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Crime and Punishment in Ottoman Times: Corruption and Fines

Monetary fines have been common throughout history as an instrument of law enforcement. For certain crimes, governments have often preferred them over imprisonment or corporal punishment because they are less costly to implement, at least in principle, and because they can help to compensate victims or to repair social damage. Used alone or in combination with other punishments, fines have proved to be an effective deterrent to crime. Since Becker's pioneering work about the economics of crime in 1968, a significant literature about the theory and practice of levying fines to enforce the law has emerged.[1]

In practice, however, fines are subject to corruption. Governments often pay agents, directly or indirectly, a share of the revenue from the fines that they collect. Although tying agents' income to these fines may seem on the surface to be a legitimate source of motivation, it may also lead to extortion, bribery, or theft. Recent studies have identified the cost and consequences of rent seeking in law enforcement due to opportunistic behavior.

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1 Gary Becker, "Crime and Punishment: An Economic Approach," *Journal of Political Economy,* LXXVI (1968), 169–217. For reviews of this literature, see Miceli, *The Economic Approach to Law* (Stanford, 2008), 283–336; Mitchell Polinsky and Steven Shavell, "The Economic Theory of Public Enforcement of Law," *Journal of Economic Literature,* XXXVIII (2000), 45–77.

Governments clearly must weigh the cost and benefits of using fines and agents against those of the alternatives.[2]

This article studies the use of fines and agents for law enforcement in the Ottoman Empire, as well as the institutional mechanisms implemented to control corruption. Two objectives guide the inquiry. The first is to identify the basic components of the classical Ottoman system of law enforcement. Ruling for more than six centuries over lands that spanned three continents, the Ottomans developed a system that initially relied heavily on fines and local agents. In the system that prevailed during the sixteenth century, fines constituted the punishment for many offenses, and much of the revenue went to the local officials in charge of identifying suspects and punishing criminals. To prevent corruption, the personnel responsible for adjudicating criminals were not also responsible for punishing them, and periodically these public officials rotated between regions. Their compensation consisted of shares of criminal fines and local taxes. Insights from recent literature about law and economics reveal the details of how this system deployed fines to deter crime and how it served to control corruption.

Our second objective is to trace how and why the Ottoman system changed over time. After the seventeenth century, it underwent a significant transformation; high levels of inflation undermined the effectiveness of fixed fine rates. Moreover, imperial decentralization in the provinces and the institution of long-term tax farming altered the government's relationship with local law-enforcement agents, thereby reducing the effectiveness of mechanisms that previously helped to control corruption. These developments impelled the Ottomans to decrease their reliance on fines for punishment in later periods.

This work is related to three historiographical strands. The first is the growing literature on crime and punishment in the Ottoman Empire. Using rich Ottoman court records and other archival evidence as sources, a number of scholars have recently

2 Polinsky and Shavell, "Corruption and Optimal Law Enforcement," *Journal of Public Economics,* LXXXI (2001), 1–24; Nuno Garoupa and Daniel Klerman, "Optimal Law Enforcement with a Rent-Seeking Government," *American Law and Economics Review,* IV (2002), 116–140; Coşgel, Etkes, and Miceli, "Private Law Enforcement, Fine Sharing, and Tax Collection: Theory and Historical Evidence," *Journal of Economic Behavior and Organization* (forthcoming).

studied various aspects of this issue in the Ottoman Empire—for example, crime and punishment in İstanbul, illicit sex *(zina)* in Aleppo, and law and gender in Aintab. The economic analysis of Ottoman law enforcement herein contributes a new perspective on these issues.

This article is also related to the literature about the relationship between Ottoman and Byzantine institutions. Studying commonalities between the public institutions of these states, such as their systems of taxation and governance, historians have identified the origins of certain Ottoman institutions. Although it is beyond the scope of this paper to examine the origins of law-enforcement practices in the Ottoman Empire in any depth, the economic logic and the structure behind the practices discussed herein draws attention to similarities in how these two states deployed fines.

Finally, our work is related to the enormous literature about law enforcement in Europe during the same period, particularly the evolution of the basic components and socioeconomic principles in European states. By providing a systematic analysis of the evolution of Ottoman law enforcement, we facilitate comparisons between the Ottoman Empire and other European states.[3]

OTTOMAN LAW ENFORCEMENT—FINES AND AGENTS Although fines were originally unrecognized in the criminal sections of the Islamic law *(shari'a),* and some religious scholars disapproved of them as dangerous innovations *(bid'at),* other scholars, such as the eighth-century jurist Abū Yūsuf, disagreed. Notwithstanding this early legal hesitation, some of the previous Islamic peoples of

3 Fariba Zarinebaf, *Crime and Punishment in Istanbul: 1700–1800* (Berkeley, 2010), 162; Elyse Semerdjian, *"Off the Straight Path": Illicit Sex, Law, and Community in Ottoman Aleppo* (Syracuse, 2008); Leslie Peirce, *Morality Tales: Law and Gender in the Ottoman Court of Aintab* (Berkeley, 2003); Anthony Bryer and Heath W. Lowry, *Continuity and Change in Late Byzantine and Early Ottoman Society: Papers Given at a Symposium at Dumbarton Oaks in May 1982* (Washington, D.C., 1986); Halil İnalcık, "The Problem of the Relationship between Byzantine and Ottoman Taxation," in Michael A. Cook (ed.), *Akten Des XI: Internationalen Byzantinisten-Kongresses* (Munich, 1960), 237–242; Clive Emsley, *Crime, Police, and Penal Policy: European Experiences 1750–1940* (New York, 2007); David Levinson, *Encyclopedia of Crime and Punishment* (Thousand Oaks, 2002); Julius R. Ruff, *Violence in Early Modern Europe, 1500–1800* (New York, 2001); Xavier Rousseaux, "Criminality and Criminal Justice History in Europe (1250–1850): Bibliographical Essay," *Criminal Justice History,* XIV(1993), 159–181; David de La Croix, Xavier Rousseaux, and Jean-Pierre Urbain, *To Fine or to Punish in the Late Middle Ages* (Louvain, 1994).

Turkic heritage, such as the Seljuks and the Dulkadir, commonly used fines for law enforcement. Ottoman jurists, however, generally approved of fining offenders; the government adopted the strategy as an integral component of the Ottoman criminal code, applying it extensively and systematically in a variety of circumstances.[4]

During the fifteenth and sixteenth centuries, Ottoman law enforcement resorted to fines either alone or in conjunction with other forms of punishment. Consistent with the practice in earlier Muslim states, Ottoman law also prescribed discretionary measures *(ta'zīr),* such as flogging, bastinada *(falaka),* banishment, and imprisonment. A novel characteristic of the Ottoman criminal code for certain offenses was to impose both a monetary fine and chastisement, possibly a practice borrowed from the Byzantine Empire. In those cases, the fine was linked by fixed ratio to the number of strokes inflicted on an offender, usually one *akçe* for each stroke. A far greater variety of offenses—including theft, fornication, wine drinking, the sale of unstamped cloth, property damage caused by stray animals, and hunting or disturbing animals on official reserves—were often punished exclusively by fines.[5]

The economic theory of law enforcement provides a simple basis for choosing fines as the most common form of punishment. In general, the key difference between fines and imprisonment (or other forms of nonmonetary penalty) is expense. Since adding a prison term imposes a cost not just on offenders but also on society as a whole, fines make sense as the first course of action (to the extent of offenders' ability to pay) before resorting to prison. Note that this point is based on the assumption commonly made in the early literature that fines are costless (or cheaper) to implement. If the social cost of implementing fines rises significantly, such as when their collection leads to corruption, the strategy could fail, as we elaborate later.[6]

The Ottomans' extensive use of fines in the fifteenth and sixteenth centuries, an era often referred as the "classical" period, is consistent with the economic theory of law enforcement. Evidence on the Ottoman economy and society of this period sug-

4 Uriel Heyd, *Studies in Old Ottoman Criminal Law* (New York, 1973); Rudolph Peters, *Crime and Punishment in Islamic Law: Theory and Practice from the Sixteenth to the Twenty-First Century* (New York, 2005).

5 Heyd, *Studies,* 277; Zarinebaf, *Crime and Punishment,* 162.

6 Becker, "Crime and Punishment"; Polinsky and Shavell, "Economic Theory."

gests that fines were cheaper to implement than nonmonetary forms of punishment. It is reasonable to expect the cost of imprisonment to be prohibitively high in rural areas because of the low population density and consequently low economies of scale in the provision of prison services. Since the provincial soldiers who were generally responsible for punishing offenders typically had long periods of absence during war seasons, they were unable to monitor prisons adequately. The irreversibility of certain nonmonetary forms of punishment, such as the death penalty or severe corporal punishment, also raised their social cost, particularly in the case of crimes for which the probability of accurate detection was low. By contrast, fines offered greater flexibility in setting the level of punishment, and they were, in principle reversible, whenever an error was made.

The consistency of Ottoman practice with the economic theory of law enforcement does not mean that the Ottomans somehow foresaw future theoretical developments in law and economics or that they always deliberately sought to maximize efficiency. We know too little about individual rulers and important officials to draw inferences about the knowledge or motivation that formed the basis for all of their choices. But a cost-benefit analysis would certainly be useful for making sense of trends in patterns of punishment. Although the proposition that examining costs and benefits is useful for explaining enforcement rules and institutions is not an uncontroversial proposition, this analysis seeks to demonstrate that its continuing vitality is a good indication of its validity. We proceed by adopting the methodological position that Ottoman rulers, subjects, and officials tried to maximize their own well-being by minimizing cost and maximizing revenue.[7]

The Ottomans' use of fines is also consistent with a historical precedent inherited from the Byzantine Empire. The Byzantine criminal system used fines extensively for punishment. Although historians have studied many of the financial and administrative institutions that the Ottomans borrowed from Byzantium, they have not systematically examined the parallels between their systems of law enforcement. It may not be a coincidence that the Dulkadir, another Islamic polity that utilized fines as popular

7 Various social, political, and historical constraints limited what the Ottomans could accomplish. For an analysis of the relationship between efficiency and constraints in taxation, see Coşgel, "Efficiency and Continuity in Public Finance: The Ottoman System of Taxation," *International Journal of Middle East Studies,* XXXVII (2005), 567–586.

methods of punishment, was also a former Byzantine territory. A comparative evaluation of the Ottoman and Byzantine fines could demonstrate the extent to which the Ottomans were influenced by their Byzantine predecessors.[8]

Ottoman sultans issued criminal statutes that specified in great detail the fines that applied to specific offenses. Table 1 shows some of the criminal fines in the Ottoman Criminal Code of Sultan Süleymān the Magnificent, drafted in 1545. Not surprisingly, fines varied significantly among offenses, depending on the severity of the crime and the harm to the victim. For example, the fine imposed for murder, unless punished by retaliation (see note below Table 1), was generally much higher than that for wounding with a knife or arrow. Similarly, the fines for stealing grain and wounding with a knife or arrow were significantly different. The considerably higher fines for fornication and sodomy by married individuals presumably reflected the greater social harm caused by these offenses.

Table 1 also shows that fines depended not just on the severity of the offense or the harm to the victim but also on the offenders'ability to pay, as determined by their wealth. The fine for killing a person, for instance, varied from 400 akçe for a rich offender whose wealth exceeded 1,000 akçe, to 200 akçe for a less wealthy offender whose income was between 600 and 1,000 akçe, to only 50 akçe for a poor offender with an income lower than 400 akçe.[9]

A discriminatory fine structure based on offenders' ability to pay is consistent with the economic theory of law enforcement and the notion of optimal deterrence. Becker first established the proposition that when punishment takes the form of monetary fines and apprehension is uncertain, it is optimal to set the fine as high as possible while proportionately lowering the probability of detection to achieve the desired "expected fine" (and hence deterrence) at the lowest social cost. It follows that the fine should be

8 İ. Tokalak, *Bizans—Osmanlı Sentezi: Bizans Kültürü ve Kurumlarının Osmanlı Üzerindeki Etkisi* (Istanbul, 2006); Angeliki Laiou, "Law, Justice, and the Byzantine Historians: Ninth to Twelfth Centuries," in *idem* and Dieter Simon (eds.), *Law and Society in Byzantium, Ninth–Twelfth Centuries* (Washington, D.C., 2004), 182; Paul Magdalino, "Justice and Finance in the Byzantine State, Ninth to Twelfth Centuries," in Laiou and Simon (eds.), *Law and Society,* 96; Warren Treadgold, *A History of the Byzantine State and Society* (Stanford, 1997), 179, 352.

9 Heyd, *Studies,* 104–110. Fine levels also depended on the legal/personal status of individuals, such as whether they were free or slave, Muslim or non-Muslim, or adult or minor.

Table 1 Examples of Fines for Criminal Offenses (Akçes)

OFFENSE	STATUS OF OFFENDER	OFFENDER'S WEALTH			
		RICH	AVERAGE	POOR	VERY POOR
Murder[a]		400	200	100	50
Wounding with a knife/arrow[b]		200	100	50	
Stealing grain		40	20	10	
Concealing stray animals		40	20	10	
Fornication	Married	300	200	100	40–50
	Unmarried/widow	100	50	30	
Sodomy	Married man	300	200	100	40–50
	Unmarried man	100	50	30	

[a]According to the Code, "If a person kills a human being, retaliation *(kisas)* shall be carried out [and] no fine shall be collected." The fine for murder applies if "retaliation is not carried out or the killing is not such as to require retaliation" (Uriel Heyd, *Studies in Old Ottoman Criminal Law* [New York, 1973], 105).

[b]The penalty for wounding also included strokes. The monetary fine "shall be collected . . . after he has been chastised" (Uriel Heyd, *Studies in Old Ottoman Criminal Law* [New York, 1973], 107).

SOURCE "Ottoman Criminal Code of Sultan Süleymān the Magnificent," in Uriel Heyd, *Studies in Old Ottoman Criminal Law* (New York, 1973), 54–131 (Ottoman text with English translation).

set as equal to the offender's wealth, which is the maximum amount the offender could pay. Polinsky and Shavell extended this logic to show that when offenders vary in their levels of wealth, the optimal strategy involves fines that increase according to the wealth of offenders, culminating in a maximum fine below the worth of the wealthiest person.[10]

In imperial records, expected fine revenues were generally recorded in tax registers called *tahrir defterleri,* under the general heading of "windfall" revenue *(bād-i havā),* or in reference to more specific fines *(cerīme)* expected from such widely observed misdemeanors as crop damage caused by stray cattle. Further details about the types and amounts of fines can be found in the surviving records of actual revenues from these fines. A document pertaining to the fines collected by Hüseyin Subaşı, an official in charge of collecting fines in eight villages around the town of Ramle in

10 Becker, "Crime and Punishment"; Polinsky and Shavell, "A Note on Optimal Fines When Wealth Varies Among Individuals," *American Economic Review,* LXXXI (1991), 618–621. The economic logic is that if the maximum fine were raised to the level of the wealthiest person, and the probability of apprehension were lowered proportionately, individuals not so wealthy would be undeterred because they would not be able to pay the full fine.

1586, shows thirty-three instances of crimes and misdemeanors in the four months covered by the register, including fighting (with penalties ranging between 20 and 540 *pāra*), stealing rice (200 pāra), and drinking wine (160 pāra).[11]

The second basic component of Ottoman law enforcement was the use of agents to apprehend and punish offenders. Prior to the seventeenth century, during the so-called classical period, the local officials entrusted with these tasks received a share of fine revenues as remuneration. The Empire consisted of several administrative levels that divided the Empire into provinces, the provinces into districts, and the districts into fiefs. In the provinces close to the imperial center, government agents also typically received income directly from taxable sources assigned by the central government. For example, if a certain cavalryman *(sipahi)* was appointed as the fiefholder of a village, all of the peasants in that village paid their taxes directly to him as his remuneration, which he shared with the local governor. In return for the right to collect taxes, he provided local protection to the peasants, men and arms to the central government in times of war, and possibly maintained roads and bridges. The same official was often charged with enforcing the law and collecting the fine revenue in his region. To enforce the law in towns, the government similarly appointed local officials (for example, *subaşı*) who also received income from fine revenues. Since the Ottoman system of government separated enforcement from adjudication (as we detail below), these agents apprehended and punished offenders but left it to judges to determine guilt.[12]

INCENTIVES AND CORRUPTION IN LAW ENFORCEMENT The resort to agents for law enforcement introduced obvious issues for the

11 Coşgel, "Ottoman Tax Registers *(Tahrir Defterleri),*" *Historical Methods,* XXXVII (2004), 87–100; Amy Singer, "Marriages and Misdemeanors: A Record of 'Resm-i'Arus ve Bad-ı Hava'," *Princeton Papers: Interdisciplinary Journal of Middle Eastern Studies,* IV (1996), 138.

12 Glen W. Swanson, "The Ottoman Police," *Journal of Contemporary History,* VII (1972), 243–260. The system was also flexible enough to accommodate various regional arrangements, especially in the distant corners of the Empire. For example, in Kurdish territories, tribal leaders performed law-enforcement responsibilities and collected the fines. In Egypt, the peasants paid their fines to their *kashifs* (local governors). See Heyd, "Jurm," in P. J. Bearman et al. (eds.), *Encyclopedia of Islam: A Dictionary of the Geography, Ethnography and Biography of the Muhammadan Peoples* (Leiden, 1978), IV, 604; Michael Winter, *Egyptian Society under Ottoman Rule, 1517–1798* (London, 1992), 90–91. This article focuses on the practices of the central provinces.

government to consider when choosing between fines and other forms of punishment. There were two types of problems in implementing a system of fines and organizing the personnel for law enforcement. The first was the traditional principal–agent problem—the extent of the agent's commitment to enforcing the law. For example, an agent might not devote much effort to identifying, apprehending, and punishing criminals if he did not internalize the full social benefits from law enforcement. In particular, depending on his compensation scheme, he could fail to honor the intended deterrence effect of his activities. The general source of the problem was that agents had interests different from those of rulers, and rulers could not easily observe agents' actions in specific cases because of their lack of information about local conditions—the very reason why they employed local officials in the first place. Moreover, even if rulers were somehow able to gather the required information, the cost of determining appropriate courses of action in each case and to monitor officials' performance would have been too high. The upshot is that decentralized agents could under-enforce the law without easy detection under any circumstances.

The second problem was the possibility of corruption in law enforcement—agents accepting payment in exchange for not reporting a violation or either threatening to frame or actually framing an innocent person to extort money. An enforcement agent motivated by rent seeking could engage in such behavior if the benefits of corruption exceeded the expected cost, that is, the risk of, and penalty for, being caught. Note that this type of problem is not typically present in the standard principal–agent settings, such as sharecropping or wage contracts, which have been traditionally examined in the literature. Whereas the typical concern in a standard principal–agent setting is the choice of how much effort the agent should expend, the possibility of corruption in law enforcement adds a new dimension to the agency problem. Corruption in law enforcement is socially costly because it dilutes deterrence. When innocent individuals are extorted or framed, they bear the expected payment, which reduces the cost of committing the crime.

The fine-based criminal system created clear incentives for Ottoman law-enforcement agents to detect criminals, but it also created a risk that they would implicate innocent subjects, or

overcharge actual criminals. For instance, when a thief was caught in the act inside a house in Aintab (c. 1540), the local tribal chief, who served as the local police, claimed that the thief's intention was rape, thus forcing him to pay a higher fine. In another case, fine collectors incited unmarried men to assault women of high social standing in order to subject these women to high fines for illicit sex. Such behavior was not limited to Aintab; the literature provides numerous examples of unjust or excessive fines. Since enforcement officials who were compensated solely by fines had little interest in the deterrence effects of their actions, corruption could be a serious problem.[13]

It is nearly impossible to determine the severity of the problem, the extent to which it changed over time, or its relationship to corruption in other societies. The fact that corruption, by its nature, does not leave traces in historical documents may well explain why Ottoman historians expressed conflicting views about its significance in the Empire. For example, whereas Mumcu found bribery and favoritism to be widespread during the fifteenth and sixteenth centuries, Gerber argued that the legal system functioned relatively well during the same period. Although Rubin's recent research about Ottoman courts in the nineteenth century indicates that the Ottoman government considered corruption to be a serious and nagging problem during this period, he does not indicate whether the problem worsened or improved over time. Comparisons with other societies are even less certain. Some European travelers made implicit or explicit comparisons between their own systems and that of the Ottomans, but Prest, a historian of judicial corruption in early modern England, found such comparisons to be unjustified.[14]

Historical evidence nevertheless suggests that corruption was a significant potential problem for law enforcement in the Ottoman Empire. Imperial orders sent to provincial centers regularly warned judicial and military officials against acts of corruption and

13 Peirce, *Morality Tales,* 319. See Ebru Boyar and Kate Fleet, *A Social History of Istanbul* (New York, 2010), 115–116, 198, for a discussion of the creative ways in which Kara Hızır, the *subaşı* (sub-governor) of Istanbul in the 1540s, extorted money, not only from the guilty but also from the innocent.

14 Ahmet Mumcu, *Osmanlı Devleti'nde Rüşvet: Özellikle Adli Rüşvet* (Ankara, 1969); Haim Gerber, *State, Society and Law in Islam: Ottoman Law in Comparative Perspective* (Albany, 1994); Avi Rubin, *Ottoman Nizamiye Courts: Law and Modernity* (London, 2011); Wilfrid Prest, "Judicial Corruption in Early Modern England," *Past & Present,* 133 (1991), 67–95.

oppression, indicating the presence of these practices as continual concerns. In the same vein, European travelers' accounts about the Ottoman Empire that were composed between the seventeenth and nineteenth centuries generally made special mention of corrupt practices (especially bribery) by both court functionaries and law-enforcement officials. Although we cannot be certain that imperial orders were followed or that Europeans' assessments were objective and free of anti-Ottoman bias, anecdotal evidence suggests strongly that corruption was a problem.[15]

How did the Ottomans attempt to control agency problems and corruption? The starting point was to define and outlaw wrongdoing in law enforcement. The Ottoman legal system clearly considered the possibilities of corruption and misconduct as significant concerns. According to the "circle of justice," traditionally considered to be the basis for Ottoman political theory, economic prosperity depended on meting out justice to taxpaying subjects. The sultans typically laid the legitimacy of their rule on the protection of the subjects from abuse and corruption at the hands of the military-administrative authorities, including the law enforcers. In drafting the legal code of a province *(kānunnāme),* and in edicts regarding matters of justice *(adāletnāmes)* that the imperial center sent to the provinces on a regular basis, they generally took great care to address and prohibit behavior that was deemed corrupt, such as excessive taxes and illegal impositions of criminal fines.[16]

MECHANISMS FOR CONTROLLING CORRUPTION Since merely declaring wrongdoing to be illegal would have been insufficient, the Ottomans attempted to implement institutional safeguards and incentive mechanisms to ensure against such behavior. Three policies aimed at regulating rent-seeking behavior were the distinction

15 Boğaç, *Local Court, Provincial Society, and Justice in the Ottoman Empire: Legal Practice and Dispute Resolution in Çankırı and Kastamonu (1652–1744)* (Leiden, 2003), 108–124; Christoph Herzog, "Corruption and the Limits of the State in the Ottoman Province of Baghdad during the 19th Century," *The MIT Electronic Journal of Middle East Studies,* III (2003), 36–43. Herzog insists that barring evidence to the contrary, European accounts should be considered strategically reliable, given the lack of comparable sources that provide ethnographic information.

16 İnalcık, "Adaletnameler," *TTK Belgeler,* II (1965), 49–145. Ergene, "On Ottoman Justice: Interpretation in Conflict (1600–1800)," *Islamic Law and Society,* VIII (2001), 52–87, contrasts the concept of justice promoted by the imperial center with a concept of justice entailing mutual commitments and rights between the sultan and his servants, as advocated by Ottoman officials on the administrative or geographical periphery.

between the personnel who adjudicated and those who punished criminals, the periodic rotation of public officials between regions, and a compensation scheme that paid officials shares of criminal fines and local taxes. Insights from the literature about law and economics shed light on how these mechanisms helped the Ottomans to prevent corruption and to ensure that law-enforcement agents exerted optimal effort in catching criminals.

Separation of Adjudication and Punishment The Ottomans separated adjudication from punishment by using two classes of officials for criminal justice—judges and military/executive personnel. In principle, judges could try suspects and determine guilt but not carry out their sentences. Only local military or executive officials (such as governors or sub-governors, *sipahi* or *subaşı*) were empowered to apprehend and punish criminals. Moreover, only the executives had the right to collect fines as part of their income. The ultimate objective in this separation of powers was not just to achieve complete specialization between these tasks but also to prevent abuse of power. If the judges did not receive the fine revenue, they had no incentives to over-enforce the law to raise incomes. Similarly, if law-enforcement officials were suspected of abusing their power, they could be taken to court.[17]

The economic model of law enforcement generally assumes a welfare-maximizing government that automatically chooses the socially optimal scheme. In this setting, no allowance needs to be made for the possibility (likelihood) that police officers would shirk in their efforts to apprehend offenders, or worse, to accept bribes from offenders in return for letting them go. Given the practical importance of these problems, however, Becker and Stigler proposed that the compensation of enforcers be made dependent on their performance, for example, by paying them a reward, or bounty, for those offenders that they apprehend, thereby effectively "privatizing" the enforcement of law.[18]

Although this solution partially aligns the interests of enforc-

17 For the separation of powers between the judges and executive officials, see Heyd, *Studies,* 208; Ronald C. Jennings, "Kadi, Court, and Legal Procedure in 17th-Century Ottoman Kayseri," *Studia Islamica,* XLVIII (1978), 133–172; Metin Kunt, *The Sultan's Servants: The Transformation of Ottoman Provincial Government, 1550–1650* (New York, 1983), 21–23; Sami Zubaida, *Law and Power in the Islamic World* (New York, 2003), 56–58.

18 Becker and George Stigler, "Law Enforcement, Malfeasance, and Compensation of Enforcers," *Journal of Legal Studies,* III (1974), 1–18; Polinsky and Shavell, "Corruption." See the survey of this literature by Reza Rajabiun, "Private Enforcement of Law," in Garoupa (ed.), *Criminal Law and Economics* (Cheltenham, 2009), 60–89.

ers and society, it does not address the problem of wrongfully fining an innocent person. If no independent effort is made to assess the guilt of offenders before collecting a fine, private enforcers would clearly maximize their net income by randomly apprehending individuals rather than by steadfastly locating actual offenders. If, however, enforcers were well aware that independent adjudicators were in place to evaluate the guilt of defendants before assessing fines, they would have a greater incentive to seek out true offenders. Indeed, it is easy to show that enforcers' efforts increase with the accuracy of adjudicators' assessment of guilt.[19]

Evidence from Ottoman court records indicates that separating adjudication from punishment kept some of the corruption by law-enforcement officials under control. Numerous cases of abuse brought before a judge saw corrupt officials sentenced to various forms of punishment. As Heyd states, guilty officials had to return the fines that they had falsely collected, and particularly oppressive officials were also flogged. Based on his extensive study of legal procedure in Kayseri, Jennings similarly found that when a law-enforcement official was accused of corruption, "he was brought to court immediately and subjected to the law like any other law violator." Although the existence of such court cases may not completely prove that the separation of adjudication from punishment was always successful, it does suggest that this approach helped to control corruption in some cases by providing a mechanism for people to bring corrupt officials to justice.[20]

Separating adjudication and punishment was unlikely to eliminate the problem entirely, however, because the division of duties could not always be complete. Not all criminal cases were handled by the court system, and not everyone had easy access to courts, especially in rural areas. Since establishing courts everywhere and

19 We can demonstrate this argument with a purely mathematical method: Let $p(x)$ be the probability that the enforcer locates the true offender, where x is his expenditure on effort, and $p' > 0$, $p'' < 0$. Let f be the fine and s the enforcer's share of the fine, so that $s < 1$. We assume that the adjudicator makes two types of error—a type one error (acquittal of the guilty) and a type two error (conviction of the innocent). Let q_1 be the probability of a type one error, and q_2 the probability of a type 2 error, where we assume that $1 - q_1 > q_2$. The upshot is that the adjudicator is more often right than wrong, in the sense that he convicts the guilty more often than the innocent. For details, see Keith Hylton, "Costly Litigation and Legal Error under Negligence," *Journal of Law, Economics & Organization,* VI (1990), 433–452. The expected profit of the enforcer becomes $\pi = [p(x)(1 - q_2) + (1 - p(x))q_1]sf - x$. The resulting first-order condition for x is $p'sf(1 - q_1 - q_2) - 1 = 0$, from which it follows that the enforcer's effort is positive but decreasing in the probability of both types of errors.

20 Heyd, *Studies,* 297; Jennings, "Kadi, Court," 167.

bringing all criminal cases before a judge would have been prohibitively expensive, Ottoman law-enforcement officials handled a variety of minor, sometimes even major, offenses directly without the involvement of a judge. According to Islamic legal theory, executive officials could punish criminals who confessed or if the evidence overwhelmingly indicated guilt, such as when a person was caught drunk. Although the extent of such summary punishment by executive officials is unknown (since it was not recorded in court registers), contemporary foreign observers generally reported that many criminal cases never went before a judge. Hence, officials motivated by rent seeking still had numerous opportunities to raise their incomes by fining innocent people. The possibility of reporting abuses of that nature to courts would not have been possible in certain instances because access to courts was too difficult or costly. Thus, although the attempt to separate adjudication and punishment certainly limited the problem, it did not eliminate it. Other mechanisms were needed to control it further.[21]

Rotation of Public Officials The system of rotation among public officials, core elements of which could be found in previous Near Eastern states, mandated that provincial military and administrative personnel—including judges and law-enforcement officials—relocate from one region to another on a more or less regular schedule. The frequency and period of rotation varied by region, occupation, and time. Studying a sample of provincial cavalrymen in the mid-sixteenth century, Barkey found that "an average of 45 percent of officials were rotated" during the three snapshot years that she chose for sampling. Judges in eighteenth-century Aleppo were rotated about every year. Whereas several contemporary Western observers and modern historians have noted the hardship that this system caused for public officials, Barkey described systematic rotation as an integral "part of the Ottoman state mode of social control." By rotating public officials in and out of assignments, the Ottoman rulers ensured that these officials would not become ensconced in the provinces or develop local ties and power.[22]

Systematic rotation could prevent corruption by limiting the

21 Heyd, *Studies,* 210–211; Zubaida, *Law and Power,* 57.

22 Karen Barkey, *Bandits and Bureaucrats: The Ottoman Route to State Centralization* (Ithaca, 1996), 470, 460; Abraham Marcus, *The Middle East on the Eve of Modernity: Aleppo in the Eighteenth Century* (New York, 1989), 80–82.

local interaction between judges and law-enforcement officials, helping to mitigate the imperfect separation of adjudication from punishment. Despite being separate in principle, rent-seeking judges could develop alliances with agents in charge of punishment, take part in their corruption, and share the proceeds of this collaboration. The system of rotating officials among the districts decreased the opportunity. If judges and law-enforcement officials did not stay in a location long enough to build an alliance, they could not easily engage in joint corruption.

Compensation of Enforcers The final Ottoman mechanism for controlling corruption was the compensation of law-enforcement officials with shares of fines and taxes. Unlike the previously discussed strategies, which functioned as external controls on behavior, this method depended on agents' self-interest. The discussion herein follows from some of the recent developments in the law-and-economics literature about efficient law enforcement. Although compensating enforcers competitively with only a share of the fines collected from offenders would certainly give enforcers an incentive to invest in apprehension efforts, such a scheme would not generally result in efficient enforcement. Nor would monopolizing fine collection under a single agency. Although enforcers would care about collecting fines, they would not necessarily be concerned with the social benefits of their actions. In fact, enforcers would conceivably benefit—that is, increase their revenue—if the crime rate were to increase. One way to resolve this problem, according to Garoupa and Klerman, is to combine fine sharing with a reward that is inversely related to the number of offenses. In this regard, Coşgel, Etkes, and Miceli showed that such a scheme is achievable in practice by combining the tasks of law enforcement and tax collection and compensating joint enforcer-collectors with shares of both fine revenue and taxation.[23]

Following the logic of this proposal, suppose that the tax base is decreasing because of increased theft and other crimes. Tax collectors whose payment depends on taxes would have a distinct interest in reducing the crime rate, thereby being in accord, at least partially, with the social benefits of deterrence. Their motivations

23 William Landes and Richard Posner, "The Private Enforcement of Law," *Journal of Legal Studies,* IV (1975), 1–46; Polinsky, "Private versus Public Enforcement of Fines," *ibid.,* IX (1980), 105–127; Garoupa and Klerman, "Optimal Law Enforcement," 131; Coşgel, Etkes, and Miceli, "Private Law Enforcement."

would not be fully aligned with social welfare, however, even if they were to retain all of the collected taxes, because total tax revenues represent only a fraction of aggregate wealth. Nonetheless, this scheme represents a better reckoning of enforcers' incentives than the pure fine-sharing scheme.

The Ottomans implemented just such a two-part mechanism for compensating law-enforcement officials. As noted earlier, they typically used local military-administrative officials for local law enforcement. These officials usually performed a variety of other functions for the state. As public servants, they protected their local population against external threats, provided men and arms to the ruler's army in times of war, and possibly engaged in such other services as the maintenance of roads and bridges. In exchange, they received income from a share of the local tax revenues. For example, in return for serving in the army and protecting peasants, cavalrymen *(sipahi)* could be appointed fiefholders of a village, to whom all of the peasants there paid taxes directly as remuneration.

As the second component of a two-part scheme, the income of law officials included a share of the fine revenue. The relegation of taxes and fines to the same recipient was inherent in the fundamental Ottoman principle that fines "belong to the land [on which an offense was committed])." In accordance with this principle, law-enforcement agents received not just taxes but also a share of the fines of the same taxable source. This rule applied directly to the "free" *(serbest)* lands, where the "landowner" *(sahib-i arz)*—the high-ranking government official (such as the *beylerbeyi, sancakbeyi,* or *zaim*)—who claimed the taxes and revenues generated by these areas, or his agents, received the fines in their entirety. On the lands that were not categorized as "free" but were technically state-owned *(miri),* the fiefholder shared the fines with the governor, usually in an equal proportion.[24]

THE DEMISE OF FINES IN OTTOMAN LAW ENFORCEMENT Fines became less prevalent in the Ottoman Empire during the seventeenth and eighteenth centuries, a period of major social, economic, and administrative transformation. They do not appear in several provincial *kanunnāme*s (law-codes) composed during this

24 Heyd, "Jurm," 604; *idem, Studies,* 289; Peirce, *Morality Tales,* 324, for examples of how fine revenues were allocated.

period, and there is evidence that many offenders who could be fined were instead sent to the galleys or punished by forced labor. The first two modern Ottoman penal codes (1840 and 1850) make no mention of fines as acceptable forms of punishment; in the second one, they are explicitly forbidden.[25]

According to the economic approach to law enforcement developed above, the primary reason for the reduction in the use of fines was the significant rise in the cost of exacting them, due to the changes in Ottoman society during this period. Inflation raised the cost of implementing fines directly, and transformations in regional administration and provincial society raised it indirectly by eliminating or diminishing the effectiveness of the mechanisms previously installed to combat corruption.

In a rural state as vast as the Ottoman Empire, at a time when the means of communication were primitive, the efficiency of using fines for law enforcement in the provinces depended heavily on revising the scale of fines frequently. In a static environment, where the scale of fines did not change for long periods of time, the cost could be low. But in an environment of rapidly changing prices, increasing fines to keep up with inflation would be costly. The central government would not only need timely information about local prices to update the schedule of fines; it would also need to convey this information immediately to local courts and law-enforcement agencies. These "menu costs" could delay price adjustments significantly, especially in a centralized bureaucratic setting. The higher cost of changing fines in an inflationary environment may well explain why the rates remained largely unchanged in the Ottoman Empire after the sixteenth century, even though prices increased about twenty-two times between the 1500s and the 1800s. Since the real rates of fines declined significantly, fines lost the ability to deter criminals. The inflationary environment of this period may be one of the reasons why the Ottomans relied less on fines after the sixteenth century.[26]

The question is whether the control mechanisms identified

25 Ariel Salzmann, "An Ancien Régime Revisited: 'Privatization' and Political Economy in the Eighteenth-Century Ottoman Empire," *Politics & Society,* XXI (1993), 393–423; *idem,* "Measures of Empire: Tax Farmers and the Ottoman Ancien Régime, 1695–1807," unpub. Ph.D. diss. (Columbia Univ., 1995); Heyd, "Jurm," 604; Zarinebaf, *Crime and Punishment,* 164.

26 For the change in prices, see Süleyman Özmucur and Şevket Pamuk, "Real Wages and the Standards of Living in the Ottoman Empire, 1469–1914," *Journal of Economic History,* LXII (2002), 301.

above—the periodic rotation of officials, the separation of adjudication from punishment, and the use of fines and taxes to compensate law-enforcement officials—continued to check corruption from the mid-seventeenth century onward. The structural transformation that the Ottoman Empire underwent during this later period suggests otherwise. As Heyd observed, the decline in the revenue of law-enforcement agents who relied on fines for income probably tempted many of them to find ways to raise rates unofficially. Zarinebaf also noted that litigants and law enforcers often negotiated fines on their own. As the Ottoman polity became increasingly decentralized, regional officials (provincial military-administrative authorities, local notables, tribal leaders, etc.) acquired a greater ability to influence social, economic, political, and administrative affairs in their regions. The causes or phases of this complex development are well documented elsewhere; what matters most for this article is that the direct governmental control of the provinces that transpired during the sixteenth century was replaced by an arrangement that led to the "localization" of political and administrative control. Barkey describes this process as the emergence of "local governance regimes," primarily dynasties of regional notables, which acted as "small states."[27]

Local Elites and the Breakdown of Justice By the late seventeenth and eighteenth century, the local elites "had usurped most of the administrative and military posts in the provinces, either through purchasing titles or membership into Ottoman military and administrative provincial establishment, or through tax-farmers." As a result, it became increasingly difficult for the government to rotate them and thus curb the creation of strong relationships and coalitions within particular jurisdictions. In many places, provincial offices became identified with specific families, often transferred from one generation to the next. Moreover, judges (*kadı*s), who occupied their positions for only a year or so, gradually lost their ability to limit predatory activities within these

27 Heyd, "Jurm," 604; Zarinebaf, *Crime and Punishment,* 163–164; İnalcık, "Centralization and Decentralization in Ottoman Administration," in Thomas Naff and Roger Owen (eds.), *Studies in Eighteenth Century Islamic History* (Carbondale, 1977), 27–52; Salzmann, "Ancien Régime"; *idem,* "Measures of Empire"; Barkey, *Empire of Difference: The Ottomans in Comparative Perspective* (New York, 2008), 256–257; Dina Khoury, "The Ottoman Centre versus Provincial Power-holders: An Analysis of the Historiography," in Suraiya Faroqhi (ed.), *The Cambridge History of Turkey* (New York, 2006), 1, 136–137.

strongholds or to rectify the crimes of provincial authorities. In fact, many eighteenth-century magistrates assisted the illegal or illegitimate activities of local authorities. For example, Strauss wrote in detail about how Hacı Ali—a *zabit,* and the principal law-enforcement agent of Athens in the late eighteenth-century—coopted the local judge and manipulated the judicial processes to his advantage. Similarly, documents that Talat Yaman published from eighteenth-century Küre are rife with allegations about provincial judges and local notables joining forces to make false allegations against rival provincial interests.[28]

Local kadıs often failed, or chose not, to protect common people against clear abuses by law enforcers. Court records of Kastamonu show that local officials could abuse their power for personal gain even by interfering into private disputes among inhabitants. According to an entry in the records, Ali Beşe, son of Hüseyin, claimed in the presence of Elhac Mustafa, the father and legal representative of Molla Mehmed, that "while Ümmü Gülsüm was in Istanbul, she agreed to be my (Ali Beşe's) wife. On 15 Şevval 1147 (/10 March 1735), our marriage was contracted. Yet, after her return to Kastamonu, she also agreed to give herself to Molla Mehmed and contracted [a second] marriage [illegitimately]. . . ." When questioned, the representative Elhac Mustafa acknowledged that following her return from Istanbul, Ümmü Gülsüm agreed to marry Molla Mehmed. He also reminded the court that Ali Beşe made the same accusation before, in front of a previous kadı, but he could not prove his claim. Elhac Mustafa also stated that Ali Beşe had publicly declared in the first trial, "My case [concerning Molla Mehmed and Ümmü Gülsüm's marriage] is based on falsehood." Ali Beşe answered Elhac Mustafa's rebuttal: "At that time [of the first trial] my opponents bribed the military commander of Kastamonu, Bayrakdar Şaban Ağa, who had me imprisoned and used force on me to make me say these words."

28 Khoury, "Ottoman Centre," 136; Barkey, *Bandits and Bureaucrats,* 481; İnalcık, "Centralization and Decentralization," 28; Johann Strauss, "Ottoman Rule Experienced and Remembered: Remarks on Some Local Greek Chronicles of the *Tourkokratia,*" in Fikret Adanir and Suraiya Faroqhi (eds.), *The Ottomans and the Balkans* (Leiden, 2002), 210–211; Talat Yaman,"Küre Bakır Madenine Dair Vesikalar," *Tarih Vesikaları,* I (1941), 266–282. The disappearance of the checks and balances between adjudicative and law-enforcement agents might have also led to abuse on the part of court officials, who often claimed shares of fine revenues for themselves. Heyd, "Jazā'," *Encyclopedia of Islam,* IV, argues, "In later periods *qadi*s often exacted fines for themselves" (518).

When asked about this claim, Elhac Mustafa acknowledged that Ali Beşe's previous statement was in fact forced. Afterward, Ali Beşe brought to court witnesses who confirmed his marriage to Ümmü Gülsüm. Subsequently, the court ordered Ümmü Gülsüm to "release" herself to Ali Beşe.[29]

The document is not clear about whether the first kadı before whom Ali Beşe brought his case knew about the actions of the commander, who was undoubtedly responsible for law enforcement in Kastamonu. But even if he did not, the fact that Ahmed Beşe does not appear to have cited the commander's abuse suggests that accusation would have been futile. Nor is it clear why Ahmed Beşe chose to bring the case to court two-and-a-half years after the incident, perhaps because the commander was no longer in office. Whatever the reason, the records leave no indication that the commander was investigated or punished for his actions. Although such an example does not necessarily prove that the system had decayed by the postclassical period, it does tend to justify doubts about how well judicial agents restrained the predatory tendencies of law enforcers.[30]

The effectiveness of the separation between adjudication and punishment becomes more complicated in light of the fact that provincial courts were not even the primary arbiters of criminal cases during the seventeenth and eighteenth centuries. According to Ginio, during the fourteen months between June 1740 and July 1741, 184 cases were brought before the court of Salonica, only 13 of which were crime-related. In the ten-year period between 1781 and 1791, only 27 of the 450 disputes brought before the court of Kastamonu were crime-related. Many individuals resolved their disputes out of court. Ergene demonstrated that many residents of Çankırı and Kastamonu in Anatolia during the late seventeenth and early eighteenth centuries avoided the courts, preferring instead to petition the local military and administrative authorities. Most of the time, the provincial authorities punished offenders without a court judgment. Furthermore, Tucker indicated that

29 Kastamonu Court Records, vol. 35, dated 3 Cemaziyelahir 1150 / 28 September 1737. The National Library in Ankara, Turkey, houses microfilmed copies of these documents.

30 Heyd, "Jazā'," argues, "From the 11th/17th century . . . criminal justice was . . . administered by increasingly corrupt *qadi*s or the arbitrary will of oppressive governors and their subordinates. Ottoman criminal justice, praised by European observers in earlier periods for its efficiency, degenerated completely" (519).

such sexual crimes as abduction or elopement were often settled privately, especially in the countryside, where the offenders were often punished by their own kin or the relatives of the harmed parties. If the court were indeed a secondary alternative in criminal cases during the postclassical period, its effectiveness to protect the common people from local authorities must have been negligible.[31]

Tax Farms and Law Enforcement The third mechanism that had previously helped to control corruption—namely, the combined use of fines and taxes for the compensation of law-enforcement agents—certainly suffered during the seventeenth and eighteenth centuries. The fiscal and financial transformation of the seventeenth century forever altered the system of revenue extraction, complicating fine collection and related penal practices. As a part of this transformation, many state-owned estates (*timar*s, *zeamet*s, and *has*) were auctioned to private entrepreneurs as tax farms, initially for tenures renewable from one to three years but after 1695, for much longer tenures, often for life. In these locations, the tax farmers, their local agents, or sub-contractors replaced the prebendal functionaries (such as *sipahi*s) as fine collectors.[32]

This transformation may have been responsible for a number of problems. First, the institution of tax farming in the Ottoman Empire led to the emergence of new groups of revenue extractors in the provinces, aside from the official state functionaries. Although provincial authorities continued to rely on revenue sources in the countryside, tax farming allowed the wealthier members of imperial and provincial society, regardless of their political status, to invest in, and make claims to, official revenue sources. Unfortunately, no available empirical study reveals how the introduction of tax farming influenced the numbers of tax/revenue extractors in the provinces or changed the tax/revenue burden of local populations. However, any increase in the number of revenue extractors because of tax farming would have led to

31 Eyal Ginio, "The Administration of Criminal Justice in Ottoman Selânik (Salonica) during the Eighteenth Century," *Turcica,* XXX (1998), 187–188; Ergene, *Local Court;* Judith Tucker, *In the House of the Law: Gender and Islamic Law in Ottoman Syria and Palestine* (Berkeley, 1998). According to Heyd, "Jazā'," "The clash between the authority of the *qadi* and the governor in the administration of criminal justice remained a major problem throughout Ottoman history" (519).

32 Peters, *Crime and Punishment in Islamic Law,* 97.

intensified competition over scarce resources, as well as an inclination to over-exploit these resources in legitimate or illegitimate ways.[33]

Second, although fines continued to "belong to land" in tax farms, the people who ultimately became responsible for law enforcement in these jurisdictions, as well as their manner of conducting it, remains unknown. One possibility is that tax farmers, many of whom were investors from distant locations—or, more likely, their local representatives—policed their areas. If so, the duration of a tax-farming contract, as well as the duration of any sub-contracts, must have influenced the extent to which these individuals enforced the law. In cases of longer-term tax-farming contracts, such as *malikane mukataa*s (life-term tax farms), tax farmers could hardly have been interested in sacrificing their long-term interests to their short-term benefits by over-enforcement. However, in the majority of the mukataas, the tax farmers did not personally assume direct management of their revenue sources; they sub-contracted them to local agents for shorter periods. Thus, the short-term considerations of these sub-contractors might have led to excessive fining.

Alternatively, given the civilian backgrounds of many tax farmers or their agents, the local military-administrative authorities—such as the governors or sub-governors of the administrative units that contained the tax farms, or the subaşıs of nearby towns—might have assumed the policing responsibilities. This scenario would explain why tax farmers often conflicted with local military-administrative officials about fine revenues, as many historical sources indicate. For example, a series of archival documents published by Yaman reveals the tax farmers of the copper mines in Küre (located in north-central Anatolia) and the surrounding villages that provided laborers for mining to have complained incessantly about the local military-administrative authorities commandeering the fine revenues. Although Yaman's documents emphasize that the fines belonged to tax farmers, they do not reveal the specific law-enforcement duties, if any, that

33 According to Pamuk, "The Evolution of Financial Institutions in the Ottoman Empire, 1600–1914," *Financial History Review,* XI (2004), "Some 1,000 to 2,000 Istanbul based individuals, together with some 5,000 to 10,000 individuals based in the provinces, as well as innumerable contractors, agents, financiers, accountants and managers" became involved in revenue extraction through tax-farming over the eighteenth century (17).

tax farmers performed. Nor do other historical sources indicate whether local authorities, when subjecting provincial populations to such payments, were in fact seeking compensation for services that they actually performed.[34]

As mentioned above, complaints about fine collection during the seventeenth and eighteenth centuries might have led to its eventual abandonment. Nevertheless, it is also easy to understand why the imperial government did not expressly ban fine collection after the seventeenth century. After all, fines constituted a source of revenue that contributed to the profits of tax farms. The need to keep tax farms attractive for potential investors must have mitigated the desire to curb corruption by abolishing fines. Likewise, the imperial government might have refrained from intervening in disputes between tax farmers and local populations about excessive fine collection, lest its actions generate resentment among tax-farmers and a disinclination to invest in provincial revenue sources. Among other factors, contradictory impulses (the need to protect the interests of taxpayers and the need to maximize returns to investment sources) might have led the imperial government to adopt relatively passive and accommodative provincial policies during the postclassical period.

The economic analysis herein focuses on the incentives for would-be offenders to make efficient decisions regarding the commission of criminal acts (the notion of optimal deterrence) and for law enforcers to engage in corruption. Insights from recent literature about law and economics suggest that the procedures that the Ottomans used to prevent corruption enhanced efficiency in law enforcement. The Ottomans recognized the economic benefits of these strategies long before economists pointed them out in theory.

The declining use of fines in penal processes coincided with high inflation rates, the localization of political and administrative control, and the institution of life-term tax farming during the postclassical period. The circumstances of the late seventeenth and eighteenth centuries impaired the imperial government's ability to maintain the system of fines and to curb the potential abuses and irregularities associated with it. As the inflationary environment

34 Yaman, "Küre Bakır."

raised the menu cost of price adjustments, the central government was at pains to readjust the rates of fines on the periphery. The government also lost the capacity to rotate provincial authorities, separate adjudication from punishment, and ensure that recipients of fines also received tax revenues. Finding it less feasible to maintain a reasonably well functioning fine system, the Ottomans increasingly turned to other methods for punishment.

The question about whether the Ottoman fine system had a noticeable effect on the crime rate, at least in its heyday, is difficult to ascertain. For one thing, we do not have consistent statistics on crime rates over time. Even if a crime trend were traceable, it would be difficult to attribute distinct secular outcomes to the use of fines because several other factors, such as migration, natural conditions, political crises, and macroeconomic cycles, could well have affected crime simultaneously. An answer will have to await reliable statistics and a more systematic analysis of such circumstances and patterns to isolate specific influences.