uncertain property rights in France and the Ottoman Empire, however, was very different. In France, a coalition of tax farmers emerged after 1661 that could coordinate punishments against the crown. This coalition emerged because existing institutions were conducive to capital pooling, which allowed the tax farmers to credibly threaten the crown. In the Ottoman Empire, existing institutions were not as amenable to pooling capital, which kept fiscal agents from organizing in large enough numbers to credibly constrain the sultan.⁴⁷

⁴⁵ Çizakça, "Tax Farming," p. 224.

⁴⁶ İnalçık and Quataert, *Economic and Social History*, pp. 537-38.

⁴⁷ We do not mean to imply that French constraint after 1661 yielded results like the British had in, say, 1780. We mean by "constraint" that an important group of fiscal agents were able to significantly raise the cost to the Monarchy of engaging in certain actions after 1661 relative to before 1661. We are not making claims for the efficiency of this constraint. Our argument is about the political economy of institutional change.

There were two significant barriers to the initial consolidation of the French tax farm system. First, the individual tax farms were already under contract. Before they could be consolidated either these contract holders had to be legally “bought out”, or, their contracts had to be illegally abrogated. Second, there were explicit laws in place that outlawed consolidation of the farms. Initially created to prevent collusion on the part of the farmers, by the middle of the seventeenth century, these now constituted an explicit cost to any group of tax collectors attempting to consolidate the system. Louis XIV’s Finance Minister, J.B. Colbert, was instrumental in overcoming these two costs of organizing the Company of General Farms. Through the judicious use of legal investigations of tax farmers (*Chambre de Justice*), Colbert managed to buy out at reduced price, or kick out, many of the existing tax farmers.⁴⁸ He then combined many of these tax farm contracts and re-leased them to members of his trusted inner circle.⁴⁹ Lastly, Colbert issued new regulations concerning the legality of a consolidated tax farm system.⁵⁰

The creation of the Company of General Farms gave rise to more secure property rights for the king’s tax collectors and this, in turn, led to an increase in the value of the tax farms. Figure 5 shows the sustained increase in the aggregate value of lease prices for the Tax Farms that coincided with the creation of the Company of General Farms.⁵¹ The dramatic increase in

⁴⁸ For how Colbert used the *Chambre de Justice* to install his relations into the farms, see Dessert, *Argent*, pp. 259, 339-40.

⁴⁹ Dessert and Journet, “Lobby.”

⁵⁰ See the laws of May 1680, June 1680, and May 1681, which concern the governance and operation of the *Gabelles*, *Aides* and, ultimately, the unified Company of General Farms in Isambert et al., eds., *Recueil general*. The May 1681 edict “Common Title for all the Farms” served as the legal basis for tax farming until the end of the eighteenth century and explicitly acknowledged the existence of the Company of General Farms.

⁵¹ Data from *Archives Nationales* KK 355. We implicitly assume that the relationship between a tax farm’s lease price and the underlying value of that farm is described by the model presented in Johnson, “Banking on the King,” pp. 971-72. The data in Figure 5 are equal to the sum across farms of yearly lease payments. Ideally, we would present data on individual tax farms over time, holding constant tax rates, incomes, tax base, competitiveness of

lease prices after 1661 reflected the increased security of property rights over the tax farms relative to the previous period.⁵² Between 1681 and 1789 the financiers who controlled the Company of General Farms lost their property rights to the Farms only once, during the Law Affair (1716-1720).⁵³

We should emphasize that we are *not* claiming that the French tax system was more efficient than the Ottoman system because of this constraint. Rather, we are simply arguing that fiscal agents in France could more effectively restrict the actions of the crown after 1661. The king's hands were tied more tightly after 1661, and eventually this restricted range of motion would lead the crown down the path of fundamental institutional reform rather than a path of incremental reforms as followed by Ottoman sultans.

The evolution of the French tax farms illustrates how, in response to uncertain property rights, tax collectors were able to form a coalition that allowed them to successfully constrain the king. They then limited the crown's options when confronted with fiscal problems during the eighteenth century, a situation that contributed to the political crisis facing the Monarchy at the end of the eighteenth century.⁵⁴ Fiscal crises like the one confronting Louis XVI in 1789 were nothing new to French Rulers. But the rise of organizations like the Company of General Farms

bidding, and so on. That is not possible since, among other things, the farms were consolidated at a rapid rate after 1661. Johnson, "Banking on the King," pp. 968-71, details the linkages between the aggregate lease price data in Figure 5 and an increase in the *value* of the individual farms. To summarize his evidence, incomes were stagnating during the period of greatest increase in lease prices, tax rates within individual farms did not increase enough to explain the increased lease prices, and the competitiveness of auctions dramatically decreased (thus working *against* the increase in lease price).

⁵² See Johnson, "Banking on the King."

⁵³ See Johnson, "Cost," p. 16.

⁵⁴ Velde and Weir, "French Government Debt," give a nice overview of the literature. Consistent with our thesis, they also point out on page 36 that at the end of the eighteenth century, "Persistent deficits were not the result of bad planning, court extravagance, economic weakness, or even an administration built on venal officeholders. Cleverer or more honest administrators could not have eliminated them. They arose from a political system that completely separated the privilege of spending from the obligation to pay taxes and at the same time left the public enough political power to resist taxation."

fundamentally limited Louis XVI's options by significantly raising the cost of violating the property rights of stake-holders in the existing fiscal system. The reason was that defaulting on a large corporate body was different than revoking the property rights of a single subject. As a result of the increased cost of predation, Louis XVI was forced to pursue alternative routes to solve his fiscal problems – he had to call the Estates General – and that eventually led to fundamental fiscal and political reforms.

No constraining organizations resembling the Company of General Farms arose from within the fiscal system in the Ottoman Empire. Instead, in the 1690's the Ottoman fiscal system moved in a direction opposite that of France, towards greater decentralization and less security over fiscal contracts. Faced with the need to collect even more money, the sultan raised taxes at the end of the seventeenth century and converted old short-term tax farming contracts (*iltizam*) to lifetime contracts (*malikane*) beginning in 1695. Having increased many existing taxes at the end of the seventeenth century, and confronted with the need to collect even greater amounts of funds, the old short-term tax farming contracts (*iltizam*) were converted to lifetime contracts (*malikane*) beginning in 1695.⁵⁵

In the early years of the life-grant system, 150 to 300 new leases were auctioned annually.⁵⁶ The new tax farmers obtained full rights to the tax farm upon winning the auction, including the right to subcontract the revenue collection to smaller tax farmers.⁵⁷ Non-Muslims, such as Jews, Greeks, and Armenians, though prohibited from holding tax-farm leases, could

⁵⁵ Salzmann, "Ancien Régime," p. 339.

⁵⁶ İnalçık and Quataert, *Economic and Social History*, pp. 713-14. Life-grant tax farms included previously farmed out tax sources as well as new taxes. See Çizakça, *Comparative Evolution*, for evidence of how the Ottomans implemented liberal trade policies in the eighteenth century which accounted for the increased number of tax farms.

⁵⁷ İslamoğlu-İnan, ed., *Ottoman Empire*, pp. 346-50.

serve as financiers.⁵⁸ Throughout the eighteenth century the number of life-grant tax farm holders averaged from one to two thousand.⁵⁹ Five to ten thousand secondary tax farmers and financiers were also part of this system. The sub-tax farmers were often the same individuals who had participated in short-term tax farming (*iltizam*), although they now held longer tenures. Through the life-grant system the Ottoman state increased the amount of tax collection it contracted through tax farming to include almost all tax collection outside the religiously prescribed head tax (*cizye*).⁶⁰

In contrast to the ability of tax farmers in France to increase the security of their property rights during the eighteenth century, fiscal contracts under the new life-grant system were far from secure. In 1714, the sultan retracted contracts in most provinces and then reinstated them in 1717 at prices nearly 50 percent above the original bids.⁶¹ In response to this type of disregard for the law by the sultan, the owners of life-grant contracts in the provinces began to ignore the law as well. For example, they would often pass tax farms from one generation to the next instead of returning the farm to the state. Some stopped sending revenues to Istanbul altogether. As a result, revenues fell even further. Provincial problems were further exacerbated by the rise of a class of ex-bandits that took hold of some territories and administered them in full autonomy from Istanbul. Provincial notables (*ayan*) more broadly grew in autonomy particularly during the period 1768-74.

As the disregard on the part of tax collectors for the laws governing life-grant contracts worsened, the Ottoman state followed suit. Confiscations of farms and removal of local lords

⁵⁸ The Armenian financiers of the eighteenth century were particularly vital for bids in Istanbul. See Salzmann, "Ancien Régime," p. 403.

⁵⁹ İslamoğlu-İnan, ed., *Ottoman Empire*, p. 349 and Çizakça, *Comparative Evolution*, p. 171 .

⁶⁰ İnalçık and Quataert, *Economic and Social History*, p. 711.

⁶¹ Salzmann, "Ancien Régime," p. 417, endnote 55.

became common. An example comes from the city of Aleppo. A prominent figure in Aleppo, Muhammad Chalabi Tahazade, held nearly one fifth of all life-grant lands as late as 1777. He was exiled in 1775 and although was allowed to return in the 1780's, his titles were never restored.⁶² In the late eighteenth and early nineteenth century, an ex-bandid Albanian lord, Ali Pasha of Yanina, conquered and held at least one thousand fiscal estates, conducted foreign policy of his own and protected merchants for a fee.⁶³ To regain control over revenue collection, the Ottoman state often used brutal force to eliminate these provincial rulers. Ali Pasha of Yanina, for example, was assassinated in 1822 and his head sent to the sultan in Istanbul.⁶⁴

The chaos within the life-grant system continued until 1793 when, after failing to get a loan from Morocco or Europe as part of the "New Order" treasury reforms, Selim III was forced to finally revoke the life-grant farms and re-contracted them on a short-term basis.⁶⁵ Life grants made a come-back in 1808-1840 in restricted form, but even into the 1840s expropriation by the Ottoman government was a regular part of revenue raising.⁶⁶

The contrast between the direction of institutional change within the French and Ottoman fiscal systems during the later seventeenth early eighteenth centuries is stark. In France, tax farmers consolidated their holdings into a single interest group with a large stake in maintaining the existing fiscal system. In the Ottoman Empire, tax collectors did not consolidate, instead, both their numbers and their interests, increased. The sultan could "pick-off" any given tax

⁶² His tax farms were partially restored to his family members who succeeded to local power after his death. *Ibid.*, p. 421, endnote 96.

⁶³ İnalcık and Quataert, *Economic and Social History*, pp 667-68.

⁶⁴ Sadat, "Rumeli" p. 558. The purging of the autonomous provincial lords was not fully completed until 1838-42 when tax farmers were forcefully separated from their farms.

⁶⁵ Salzmann, "Ancien Régime," p. 407.

⁶⁶ See Pamuk, "Evolution."

collector, but, he could not go after them all. And by selectively engaging in predatory behavior, confidence in the entire system was undermined. Neither the French move towards centralization, nor the Ottoman move towards decentralization, were necessarily efficient. Yet each had profound effects on the margins of maneuver that each government faced. However, they profoundly affected the degrees of freedom of the different governments. French kings were more strongly tied to the existing set of fiscal institutions during the eighteenth century than their Ottoman counterparts. Ultimately, their bond to existing fiscal institutions would unleash a major fiscal crisis in France, which could only be solved by extensive reforms that swept away entrenched interests. The Ottoman sultans, by contrast, were free to engage in incremental reforms to the fiscal system well into the nineteenth century.

The Transaction Costs of Collusion

Why did a coalition of fiscal agents emerge in France during the second half of the seventeenth century, but not in the Ottoman Empire? Tax farmers in France faced lower costs when they sought to overcome their collective action problem than their Ottoman counterparts. The costs were lower for two reasons. First, the French tax farmers simply started-off as a more homogenous group. In seventeenth century France, there were fewer tax farmers, fewer tax farms, and the farmers belonged to similar social networks. The homogeneity facilitated, at least initially, the creation of the Company of General Farms. The second, and in our opinion more important, difference lay in the ability of French tax farmers to pool capital at a lower cost than their Ottoman counterparts. Social networks may have encouraged the initial formation of a French tax farming coalition, but its long-run survival depended on the organization's ability to

align the interests of its members and enforce cooperation through relatively sophisticated “corporate” institutions. Nascent institutions already existed in Western Europe that made it relatively easy to form an organization with legal personhood, separation of ownership from control, and transferable shares. Such institutions allowed the Company of General Farms to amass enough capital to make punishments against the crown matter by, for example, withholding loans. In addition, since a relatively small number of General Farmers (who cared about the long run interests of the Company) controlled these funds, these institutions made implementing punishments much less costly. It was easier for a council of ten Farmers to decide to withhold a loan than for thousands of investors to decide.

One obvious difference between the two countries was that France was a more homogenous political entity, with tax collectors who were a small and relatively homogenous group. Between 1590 and 1653, before French tax farms were unified, about 303 different signatures can be found on French tax farm contracts.⁶⁷ Eighty-one of these farmers signed multiple contracts. After unification, for the period 1681-1708, the number of tax farmers decreased significantly, to eighty-eight. The majority, sixty-two, signed more than one contract during the period.⁶⁸ In the eighteenth century Ottoman Empire, by contrast, some 1,000 to 2,000 life-grant tax farmers operated in the cities with 5,000 to 10,000 additional agents serving as sub-contractors in the provinces.⁶⁹ The large number of tax farmers reflects a geographic reality. The empire stretched wide over Southeastern Europe, North Africa, and the Middle East. It was much larger than France.

⁶⁷ See Dessert, *Argent*, Appendix.

⁶⁸ Johnson, “Banking on the King,” pp. 983-84.

⁶⁹ See Salzman, “Ancien Régime.”

Even when French tax farms were decentralized, there were always one or two “big” farms that united large numbers of tax farmers.⁷⁰ Between the years 1600 and 1652 -- before the creation of the Company of General Farms -- the two largest tax farms composed about 52% of total revenues going to the king from the entire tax farm System. This number continued to grow until the two large farms (along with many smaller ones) were formally unified into the Company of General Farms in 1681.

Because the Ottoman Empire was so large it may not have been feasible, or optimal, to consolidate the tax farms as happened in France. But, geography alone does not explain why multiple tax farmer coalitions did not emerge in the Ottoman Empire, with each one able to constrain the sultan. Heterogeneity does not necessarily imply the decentralization observed in the eighteenth century. Farmers could have organized along regional lines, creating for example an Egyptian consolidated farm, or one big farm over the European territories. These would have been comparable in size to the Company of General Farms and could have acted as effective constraints against the sultan.

Another possibility is that seventeenth century Ottoman tax collectors were not homogenous enough as a class to overcome the collective action costs of unifying. In France there is ample evidence that, especially by the post-1661 period, many of the tax farmers were either related, or friends.⁷¹ During the eighteenth century, the vast majority of French tax farmers came from the upper bourgeoisie, lived in Paris, read the same books, went to the same operas, went to the same churches (Protestant), and intermarried.⁷²

⁷⁰ Johnson, “Banking on the King,” p. 969.

⁷¹ See Dessert and Journet, “Lobby” and Dessert, “Finances et Société”.

⁷² See Durand, *Fermiers*.

By contrast, Ottoman Tax Farmers reflected the diverse ethnic and religious composition of the Empire: Muslims, Christians, and Jews all participated in both large and small tax farms.⁷³ In the city of Bursa during the first half of the seventeenth century Jews won the majority of urban tax farms, consistently outbidding the military.⁷⁴ Some tax farm contract data from Çizakça (1996) generalize this point to the rest of the empire. Of ninety-six tax farmers in his empire-wide sample of contracts between 1611 and 1630, sixty percent were Muslim, twenty-seven percent Jewish, and thirteen percent Christian. Of the ten partnerships between two tax farmers in the sample, four were made up by two Muslims, three by two Christians, one by two Jews, and one partnership involved a Muslim and a Jewish Tax Farmer. Of the six partnerships of three Tax Farmers, four were exclusively Jewish and two were mixed Muslim and Jewish.

The eighteenth century Ottoman tax farmers did not share the homogenous backgrounds of their French counterparts.⁷⁵ While definitely a more homogenous group than the seventeenth century tax farmers, the life-grant farmers still came from high ranking military officials, bureaucrats, and clergy. Furthermore, non-Muslims such as Jews, Greeks, and Armenians, while on paper prohibited from holding tax farm leases, served as critical financiers. Despite this heterogeneity, however, there is ample evidence suggesting that non-Muslims used the religious Muslim (the *Shari'a*) legal courts astutely and “entered into legal partnerships using the

⁷³ Ottoman historians disagree as to the involvement of the various ethnic and religious groups in tax farming partnerships. See See Salzman, “Ancien Régime”; and Gerber, “Muslims,” for a balanced view.

⁷⁴ Gerber, “Muslims,” p. 106.

⁷⁵ This degree of heterogeneity had to increase the cost of coalition formation. For example, we know that Jewish tax-farmers were expected to obey their own Law-Merchant. The Jewish community could prohibit any of its members from joining a particular auction if deemed damaging to the community in some way. Çizakça, *Comparative Evolution*, p. 158. Dual legal systems raise transactions costs.

technicalities of Muslim law.”⁷⁶ Dealing with the Ruler under Islamic law, however, did pose potentially serious blocks to pooling significant amounts of capital.

The French Company of General Farms could manage to pool large amounts of capital and use that capital, when necessary, to punish rulers for several reasons. First, the Company represented a vital step towards a “modern” form of corporate organization in which the organization adopts “legal personhood” and thus grants individual investors limited liability. After 1668 the individual whose name appeared on Tax Farm contracts, the *adjudicataire-général*, was a mere personal attendant (*valet-de-chambre*) of the Finance Minister.⁷⁷ In contrast to the first half of the seventeenth century, loans made by the Company to the crown were no longer treated as the personal debt of any individual farmer. This played an important role in 1697 when the General Farmers, acting as a single group, successfully renegotiated their debt contracts with the king. What a contrast to the less successful renegotiation back in 1623 between the largest tax farmer at the time, Antoine Feydeau, and the king: Feydeau ended up fleeing the country and losing most of his property.⁷⁸ More striking still was the difference between the punishments meted out to tax farmers and non-tax farmers during the legal investigations (*Chambre de Justice*) of 1716. Tax farmers were tried in this court, but rarely implicated. Those who were most severely punished were without connections to major organizations like the General Farms.⁷⁹ The treatment of the tax farmers in 1716 stood in

⁷⁶ Gerber, “Muslims,” p. 118.

⁷⁷ Rousselot de Surgy, “Finances”, vol. 1, p. 13. The *valet-de-chambre* usually received a *pot-de-vin* of 6,000 livres for performing this service.

⁷⁸ For Feydeau’s story, see Heumann, “traitant”; Clamageran, *Histoire*, vol. 3, p. 12. The farmers also negotiated a payment of 800,000 Livres for each of the forty General Farmers in 1697.

⁷⁹ Dessert, *Argent*, pp. 260, 264, discusses in detail the differences between the trials of 1716 and those of 1661-65. Johnson, “Banking on the King,” pp. 22-23, also discusses the trials.

marked contrast to the earlier legal investigations of 1661-5 in which many were convicted and assessed significant fines.

A second advantage the French tax farmers had was that they could organize themselves as a limited partnership (*société en commandite*), a legal form that Colbert introduced in 1673. Every six years, when the old lease had expired, the Company of General Farms was reconstituted as a limited partnership by an *acte de société*.⁸⁰ This *acte* was a part of private law, not public law. It was written between the members of the Company and did not rely on upon the authority of the crown for enforcement and ratification.⁸¹ Technically, each of the twelve leases signed between the crown and the Farms between 1726 and 1786 was a separate legal entity. Each lease had a primary signee (*adjudicataire*) who acted as a representative to the crown for the other Farmers. Each of the forty core *financiers* in the Company were technically guarantors (*cautions*) of the primary signee (*adjudicataire*), and thus only liable for the amount they invested into the Company.

The *de facto* standing of the Company of General Farms as a “legal person” was but a small step in the long development of the modern corporate form in Western Europe.⁸² One could date the beginning of this evolution as early as the eleventh and twelfth centuries, with the increasing recognition of mercantile law (*lex mercatoria*). This evolution is easiest to trace in Italy. *Commenda* contracts dominated capital pooling arrangements before the thirteenth century and required the dissolution of the contract upon the death of a partner. This severely raised the cost of pooling large amounts of capital for extended periods of time.⁸³ By the thirteenth century

⁸⁰ The *acte de société* for the Bail David is reproduced in Lavoisier, *Oeuvres* 6, pp. 629-31.

⁸¹ For more, see Lévy-Bruhl, “différentes espèces.”

⁸² For an overview of this process, see Kuran, “Absence.”

⁸³ See Kuran, “Islamic Commercial Crisis,” pp. 417-18, 421-22.

the family firm, or *compagnia*, was often used. As the name implies, participants were generally kin who shared unlimited liability. Unlike the *commenda* contract, however, upon the death of a family member, the *compagnia* was immediately reconstituted under the same name and using the same capital.⁸⁴ By the fifteenth century, Italians were using the “hub and spoke” system to effectively give limited liability to investors.⁸⁵ During the seventeenth and eighteenth centuries royally chartered companies, (such as the British East India Company, the Dutch East India Company, and the French East India Company) continued the trend towards the modern corporate form in which the liability of individual investors was limited.⁸⁶ The Company of General Farms should be viewed as part of this trend, a vital link in the gradual evolution towards the modern corporation in France.⁸⁷ A vital link because it was the General Farms that ushered the French corporation from a period in which the government did not credibly acknowledge investor rights to a period when it did. The Company was able to flourish during this period because of its ability to protect the property rights of its investors through its credible threat to punish the crown.

Why did a concept of “legal”, as opposed to “natural”, personhood not emerge in the Ottoman Empire too? One hypothesis is that Islam, from its earliest conception, precluded such a distinction. However, this explanation alone is not sufficient. After all, the concept of a legal person exists today in Islamic societies. The real question is why such a concept didn’t evolve

⁸⁴ See Kuran, “Absence,” p. 804.

⁸⁵ Ibid., p. 804; the Medici firm between 1397 and 1494 was a famous example of the “hub and spoke” organization.

⁸⁶ The French East India Company was established under the ministry of Colbert, just as the Company of General Farms was. Scott reports that joint stock companies in England held 5.2 percent of national wealth in 1717. Scott, *Constitution*, pp. 97-98.

⁸⁷ The *societe commandite* was formally codified into the Napoleonic Code in 1807. After 1830 the *commandites par action*, which allowed shares to be issued, was instituted. France would have to wait until 1867 for a general incorporation law. See Lamoreaux and Rosenthal, “Legal Regime,” pp. 33-34.

within Islamic societies of the Middle East more quickly. Simply stated, we believe the historical circumstances of Islam's creation help explain this fact. The politics of pre-Islamic Arabia were characterized by separate tribes which joined individuals together through kinship bonds. These tribes often feuded and there was a great deal of disunity and chaos as a result. Early Islamic teaching reflected these times through its emphasis on the Muslim community (*umma*) as a unifying force.⁸⁸ The Quran enumerates duties for individuals and for the *umma*, but none for any intermediate organizations. The evolution of the corporate form in Europe was, of course, not a matter of the evolution of religious law. Yet that is part of the point. The separation between church and state which was present relatively early in western political and legal theory did not develop as quickly in Islamic lands.⁸⁹ There is no statement in the Quran similar to the Christian Bible's, "... render unto Ceaser that things that are Ceaser's, and to God the things that are God's."⁹⁰ Unlike early Christianity, which emerged in the shadow of the strong secular authority of Rome, Islam developed as both a political and a religious system.

Two consequences of the early history of Islam help explain the lack of institutional innovation towards corporate forms in the Ottoman Empire. First, Islam quickly became the religion of Empire as its adherents imposed order on the political void surrounding them. As we discuss above, this resulted in a larger, and more diverse, set of interest groups in the fiscal system than in France. A second consequence was that, from the beginning, political authorities in the Middle East were more dependent upon religious authorities for legitimacy than their counterparts in the West. To the extent that economic laws were more likely based on the

⁸⁸ Kuran, "Absence," pp. 794-95.

⁸⁹ We acknowledge, however, that the relationship between church and state is not the same in all branches of Christianity. The Orthodox Church, in particular has a much closer relationship to the state than does the Catholic Church.

⁹⁰ Matthew 22:21.

teachings of religious leaders (the *muftis* and *kadis*) who derived legitimacy from upholding religious doctrine, the costs of changing these laws were much higher in Islamic states.⁹¹ This does not mean the concept of legal person could not develop within Islamic society. Indeed, as we have already argued, the paradox of French and Ottoman institutional history is that, from the point of view of the ruler, many Ottoman institutions were *more* flexible than their Western counterparts. This is what made achieving credibility elusive by the seventeenth century. The institutional environment of the early Islamic Empires simply resulted in lower demand for the concept of legal personhood from those who would benefit from it.

Aside from having access to the notion of legal personhood, the tax farmers in France were also aided in forming their coalition because they could create tradable shares in their organization, which allowed for the separation of ownership and control. In practice, the means by which this was done was through the “guarantor system”⁹² Most people invested in the Company of General Farms as guarantors (*croupiers*). There were forty “core” members of the General Farms. Upon being asked to join, each of these individuals was obliged to pay a sum of money into the capital fund of the Company known as a guarantee payment (*caution*). The guarantee payment was rarely affordable for a single individual. The potential farmer would, therefore, sell stock in his position in exchange for a portion of his guarantee payment. The holder of this stock was entitled to a proportion of the profits of the farmer each year, but liable only for the amount he or she invested.⁹³

⁹¹ For this argument, see Rubin, “Printing.”

⁹² Similar organizational changes were occurring throughout France. For example, Bien, “*secrétaires*,” discusses how the *secrétaires du roi* gradually developed the principles of limited liability investment, as in a modern corporation, during the early eighteenth century.

⁹³ There were many influential guarantors (*croupiers*) who helped the Company get its way at court. The extent of this influence was such that, when the Finance Minister Turgot allowed the list of guarantors for the Company of General Farms current lease to be published in 1776, people were scandalized. Among the stockholders were

Through the guarantor system many thousands of ordinary French men and women tied their fortunes to that of the General Farms. By the end of the eighteenth century the company had upwards of 30,000 employees. Any employee achieving a rank equivalent to middle manager also had to provide a guarantee payment. Many of these were also sold as stock to the public. In 1774, for example, 200 employees of the Farms sold in the regions of Caen and Rouen. Among the investors were thirty-three shopkeepers, thirty urbanites (“bourgeois”), fifteen lawyers, ten farmers, seven doctors, eleven constables, three officers of the courts, two army officers, five artisans, six preachers, two teachers, and ten widows.⁹⁴ Hardly a slice of the high nobility, yet, these were the people who had a direct interest in the General Farms. The transformation of the tax farm system at the end of the seventeenth century was more than the creation of a cartel, it was the birth of a powerful lobby interested in preserving the way in which half of the country’s taxes were collected and in protecting the debt guaranteed by those taxes.

The process of dividing ownership in a business venture into tradable shares was of course not an invention of the Company of General Farms; rather, it was simply an incremental step in the long development of the corporation in Europe. In the fourteenth century Italy maritime partnerships (*societas navalis*) divided the capital value of a ship into shares (*carati*). The purchaser of a share was liable only for his investment and could often trade that share.⁹⁵ Steven Epstein outlines how the fifteenth century Genoese Bank of San Giorgio separated ownership from control rights through the issuance of shares.⁹⁶ The Company of General Farms,

members of the Royal Controller General Terray’s family, court insiders such as Mme de Pompadour and Mme du Barry, and the king himself. See Lavoisier, *Œuvres*, vol. 6, pp. 629-31. The crown did not predate on the assets of the Company of General Farms during eighteenth century because, in a very real sense, it was invested in its success.

⁹⁴ Durand, *Fermiers*, pp. 76-77.

⁹⁵ Kuran, “Absence,” p. 805.

⁹⁶ Epstein, “Genoa,” (1996), pp. 260-01, 277-81, 304-06.

as we noted, was a *société en comandite*, which allowed for the issuance of shares to special partners (the *croupiers*), who had limited liability and played no role in management but were able to trade their shares. As with the evolution of the corporation as a legal person, the Company of General Farms was thus an intermediate step on the path towards the modern corporation.⁹⁷ The forty or so core members of the Farm bore greater liability for the obligations of the Company, but those who invested in them did not. Once enough capital was accumulated the Company did use it to ensure that even the core members of the Farm would be insulated from the full risks of dealing with the absolute monarchy. In effect, the Company of General Farms became “too big to fail”.

The key to understanding how the Company of General Farms became too big to fail after 1683 was their use of short term debt (*billets des fermes*). When the king borrowed from the Company, or, assigned another debt to them, the Farmers would issue short-term paper to finance the king’s transaction. This debt was issued in the name of the Company of General Farms and actively traded on private markets. In 1697 the amount of short term debt in circulation was equal to the sum of all the lending through the three largest tax farms between 1600 and 1640.⁹⁸ During the eighteenth century, the Company was responsible for holding up to a quarter of long-term Royal debt.⁹⁹ The main source of leverage which the Tax Farmers held against the crown, however, was their role in financing the debt service on Royal borrowing.

Once the role played by the Company in intermediating between private credit markets and the king reached a certain threshold, they could prevent the crown from undermining their

⁹⁷ Lamoreaux and Rosenthal, “Legal Regime,” p. 33-34.

⁹⁸ Clamageran, *Histoire*, vol. 3, p. 12, gives the number of *billets des fermes* outstanding in 1697. Lending through the farms between 1600 and 1640 comes from Figure 3 and is converted into silver values using Wailly.

⁹⁹ See Johnson, “Banking on the King,” pp. 981-82.

role in the tax system by threatening to withhold these services. If the crown owed money to the Company of General Farms, then it could not alter its agreement with them on how taxes were collected, because that would have been tantamount to defaulting on its debts.¹⁰⁰ Although we would not expect to see punishments actually occur in equilibrium, there is at least one clear case in which the actions of the crown did trigger a punishment. This was in October 1783 when the Finance Minister D'Ormesson attempted to eliminate a significant number of the farms and “reform” several others. Sensing that their investments would not be safe with the Company out of the picture, the holders of 30,000,000 Livres in short-term debt issued on the credit of the Company of General Farms demanded payment. After meeting with thirty of the general farmers, the king was sufficiently concerned that his credit might be ruined that he immediately fired D'Ormesson.¹⁰¹ Shortly thereafter, debt began trading at its previous, higher, value.¹⁰²

The question still remains as to why nascent institutions allowing for corporate personhood, tradable shares, and separation of ownership from control rights were not present in the early seventeenth century Ottoman Empire. Why had previous generations not demanded institutional innovation? It is not sufficient to point out a greater separation of church and state in the West than in the Near East. After all, Islamic law was perfectly capable of adapting to changing circumstances. If there were gains to be had from introducing corporate institutions, as we claim there was, then their failure to emerge must be explained.

Timur Kuran offers two suggestions as to why corporate forms failed to emerge more quickly in the Ottoman Empire. He first points to Islamic laws governing inheritance and

¹⁰⁰ For example, the Bail Forceville contained many articles which contractually forbade the crown from changing tax rates or methods of collection after signing. See Forceville, *Bail*, Articles 593-95.

¹⁰¹ Mollien and Gomel, *Mémoires*, vol. 1, pp. 89-92.

¹⁰² Marion, *Dictionnaire*, vol. 1, p. 350.

partnerships. A partnership lapsed at the death of a participant in France as in the Ottoman Empire. But in contrast to the West, where primogeniture dominated, a deceased Ottoman was likely to have a substantial number of heirs in the Ottoman Empire. The Islamic inheritance system was more egalitarian and mandated a division of the deceased's property across many heirs in the nuclear and extended family. Thus, to minimize the chances of costly and premature dissolution of the partnerships, they were kept small. Small partnerships inhibited capital pooling with negative repercussions for investment and economic growth.¹⁰³

As we have seen, after 1681, the French Company of General Farms was managed by a tight-knit group of financiers. This group was able to insulate itself from the predatory behavior of the crown in large part because of its ability to credibly withhold a large amount of capital from the king as a punishment for "bad behavior". This strategy required that the Company amass a large amount of capital (so the punishments would hurt) and also to separate the ownership of this capital from control rights. Had ownership and control not been separated, it might have been too costly to get all of the investors in the Company to agree at the same time to withhold their capital from the crown when necessary.

Ottoman life-grant tax farmers were never able to pool capital on the same scale as the French tax farmers, at least from the end of the seventeenth century on. In 1788 sixteen individuals controlled twenty-five percent of the capital invested in the life-grant (*malikane*) system. In France, by contrast, sixteen individuals controlled virtually all of the capital associated with the tax farm system.¹⁰⁴

¹⁰³ See Kuran, "Islamic Commercial Crisis." It should be noted that parts of Western Europe, especially in France, had egalitarian inheritance law.

¹⁰⁴ Curiously, 8 percent came from 7 palace women, again highlighting the diversity of the investors.

Ottoman investors, large and small, consistently chose to diversify across tax farms. For example, the tax farm of Tobacco Customs in Istanbul averaged four owners between 1707 and 1737 but had twenty-two by 1759 with the smallest share being 1/128.¹⁰⁵ In fact, the number of share owners per life-grant tax farm doubled between 1720 and 1820.¹⁰⁶ Investments in twenty to thirty separate tax farms were frequently observed in the later period. As these numbers suggest, the number of tax farming partnerships was growing in the late eighteenth century, and a secondary market for tax farm shares was slowly developing. In fact, the life-grant system single handedly paved the way to multiple profit-sharing arrangements and enlarged the base of lenders to the Ottoman State.¹⁰⁷ Still, an individual's investment in any given tax farm remained small. Thus, while the Company of General Farms was able to pool enough capital to be "too big to fail" during the eighteenth century, this critical mass was never reached by an Ottoman tax farm.

There was also no natural progression towards the joint-stock company and the corporation in the Ottoman Empire during the eighteenth century.¹⁰⁸ This is especially relevant since, even if a single Ottoman tax farm had been large enough to threaten the sultan, without an effective separation of the ownership from control rights over the invested capital, the costs of punishing the government would have been high. Making a threat to stop lending credible is complicated by the fact that punishments are typically costly for both the punished and the

¹⁰⁵ Çizakça, *Comparative Evolution*, p. 181.

¹⁰⁶ *Ibid.*, p. 173.

¹⁰⁷ The trading of securities is first seen in the Ottoman Empire in the 1760s. The foreign advisor De Tott, active in Istanbul during 1768-74, noted that Janissary pay was 9 quarters in arrears and that the Ottomans had been issuing pay tickets for military service which were traded as public securities. He estimated that there could be 400,000 of these tickets in circulation, about twice the number of troops the government could raise in wartime. In 1782, Grand Vizier Halil Hamid, during a Janissary inspection, found that only 10 percent of the names on the pay ticket certificates belonged to real men. See İnalçık and Quataert, *Economic and Social History*, p. 716.

¹⁰⁸ For why the corporation did not grow endogeneously in the Middle East, see Kuran, "Logic of Financial Westernization," and Kuran, "Absence of the Corporation."

punisher. There were no guarantees that all investors would agree to forego the short-term gains from continued lending at the cost of long-run uncertainty, thereby necessitating the placement of control over the capital in the hands of a group that was less likely to be subject to this free rider problem. In the Company of General Farms, the group that decided when to “punish” the crown by withholding financial services, was known as the *Caisses*. Since it was intended to protect the long-run interests of the Company, even core members had to wait for years to get a seat (it took Antoine Lavoisier 15 years). Adrian Delahante wrote of the *Caisses* that it was, “... fundamentally the senate, or better, the council of ten of the oligarchic republic of finance.”¹⁰⁹

The second reason given by Kuran for the absence of corporate institutions in Ottoman society is that there already existed a viable substitute for the corporation in the institution known as the *waqf*.¹¹⁰ The *waqf* was an Islamic unincorporated trust typically established to enable a charitable service. In essence, the provision of public goods, such as education and feeding the poor, was tied to the *waqf* system. Because of their association with the high clergy and sacred activities, *waqfs* received preferential tax treatment and were not as vulnerable to predation by rulers. Yet the *waqf* differed from a corporation in several important respects: it was not a legal person, lacked transferable shares, and its purpose (at least for any given *waqf*) was supposed to be unchanging.¹¹¹ The capital invested in a traditional *waqf* was, in a very real sense, tied to the purpose laid out in the founding of the enterprise.¹¹²

¹⁰⁹ Delahante, *Famille de Finance*, vol. 1, p. 204.

¹¹⁰ Kuran, “Absence of the Corporation,” pp. 819-21.

¹¹¹ Indeed, one of the literal meanings of *waqf* in Arabic is “to stop.”

¹¹² A dramatic example of how this “immobilization” of capital under a *waqf* impacted institutional change is given by the differential evolution of institutions dedicated to higher education in the Middle East and in Europe. Many *madrasa* colleges and Western universities were founded contemporaneously during the twelfth and thirteenth centuries, both with curricula closely linked to religious themes. The *madrasas* were often financed through *waqfs* whereas the Western Universities were constituted under trust instruments similar to the *waqf*. The European Universities (such as those in Paris and Oxford) quickly became self-incorporated as self-governing institutions

After the fourteenth century, an alternative to the traditional *waqf*, known as the “Cash *waqf*” was available, which earned a return on investors capital by lending money out. But cash *waqfs* were forbidden to merge together in order to pool greater amounts of capital.¹¹³ The cash *waqfs* were able to provide a relatively safe haven for investors, but they could not coalesce and create an organization as large as the Company of General Farms. In fact, the enlargement of the cash *waqf* system in the eighteenth century is indirect evidence of increased risk of predation by the sultan in other sectors of the economy.¹¹⁴ In the course of the eighteenth century, as Ottoman holders of capital sheltered their assets in the *waqf* system, cash *waqfs* grew into large lenders and, as an unintended consequence, also defused the demand for the sort of institutional innovations pursued by the members of the French General Farms.

The French tax farmer (and meticulous record keeper) Antoine Lavoisier, estimated that in 1762, 1767, and 1770, there were 60 million, 48.5 million, and 60 million livres tournois respectively of *billets des fermes* in circulation.¹¹⁵ This compares to the total amount of debt service facing the crown in 1764 of 124 million livres tournois.¹¹⁶ The Company used its role as a financial intermediary for the crown to block attempts to reform the fiscal system. Finance Ministers, from Turgot up until the end of the Old Regime, attempted to wrest control of the tax

capable of changing their mandates. Tied as they were to the directives of their initial founders, however, the curricula in *madrasas* experienced much less evolution. See Kuran, “Absence of the Corporation,” p. 802.

¹¹³ Kuran, “Logic of Financial Westernization,” pp. 606-08.

¹¹⁴ An estimated eighty percent of urban land was in Islamic trusts (*waqfs*) in the Ottoman Empire and in about seventy-five percent of the cases, the family that established the trust, rather than the charitable activity, was the first beneficiary of the trust. See İnalçık and Quataert, *Economic and Social History*,” p. 712.

¹¹⁵ Cited in Matthews, *Royal General Farms*, pp. 255-56.

¹¹⁶ Eugene White, “France’s Slow Transition,” Table 5; Sargent and Velde, “Macroeconomic Features,” p. 481. It should be noted, however, that the *billets des fermes* were a stock, whereas the debt service of the crown was a flow of interest and capital payments on the much larger stock of debt. Sargent and Velde estimate the size of the total debt in 1789 as 3.73 billion livres tournois.

system from the Company with limited success. Either they could not afford to buy the Farmers out, or they ran into the same threats of punishment that D'Ormesson faced in 1783.¹¹⁷ By this time, the French government was trapped in an explosive cycle of borrowing to cover existing debt.¹¹⁸ With the tax farmers blocking manipulation of the fiscal system, the crown was forced to appeal to a broader coalition to aid with reform. The first Estates General since 1614 was called in 1788 and, from that point, the momentum for fundamental reform only grew. Ultimately, it took the *guillotine* to excise the Company from its role in the fiscal system in 1794, just one of many *ancien régime* institutions swept away by Revolution.

In contrast to the fundamental institutional reforms undertaken in France at the end of the eighteenth century, Ottoman sultans were able to manipulate fiscal institutions in order to meet their short-term financial needs, and the manipulation continued into the nineteenth century. To meet the demands of the Treaty of Küçük Kaynarca after losing the war of 1768-74 with Russia, the Ottoman treasury took over many large tax farms, had them run by state agents, and issued shares on their future revenues. These shares were public annuities which could be purchased by individuals of far lower incomes than the life-term tax farmers. Under this new fiscal system, known as *Esham*, the Ottoman bureaucracy was unable to raise enough revenue to cover its spending and it was forced to issue large amounts of debt.¹¹⁹ Yet with no intermediary protecting lenders from the whims of the sultan, the *Esham* system was unable to generate the capital necessary to meet the needs of the government, and the government was forced to borrow

¹¹⁷ See Johnson, "Cost of Credibility", pp. 13-16 for a discussion of these attempts.

¹¹⁸ See White, "Was There a Solution?"; and Sargent and Velde, "Macroeconomic Features;" and Velde and Weir, "Financial Market and Government Debt." In contrast to our argument that financiers were trying to prevent the *elimination* of certain taxes, some have argued that elites were trying to block *increases* in taxes in favor of constitutional reform. See Hoffman, Postel-Vinay, and Rosenthal, *Priceless Markets*.

¹¹⁹ Çizakça, *Comparative Evolution*, p. 192.

abroad. By the early 1870's the Ottoman state was spending about 60 percent of its tax revenues to service its foreign debt. The Treasury all but officially defaulted in 1875. Facing pressure from its European creditors, the bankrupt state called its first Parliament in 1876.¹²⁰ The empire would be fully dissolved less than fifty years later.

There were many similarities between the Ottoman Empire and France during the early-modern period. Both shared an absolute government which faced high transaction costs of extracting revenues from the population. Both sultans and kings had to exchange property rights for tax revenues and both sultans and kings manipulated those property rights when it was in their best interests. It was their differences, however, that shaped the evolution of institutions after the fiscal crises of the seventeenth century. In both countries, deficit spending led to uncertain property rights, which induced tax collectors to create new institutions in order to protect their property rights. We argue that the transaction costs associated with pooling large amounts of capital explain why a more effective constraint on rulers emerge in France and not the Ottoman Empire.

The differential response of French and the Ottoman tax collectors to the fiscal crises of the seventeenth century led to different paths of institutional development during the eighteenth century. In this paper we contrast the Company of General Farms to the life-grant system, but the trends we highlight in the context of tax farming are symptomatic of the economic and political developments that ultimately led to an increased income gap between Western Europe and the Near East. The institutional rigidities, which the French overcame endogenously, and sooner than the Ottomans, were manifested in greater political constraint through the fiscal system. More generally, we argue that private sector institutions (such as those allowing for

¹²⁰ See Wheatcroft, *Ottomans*, pp. 188-93.

tradable shares, separation of ownership from control rights, and legal personhood for private companies) played a vital role in bringing about the reform of public sectors institutions in France.

The standard of living in Middle Eastern cities was similar to that of their Western counterparts until the middle of the eighteenth century when the West started to pull ahead.¹²¹ This fact recently prompted Bernard Lewis to pose the question, “What went wrong?” in the Middle East. Scholars strongly disagree over the extent to which Islamic institutions are what went wrong. There is debate over the flexibility of Ottoman versus Western institutions (which is often broadened to Islamic versus Christian institutions). We argue that those engaged in this debate are overlooking an important point. Having malleable institutions is not always a good thing. The great paradox of French and Ottoman institutional history is that Ottoman fiscal institutions were *more* flexible than their Western counterparts and yet, in the long-run, Western institutions proved more conducive to growth. We are in complete agreement with Şevket Pamuk’s observation that the Ottoman state showed, “... considerable flexibility to adapt not only its military technology but also its fiscal, financial and monetary institutions in response to changing circumstances.”¹²² Ultimately, however, French rulers were better served by the constraints that prevented them from altering institutions than Ottoman sultan’s were by their relative freedom.

One implication of our story is that there was nothing intrinsic to Islam which prevented the emergence of those specific institutions that allowed the Company of General Farms to constrain the monarchy. Rather, initial conditions and historical contingency played a

¹²¹ Özmucur and Pamuk, “Real Wages,” p. 296.

¹²² Pamuk, “Evolution of Fiscal Institutions,” p. 8.

significant role. If Islam had not developed in a political vacuum, then perhaps there would have been greater demand for institutional innovation. Egalitarian inheritance and the provision of public goods through the cash waqf were prescient and, initially, highly successful. institutions that had the unintended consequence of reducing the demand for corporate forms. Perhaps if different institutions had emerged in seventh century Arabia, then the corporation would have developed along a similar path in the Middle East as it did in the West. This is not how history unfolded, however, and as a result Ottoman sultans were able to manipulate fiscal institutions on the margin throughout the seventeenth and eighteenth centuries; they thereby avoided the fundamental institutional reforms that French kings were ultimately forced to pursue. Whereas Ottoman sultans were free to continue ruling as absolute monarchs, Louis XV and Louis XVI came under increasing pressure from Louis XIV's creation in the previous century. The Company of General Farms was a thorn in the side of absolute monarchy, and to the extent that one believes unpaid debt (much of it held by the Company) and upset taxpayers (many of them "clients" of the Company) contributed to the Revolution of 1789, it was part of the process that brought democracy to France.

References

- Acemoglu, Daron, Simon Johnson, and James Robinson. "The Colonial Origins of Comparative Development: An Empirical Investigation." *American Economic Review* 95, no. 5 (2001): 1369-401.
- _____. "The Rise of Europe: Atlantic Trade, Institutional Change and Economic Growth." *American Economic Review* 95, no. 3 (2005): 546-79.
- Allen, Robert. "The Great Divergence in European Wages and Prices from the Middle Ages to the First World War." *Explorations in Economic History* 38, no. 4 (2001): 411-47.
- Barkey, Karen. *Bandits and Bureaucrats: the Ottoman Route to State Centralization*. Ithaca: Cornell University Press, 1994.
- Baulant and Meuvret. *Prix des Cereales*. Paris: S.E.V.P.E.N, 1960-02.
- Bayard, F. and P. Guignet. *L'Économie Française aux XVIe, XVIIe et XVIIIe Siècles*. Gap France: Ophrys, 1991.
- Bayard, Françoise. *Le Monde des financiers au xvii^e siècle*. Paris: Flammarion, 1988.
- Bean, Richard. "War and the Birth of the Nation State," *This JOURNAL* 33 (1973): 203-221.
- Bien, David D. "The *secrétaires du roi*: absolutism, corporations, and privilege under the Ancien Regime." In *Vom Ancien Regime sur Franzosischen Revolution: Forschungen und Perspektiven*, ed. E. Hinrichs. Gottingen: 1973: 153-67.
- _____. "Les Offices, les Corps, et le Crédit d'État: l'Utilisation des Privilèges sous l'Ancien Régime." *Annales ESC* 43, no. 2 (1988): 379-404.
- Bonney, R. J. "The Failure of the French Revenue Farms, 1600-60." *Economic History Revue* 32, no. 1 (1988): 11-32.
- Bonney, M. and R. Bonney. *Jean-Roland Malet Premier Historien des Finances de la Monarchie Française*. Paris: Comité pour l'Histoire Economique et Financière de la France, 1993.
- Bossenga, Gail. "The politics of privilege : old regime and revolution in Lille," Cambridge: Cambridge University Press, 1991.
- Briggs, Robin. *Early Modern France, 1560-1715*. Oxford: Oxford University Press, 1998.

- Çizakça, Murat. "Tax Farming and Financial Decentralization in the Ottoman Economy, 1520-1697." *The Journal of European Economic History* 22, no. 2, (1993): 219-50.
- _____. *A Comparative Evolution of Business Partnerships: the Islamic World and Europe, with Specific Reference to the Ottoman Archives*. Leiden, New York: E.J. Brill, 1996.
- Clamageran, J.J. *Histoire de l'Impôt en France*. Paris: Guillaumin et cie, 1867.
- Colbert, Jean Baptiste. *Lettres, Instructions Et Mémoires De Colbert, Publiés D'après Les Ordres De L'empereur, Sur La Proposition De Son Excellence M. Magne, Ministre Secrétaire D'état Des Finances*. Pierre Clemont, ed. vol. 2. Paris: Imprimerie impériale, 1861-70.
- Coşgel, Metin and Thomas J. Miceli. "Risk, Transaction Costs, and Tax Assignment: Government Finances in the Ottoman Empire." *This JOURNAL* 65, no. 3 (2005): 806-821.
- Darling, Linda. *Revenue Raising and Legitimacy: Tax Collection and Finance Administration in the Ottoman Empire 1560-1660*. New York: E.J. Brill, 1996.
- Delahante, Adrien. *Une Famille de Finance au XVIIIe siècle*. Paris: J. Hertz, 1880.
- Dessert, Daniel and J.L. Journet. "Le Lobby Colbert: Un Royaume, ou une Affaire de Famille?" *Annales E.S.C.* 30 (1975): 1303-36.
- Dessert, Daniel. "Finances et société au xxi siècle: à propos de la chambre de justice de 1661." *Annales E.S.C.* 29 (1975): 847-81.
- _____. *Argent, Pouvoir Et Société au Grand Siècle*. Paris: Fayard, 1984.
- _____. *Louis XIV Prend le Pouvoir: Naissance d'un Mythe?: 1661*. Bruxelles, Editions Complexe, 1989.
- Durand, Yves. *Les Fermiers Généraux au XVIIIe Siècle*. Paris: Presses Universitaires de France, 1971.
- Epstein, Steven. *Genoa and the Genoese, 958-1528*. Chapel Hill: University of North Carolina Press, 1996.
- Forbonnais, François Veron de. *Recherches et considérations sur les finances de France*. Basle: Frères Cramer, 1758.
- Forceville, Jacques. *Bail des fermes royales-unies, fait à Me. Jacques Forceville le 16. septembre 1738*. Paris: Imprimerie Royale, 1738.

France. *Archives Nationales de France*, KK335.

Gerber, Heim. "Muslims and *Zimmis* in Ottoman Economy and Society: Encounters, Culture and Knowledge," In *Studies in Ottoman Social and Economic Life* edited by Raoul Motika, Christoph Herzog and Michael Ursinus, 141-69. Heidelberg: Heidelberger Orientverlag, 1999.

Greif, Avner, Paul Milgrom, and Barry R. Weingast. "Coordination, Commitment, and Enforcement: The Case of the Merchant Guild." *Journal of Political Economy* 102 no. 4 (1994): 745-76.

Guéry, Alain. "Les Finances de la Monarchie Française Sous L'Ancien Régime." *Annales E.S.C.* 33, (1978): 216-39.

Heumann, Pierre. "Un traitant sous Louis XIII: Antoine Feydeau," In *Études sur l'Histoire Administrative et Sociale de l'Ancien Régime*, edited by M. Georges Pagès. Paris: Librairie Félix Alcan, 1938.

Hoffman, Philip T. "Taxes and Agrarian Life in Early-Modern France: Land Sales, 1550-1730." *Journal of Economic History* 46, no. 1, (1986): 37-55.

Hoffman, Philip T., Gilles Postel-Vinay, and Jean-Laurent Rosenthal. *Priceless markets: the political economy of credit in Paris, 1660-1870*. Chicago, The University of Chicago Press, 2000.

İnalçık, Halil. "Capital Formation in the Ottoman Empire." *This JOURNAL* 29, no.1, (1969): 97-140.

_____. *The Ottoman Empire, the Classical Age 1300-1600*. New York: Prager Publishers, 1973.

_____. *Studies in Ottoman Social and Economic History*. London: Variorum Reprints, (1985).

İnalçık, Halil and Donald Quataert, eds. *An Economic and Social History of the Ottoman Empire, 1300-1914*. 2 vols. Cambridge, MA: Cambridge University Press, 1994.

Isambert, M., Athanase Jean Léger Jourdan, Decrusy, eds. *Recueil général des anciennes lois françaises....* 29 vols, Paris: Plon Frères, 1821-1833.

İslamoğlu-İnan, Huri ed. *The Ottoman Empire and the World Economy*. Cambridge: Cambridge University Press, 1987.

- Johnson, Noel D. "The Cost of Credibility: The Company of General Farms and Fiscal Stagnation in Eighteenth Century France." *Essays in Business and Economic History* 24, (2006): 16-28.
- _____. "Banking on the King." This JOURNAL 66, no. 4 (2007): 963-991.
- Kuran, Timur. "The Islamic Commercial Crisis: Institutional Roots of Economic Underdevelopment in the Middle East." This JOURNAL 63, no.2 (2003): 414-46.
- _____. "The Logic of Financial Westernization in the Middle East." *Journal of Economic Behavior and Organization* 56, (2005): 593-615.
- _____. "The Absence of the Corporation in Islamic Law: Origins and Persistence" *The American Journal of Comparative Law* 53, (2005): 785-834.
- Lamoreaux, Naomi and Jean-Laurent Rosenthal. "Legal Regime and Contractual Flexibility: A Comparison of Business's Organizational Choices in France and the United States During the Era of Industrialization." *American Law and Economics Review* 7, no. 1 (2005): 28-61.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, Robert Vishny. "Law and Finance." *Journal of Political Economy* 106, no.6 (1998): 1113-55.
- Lavoisier, Antoine. *Œuvres De Lavoisier*. Edited by Edouard Grimaux. Paris: Imprimerie Nationale, 1862-1893.
- Levine, Ross. "Finance and Growth: Theory and Evidence." in *Handbook of Economic Growth*. Edited by Philippe Aghion and Steven Durlauf. The Netherlands: Elsevier Science, 2005.
- Lévy-Bruhl, Henry. "Les différentes espèces de sociétés de commerce en France au xvii^e et xviii^e siècles," *Revue historique de droit français et étranger*, 4th series (1937).
- Lewis, Bernard. *The Emergence of Modern Turkey*. Oxford: Oxford University Press, 1961.
- Maddison, Angus. "A Comparison of Levels of GDP per capita in developed and developing countries: 1700-1914." This JOURNAL 43, no. 1 (1983): 27-41.
- _____. http://www.eco.rug.nl/~Maddison/Historical_Statistics/horizontal-file.xls
- Marion, Marcel. *Les Impôts Directs sous l'Ancien Régime: Principalement au XVIIIe Siècle*. Genève, Slatkine-Megariotis Reprints, 1974.
- _____. *Dictionnaire des Institutions de la France aux XVIIe et XVIIIe Siècles*. Paris, Picard, 1999.

- Mathias, Peter and Patrick O'Brien. "Taxation in Britain and France, 1715-1810: A Comparison of the Social and Economic Incidence of Taxes Collected for the Central Governments." *Journal of European Economic History* 5, no 3 (1976): 601-650.
- Matthews, George T. *The Royal General Farms in Eighteenth-Century France*. New York: Columbia University Press, 1958.
- Mollien, F. N. and C. Gomel. *Mémoires d'un Ministre du Trésor Public 1780-1815*. Paris: Guillaumin et Cie, 1898.
- Mousnier, Roland. *The Institutions of France under the Absolute Monarchy, 1598-1789: Society and the State*. Chicago: University of Chicago Press, 1979.
- North, Douglass C. and Barry Weingast. "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England." This JOURNAL 49 (1989): 803-832.
- North, Douglass C. *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press, 1990.
- North, Douglass and Paul Thomas. *The Rise of the Western World: A New Economic History*. Cambridge, MA: Cambridge University Press, 1973.
- Özmucur, Süleyman and Şevket Pamuk. "Real Wages and Standards of Living in the Ottoman Empire, 1489-1914." This JOURNAL 62, no. 2 (2002): 293-320.
- Pamuk, Şevket. "The Evolution of Financial Institutions in the Ottoman Empire, 1600-1914." *Financial History Review* 11, no. 1 (2004): 7-32.
- Potter, Mark. "Coalitions and Local Politics in Seventeenth Century France." *French Historical Studies* 31, (2008): 29-49.
- _____. "War Finance and Absolutist State Development in Early Modern Europe: An Examination of French Venality in the Seventeenth Century." *Journal of Early Modern History* 7, no. 1 (2003): 120-47.
- Riley, James C. "French Finances, 1727-1768," *Journal of Modern History* 59, no. 2 (1987): 209-43.
- Rogers, Clifford, ed. *The Military Revolution Debate: Readings in the Military Transformation of Early Modern Europe*. Boulder, CO: Westview Press, 1995.

- Root, Hilton. "Tying the King's Hands: Credible Commitments and Royal Fiscal Policy During the Old Regime." *Rationality and Society* 1, no. 2 (1989): 240-59.
- Rousselot de Surgy, Jacques Philibert. *Finances*. Paris: Plomteux, 1784.
- Roux, Pierre. *Les Fermes d'Impôts sous l'Ancien Régime*. Paris, Rousseau et Cie, 1916.
- Rubin, Jared. "Printing and Interest Restrictions in Islam and Christianity: An Economic Theory of Inhibitive Law Persistence." *SSRN Working Paper 1086446*, (2008).
- Sadat, Deena R. "Rumeli Ayanlari: the Eighteenth Century." *Journal of Modern History* 44 (1972): 346-63.
- Salzmann, Ariel. "An Ancien Régime Revisited : 'Privatization' and Political Economy in the Eighteenth-Century Ottoman Empire." *Politics & Society* 21, no. 4 (1972): 393-423.
- Sargent, Thomas J. and François R. Velde. "Macroeconomic Features of the French Revolution." *Journal of Political Economy* 103, no. 3 (1995): 474-517.
- Scott, William Robert. *The Constitution and Finance of English, Scottish, and Irish Joint Stock Companies to 1720*. Cambridge, MA: Cambridge University Press, 1912.
- Sokoloff, Kenneth L. and Stanley L. Engerman. "History Lessons: Institutions, Factor Endowments, and Paths of Development in the New World." *Journal of Economic Perspectives* 14, no. 3 (2000): 217-32.
- Stasavage, David. "Credible Commitment in Early Modern Europe: North and Weingast Revisited." *Journal of Law, Economics, and Organization* 18, no. 1 (2002): 155-86.
- Velde, François, and David R. Weir (1992), "The Financial Market and Government Debt Policy in France, 1746-1793," *Journal of Economic History*, Vol. 52, no. 1.
- Wailly, Natalis de. "Mémoire sur les variations de la livre tournois, depuis le règne de saint Louis jusqu'a l'établissement de la monnaie decimate," In *Mémoires de l'Académie des Inscriptions et Belles-Lettres*, vol. 21, Part 11 (1857), 398-401.
- Wheatcroft, Andrew. *The Ottomans: Dissolving Images*. London: Penguin, 1996.
- White, Eugene. "France's Slow Transition from Privatized to Government-Administered Tax Collection: Tax Farming in the Eighteenth Century." *Departmental Working Paper 200116*, Rutgers University, Department of Economics, (2001).
- _____. "Was There a Solution to the Financial Crisis of the Ancien Régime?" *This JOURNAL* 49, no. 3 (1989): 545-69.

Figure 1: Budget Surplus and Deficit in France, 1523 – 1698 (100,000's of Setiers of Wheat)

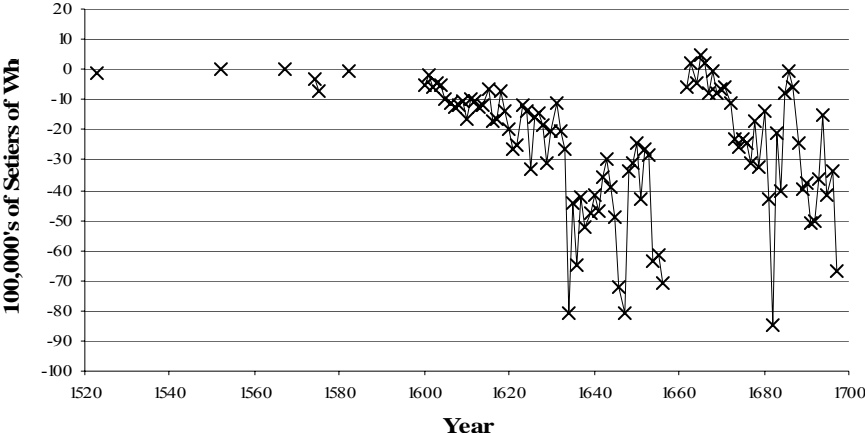


Figure 2: Budget Surplus and Deficit in the Ottoman Empire, 1523 – 1698 (100,000's of kile of wheat flour)

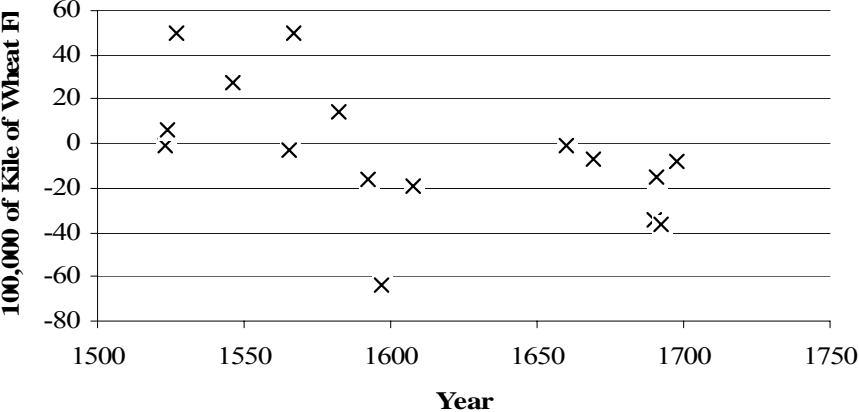


Figure 3: Anticipations Through the French Tax Farms, 1614 - 1648

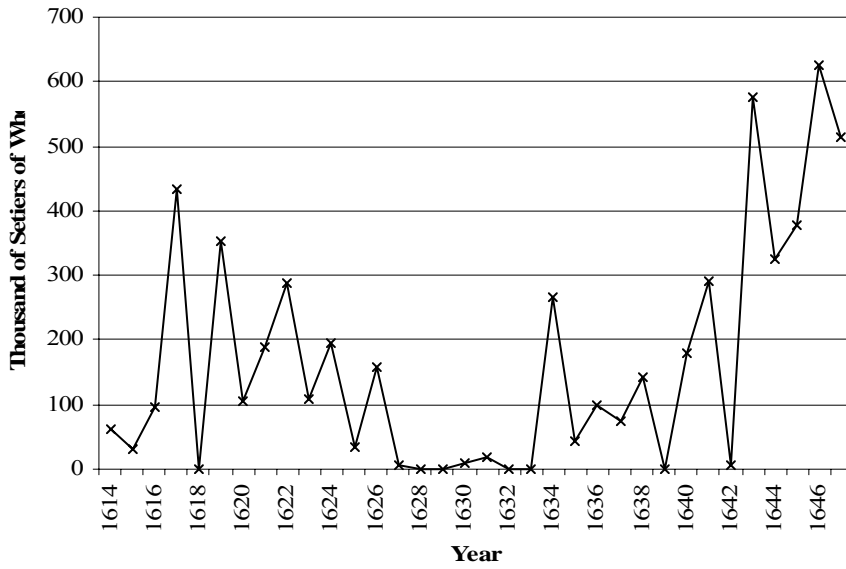


Figure 4: Difference Between Intended and Actual Duration of Ottoman Tax Farm Contracts, 1535 - 1620

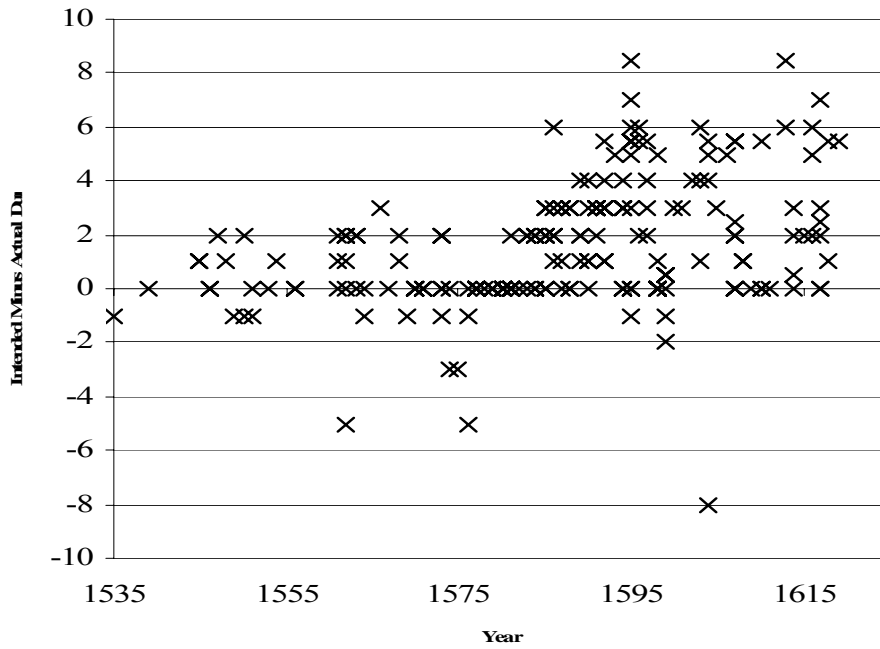


Figure 5: French Tax Farm Revenues, 1600 – 1695

