



Latin America and
Caribbean Centre

Stanford
University

Universidad de
los Andes

Land, Property Rights and Institutional Durability in Medieval Egypt

Lisa Blaydes - Stanford University

Land, Property Rights and Institutional Durability in Medieval Egypt

Lisa Blaydes*

Associate Professor

Department of Political Science

Stanford University

April 2018

Abstract

Historical institutionalists have long been concerned with the conditions under which political institutions provoke their own processes of internal change. Using data on changing landholding patterns during the Mamluk Sultanate (1250-1517 CE), I demonstrate that land shifted from temporary and revocable land grants offered in exchange for service to Islamic religious endowments and hybridized land types, representing a transformation away from state authority over agricultural resources to more privatized forms of property control. Predation on collective state resources by individual mamluks — state actors themselves — was a negative externality associated with the foundational principle of the impermissibility of transferring mamluk status to one's sons. My characterization of mamluk political institutions provides an empirical illustration of a self-undermining equilibrium with implications for understanding how Middle Eastern political institutions differed from those in other world regions, particularly medieval Europe.

*Many thanks to Connor Kennedy, Shivonne Logan, Vivan Malkani and Kyle Van Rensselaer for outstanding research assistance. Scott Abramson, Gary Cox, David Laitin, Hans Lueders and Yuki Takagi provided helpful comments and assistance.

What explains institutional durability? An influential literature suggests that institutional equilibria can be indirectly strengthened or weakened by processes dynamically introduced by the institutions themselves (Greif and Laitin 2004). While political scientists have long been concerned with the effects of feedback loops on institutional stability (e.g., Pierson 1994; Thelen 1999), empirically documenting such processes can be difficult. In part, this is because of the long, historical perspective required to observe forms of institutional change. This problem is compounded by the fact that individuals interact with their institutional environments in ways that people and environment mutually shape each other (Bell 2011). Perhaps most challenging, however, is that the factors which reinforce or undermine an institutional equilibrium — like beliefs, identity shifts and relative balances of political power — are difficult to observe and measure.

In this paper, I overcome some of these challenges through an examination of the institutional features of the land and property rights regime in a relatively well-documented case from the medieval Middle East — the Mamluk Sultanate of Egypt (1250-1517 CE). The mamluks — a corporate body of elite slave-soldiers who ruled Egypt — controlled most of Egypt’s arable land as a collective, distributing temporary, revocable land grants to individual mamluks and other servants of the state as payment for service.¹ Mamluk status was not intergenerationally transferable, nor were land grants directly hereditary by the children of the mamluks. And because state agricultural land constituted a common pool resource upon which individual mamluks might try to predate, the mamluk regime sought to enforce a series of protocols to mitigate the challenges of managing the common resource problem. The relative longevity of the Mamluk Sultanate suggests ways in which a prevailing institutional equilibrium might be successfully sustained.

Yet some of the core features of mamluk institutions also undermined the stability of the system over the long term. On the one hand, the single-generational nature of mamluk status encouraged forms of military prowess, discouraged forms of corruption and worked against the decentralization of agricultural property; on the other hand, the impermissibility of transferring mamluk status to one’s son may have reduced the time-horizon of any particular mamluk with regard to the investment in the perpetuation of the regime beyond his own lifetime. The common management of agricultural real property as a collective resource created a large and productive agricultural base upon which to finance the Sultanate; yet exploitation of the common pool by self-interested, individual actors had the potential to degrade the core resource as a whole due to nepotistic tendencies.

To demonstrate some of the challenges associated with the maintenance of the mamluk institutional equilibrium, I examine fine-grained data about land holdings in medieval Egypt. During the period of the Mamluk Sultanate, the regime undertook a series of cadastral surveys, an Egyptian version of medieval England’s much-analyzed Domesday Book, which sought to assess the value of land for purposes of taxation and allocation of land grants. This paper reports data on land type and tax value for two cross-sectional periods — the late 14th

¹A mamluk is generally described as an elite military slave, typically well-trained and compensated. After introduction by the Abbasids in the 9th century, mamluk armies were adopted by polities across the Islamic world over the centuries to follow (Crone 2003).

and late 15th centuries. I find that over the course of the approximately one-century period between the two surveys, the percentage of agricultural property provided as land grants to Egypt's slave soldiers declined while the percentage of Islamic endowment properties increased. These results speak to strategies by which wealth holders sought to use religious endowments to shelter their assets and protect them from state expropriation. While land allotments were previously held as the exclusive domain of the state for the purposes of paying the army, the regime also witnessed an increasing number of hybridized land types over time, suggesting a "chipping away" of state control over agricultural resources. A reduction in the fiscal basis for the state ultimately made the Mamluk Sultanate vulnerable to external invasion and collapse.

More generally, this paper speaks to the question of what types of equilibria can be sustained when considering the division of real property, a foundational aspect of any property rights regime. As suggested by the mamluk system, there exists diversity in historical, real property rights regimes around the world. Yet control of real property as a common resource by a ruling collective creates challenges for individual state actors who want, themselves, to be property owners. Solnick (1994), for example, argues that the breakdown of the Soviet Union was not as a result of elite stalemate or popular revolution from below. Rather, he suggests that mid-level bureaucrats were able to "steal the state" from within by seizing collective assets that they had been tasked to manage. Tsai (2006) argues that the informal coping strategies of local actors seeking to evade restrictions on ownership in Communist China created a revival of China's private sector, forcing the formal recognition and protection of private property.

Most broadly these findings speak to the issue of the self-undermining qualities of a one-generational nobility. Such regimes, often reliant on gelding or gelded elites, were common in the antique world and extended to the empowerment of eunuchs, who were castrated, and the cultivation of institutional norms like clerical celibacy, a normative gelding. Gellner (1983, 18) writes that gelding kept elites from becoming corrupted, "seduced by the pursuit of honor and wealth and the lure of self-perpetuation." While not universal among pre-modern societies, gelding was sufficiently common as to make the mamluk experience more generalizable than it might initially appear. Ayalon (1999) argues that for these regimes, the goal was always to fight against the negative implications of familial nepotism.²

My characterization of the Mamluk Sultanate also speaks to the question of how and why some regions of the world developed the types of robust private property rights which encouraged investment and industrialization, while other areas of the world did not.³ Two

²Writing of Muslim societies, Ayalon (1999, 32) describes that "the mamluks were a one-generation nobility...the eunuchs, as a result of their mutilation, could not be but a non-hereditary aristocracy." Gellner (1983, 15) contrasts gelded elites with the Chinese bureaucracy, which recruited from the gentry, and European feudal society, which imposed the principle of heredity of land across generations of a family dynasty. The dynasties of pre-modern China combined use of an incorruptible civil service examination with reliance on an influential eunuch class to guard against corrupting influences (Ayalon 1999). Fukayama (2011, 208) explores these issues, arguing that "the one-generation nobility principle worked against the basic imperatives of human biology."

³Acemoglu et al. (2002) describe the institutions of private property as essential for investment incentives and robust economic performance. They contrast these private property institutions with extractive

influential lines of scholarship dominate scholarly understanding of this puzzle with regard to the Islamic world. The first argues that Islamic legal institutions hindered the region's economic development with inheritance laws and religious endowments blocking private capital accumulation and the development of corporations (Kuran 2004; Kuran 2010). Rubin (2017) argues that, as a result of the historical circumstances surrounding the origins of each religion, Islam was better at legitimating political rule than Christianity. In both cases, Islam — either through its legal institutions or as a result of the religion's founding narrative — is the causal factor which ultimately damages the Middle East's economic prospects.

The second influential stream of scholarship suggests that the cultural characteristics of Middle Eastern societies led the Middle East to fall behind economically. Drawing inferences based on documents from the Genizah document collection — manuscript fragments found in the storeroom of the Ben Ezra Synagogue in Cairo — Greif (1994) argues that the collectivist culture of “Maghrebi” society had negative, long-run implications for the creation of growth-promoting political and economic institutions. The Genizah documents tell us little, however, about Egypt's agricultural sector or details about land grants, taxation and the region's monetary system (Rabie 1972, 1).⁴ This paper contributes to the development of a third line of exploration which focuses on the state institutions of Middle Eastern societies (Blaydes and Chaney 2013; Blaydes and Chaney 2016; Blaydes 2017) rather than either the impact of Islam or Middle Eastern culture.

1 Institutional Change and Stasis

Krasner (1984) argues that a central concern in the study of political institutions involves the need to understand when and how institutional structures change in response to alterations in domestic and international environments. Influential scholarly work suggests that generating a better understanding of state institutions and institutional change is key to explaining the diverging economic performance of societies around the world (e.g., North 1990; Acemoglu and Robinson 2012). Yet institutional structures which appear to be durable can also change without fundamental transformations in either internal or external conditions.

The Mamluk Sultanate in Egypt was among the world's great powers for a duration of almost three centuries of the medieval period. Perhaps even more notably, the institutional structures associated with mamlukism were common across the Muslim world (Crone 2003) and persisted, in a variety of forms, for nearly a millennium. While the Mamluk Sultanate was subject to a variety of shocks, including floods, droughts, plague and disruptions to patterns in international trade, I argue that the defining institutional principles associated with mamlukism were self-undermining over time. This section reviews the existing literature on institutional change and stasis with the goal of applying these insights to the question of mamluk persistence and decline.

institutions, which concentrate power in the hands of a small elite thus creating a high risk of expropriation for others in society, dampening investment incentives.

⁴In addition, this focus reflects the perspective of a minority population deeply involved in long-distance trade, a population which may or may not have been representative of the broader society.

1.1 Theoretical Concerns

North (1990, 3) defines institutions as “the rules of the game in a society” or, more formally, “the humanly devised constraints that shape human interaction.”⁵ One reason why institutional change is difficult to explain relates to the widespread conception of institutions as an equilibrium outcome and, in particular, the idea that equilibria are self-reinforcing. Indeed, Bates et al. (1998) suggest that one of the limitations of institutional analysis relates to preference for examining stable institutional settings instead of political transitions.

A large and influential literature explores the issue of institutional path dependence. Krasner (1988, 83) describes path dependent processes as ones which are “characterized by self-reinforcing positive feedback.” For Levi (1997, 28), path dependence suggests that once a polity has started down a particular track, the costs of reversal can be high. Yet Thelen (1999, 385) suggests that the concept of path dependence is both “too contingent and too deterministic” — too contingent in the sense that small initial differences can create large later differences and too deterministic because once a path is adopted stability follows almost automatically. Thelen (1999) argues that the key to understanding how external shocks can produce institutional change is through identifying the reproduction mechanisms associated with different institutional arrangements.

Pierson (2000) conceptualizes path dependence as a social process which is dependent on increasing returns. Greif and Laitin (2004) provide a game-theoretic notion of stability and argue that a self-enforcing institution can undermine itself when the changes in the quasi-parameters that it entails imply that the associated behavior will be self-enforcing in a smaller set of situations. For Greif and Laitin (2004), the processes an institution entails can undermine the extent to which the associated behavior is self-enforcing. Hence, institutions can be self-undermining and the behaviors that they entail can cultivate the seeds of their own demise. In this setting, institutional change will endogenously occur only when the self-undermining process reaches a critical level such that past patterns of behavior are no longer self-enforcing

1.2 Challenges in Historical Institutional Analysis

A key challenge in the existing literature on historical institutional change relates to the identification of high-quality empirical evidence regarding the slow-changing parameters that impact institutional stability. Bates et al. (1998) provide a detailed examination of a series of historical cases with a particular focus on institutions, including their impact and how they change. Through the development of a series of “analytic narratives,” Bates et al. (1998) describe institutional structures — like the medieval *podesta* and early modern European absolutist regimes — with the goal of reconstructing historical interactions and explaining outcomes related to political order or breakdown. Bates et al. (1998) put considerable emphasis on combining game theory with historical narrative but pay less attention to gathering evidence and testing hypotheses using fine-grained historical data.

⁵Tracing the historical emergence of institutional arrangements that either promote or hinder economic development is the focus of this work (North 1990).

Bueno de Mesquita (2000) also examines historical institutional structures. He argues that core institutions associated with the medieval state are, at least in part, an endogenous product of strategic political interactions between the Catholic Church and European kings. Bueno de Mesquita suggests that the Concordat of Worms created a property right over bishoprics that adhered to the sovereign as a fiduciary rather than to the sovereign as an individual. Bueno de Mesquita provides an argument about the development of new political institutions as an outcome of the contest for control between actors, offers a narrative account of supporting evidence and presents data on the number of bishops who were more closely aligned kings versus popes over time.

Greif and Laitin (2004) ask why and how institutions evolve in a changing environment and how processes that institutions unleash can lead to institutional collapse. From an empirical perspective, Greif and Laitin (2004) provide a discursive comparison of institutional stability in medieval Venice and Genoa where political regime — in particular, the governing structures of the society — is the institution of interest. In their account, there are a number of quasi-parameters that are explored including wealth, patronage, identity, relative strength of different social groups, like clans, and the salience of revenge norms (Greif and Laitin 2004, 642). Greif and Laitin (2004, 644) find that during the eleventh and twelfth centuries, the self-enforcing institutions that emerged in Venice and Genoa were successful in fostering inter-clan cooperation, supporting peace and prosperity. Over time, however, the prevailing institutions in Genoa created an opening for inter-clan rivalry to re-emerge, disrupting coalitional governance and leading Genoa into a period of civil strife. Measuring the salience of latent, inter-clan rivalry is difficult, however, particularly since the parameters of interest may be unobserved in a setting where institutions work to suppress violence.

Like previous projects which explore the implications of historical institutions, I also examine political regimes, including the rules and norms surrounding a particular political system. After characterizing the institutional setting, I next operationalize and provide quantitative evidence for a key quasi-parameter — the state agricultural tax base — that is changing over time with implications for regime stability.

2 Land and Fiscal Authority in the Mamluk Sultanate

The Mamluk Sultanate was established after mamluk leaders wrested control from their predecessors, the Ayyubids, during a period of the growing external threats associated with invading European crusaders from the west and Mongols from the east. The mamluks were state builders who created a system that effectively limited the cost of internal politics by reducing violence and creating norms about the distribution of resources and rotation of power (Clifford 2013, 14). The Mamluk Sultanate handled the major functions of a state, including taxation, military protection and the development of a functioning judicial system (Sabra 2000, 4).⁶ The state’s clientelist structure was managed through the operation of a “clientage system” which constituted a “constitutional order” for the mamluk collective

⁶On the other hand, the Mamluk Sultanate did not possess permanent diplomatic missions or social welfare ministries, typical of later states (Sabra 2000, 4).

(Clifford 2013, 16). Since the mamluk state had no institutionalized form of succession, “[mamluk] sultans stood or fell based on their reputation as upholders of the constitutional system of distribution of resources and rotation of power” (Clifford 2013, 60).

2.1 Slave Soldiers and State-Society Relations

Mamluks were a class of slave soldiers who served as a military elite. Purchased in slave markets of Genoa and elsewhere and brought to Egypt as children, the mamluks constituted a separate class from native Egyptians. According to Lapidus (2002), “no one could be a member of the military elite unless he was of foreign origin...nor, in principle, could the sons of slaves and rulers.” Indeed, the mamluk system was predicated on the “importation of new men in each generation” (Lapidus 1984, 116). As a result, the mamluk system relied upon a continued and steady importation of military slaves (Faroqhi 2010, 315).

Mamluks — as a corporate body — enjoyed strong feelings of comradeship since all members underwent similar processes of recruitment and training (Tsugitaka 1997, 146). The children of mamluks were excluded from the mamluk status and income because they lacked the camaraderie of the mamluk trainees thought to be essential for “to knit the socio-political ‘system’” together (Steenbergen 2006, 77). Mamluks were differentiated from locals through status markers, including dress and horseriding (Steenbergen 2006, 20). And because mamluks had no social ties to local groups, the native peoples had no “patrons, relatives or neighbors who were part of the power structure...on the contrary, they were completely alienated from the new military and its elites” (Kennedy 2004, 10-11).⁷

During peacetime, the majority of mamluks lived in Cairo (Poliak 1939). Since they were a closed social class, their connections to native urban dwellers was limited (Sabra 2000, 4). Mamluks were also typically of Turkic background, preferring to speak their native language, to bear Turkic names and to mainly marry female slaves from their countries of origin (Ayalon 1994, 16-17). According to Petry (1994, 73), the objective of the system was to “instill allegiance through isolation.” All of these factors contributed to the high level of group solidarity which existed within the mamluk ranks (Petry 2012, 93) as well as to separate the mamluks from locals. Blaydes and Chaney (2013) argue that mamlukism enabled the ruler to bypass local elites in the raising of a military, leading to a concentrated, but brittle, form of political power.

Mamluk corporateness and relative social isolation did not preclude the existence of intense rivalries within the mamluk class. For example, to rise to the highest levels of the mamluk aristocracy, recruits were required to demonstrate “personal adroitness, impeccable courage, and absolute belief in one’s own worth” (Petry 1994, 73). Petry (1994, 79) argues that there was a tension of allegiance built into the mamluk system. While the military caste system “imbued recruits with an abiding collective identity and trained its members to form tightly knit factions as cadets” while at the same time, the institution also gave great incentive to be personally savvy and to look out for ones’ self (Petry 1994, 79).

⁷Within mamluk society, there existed two layers of institutional organization; the first was the mamluk aristocracy as a whole and the second was the smaller circle of the mamluk “family” which included various interconnected patrons (Ayalon 1987, 207).

2.2 Military Affairs and Fiscal Administration

The medieval Islamic period was characterized to a great degree by elite militarization (Hodgson 1974, 64). Maintaining a costly, alien military elite required that governments exert considerable effort to manage state agricultural resources (Goldberg 2012, 351). Controlling agricultural assets was especially important since agricultural products were the source of most of the Sultanate's wealth (Stilt 2011, 21). As a result of a relatively high degree of bureaucratic sophistication, the Mamluk Sultanate was able to enjoy the rents associated with Egypt's rich agricultural product (Petry 1994, 103). Agricultural crops were subject to state taxation and mamluk amirs supported themselves based on their control of grain and agricultural produce. In this setting, the primary role of the bureaucracy was to serve as an intermediary between the agricultural society and the military since land revenue supported the mamluk army and government (Lapidus 1984, 45).

As suggested previously, the mamluks were "outsiders," reliant on the state for their salaries and without other means of financial support (Kennedy 2004, 11). In compensation for their service, mamluks typically held a temporary, nonhereditary deed to land, called an *iqta'*, despite the fact that they lived in urban areas far from their agricultural holdings (Rabie 1972, 59-60; Borsch 2005, 26-32).⁸ While military slaves enjoyed the ability to serve as tax collectors as part of the *iqta'* system, "slave soldiers were no barons" as the *iqta'* did not invest the soldiery with land in a way comparable to the European fief (Crone 2003, 87; Finer 1997, 674).⁹ Abu-Lughod (1989, 239) characterizes the mamluk system as "essentially a mechanism for mobilizing the natural resources and labor of the country to support an elaborate military machine and the luxurious style of life of its alien elite." While the mamluk sultanate as a whole resembled a "stationary bandit" (Olson 1993), the lack of a long term investment in a particular plot made individual mamluks unlikely to make big investments in their assigned *iqta'*.

Von Grunebaum (1970, 193) characterizes the coming to power of the mamluks as "the logical consummation of military governments essentially based on *iqta'at*, whereby the state had now to some extent become the communal possession of a military ruling caste." By the late medieval period, most of the arable land in Egypt — both in the Nile Valley and the Delta — was state-controlled, with taxes paid to absentee landlords and bureaus associated with the sultanate and the military (Petry 1994, 106). A mamluk commander (i.e., *amir*) might receive land assignments (i.e., *iqta'at*) made up of between one and ten villages (Poliak 19, 1939); this served as his main source of revenue (Steenbergen 1972, 476; Rabie 1972, 34). In this context, the military man acted as landlord and, often, as final arbiter of disputes in rural areas (Hodgson 1974, 93). From this revenue, the commanders were responsible for financing expenses and equipment associated with his subordinate soldiers, who were

⁸Lapidus (1984, xiii) defines the *iqta'* as a "benefice administration for the collection of taxes and the payment of troops."

⁹Despite the close ties between land and military service, the *iqta'* never came to resemble the feudal fief of Europe. Wickham (1985, 178), writes that the "possession of *iqta'* never became ideologically separated from a recognition of the tax system...it never became *simply* landholding." The majority of *iqta'* holders lived far from their land assignments (Rabie 1972, 64), residing in big cities and leaving *iqta'* management to agents, visiting as needed (Tsugitaka 1997, 90).

expected to be ready to fight if needed (Rabie 1972, 32-34).¹⁰ The *iqta'*, then, represented a decentralized form of fiscal administration (Lapidus 1990, 27). Under this system, the military and fiscal organization of the state became structurally linked (Brett 2010, 552).

Powerful as a result of their military prowess, the strength of the mamluks was found in their agglomeration rather than in the strength of any particular mamluk commander. Indeed, if they had been individuals isolated on rural estates, they would have likely faced rebellion. As a group they were intimidating and could, together, put down threats. Clifford (2013, 47) argues that by cultivating vertical clientelistic relations, the mamluks made the masses politically divided and unable to coordinate with one other except through occasional mob violence. When mass disturbances did occur, this was primarily a way for citizens to “signal dissatisfaction with regime policies” (Petry 2012, 23). Violence often involved forms of symbolic dissent and opportunities for negotiated settlement of grievance (Clifford 2013, 16). Rebellious behavior might include attacking warehouses, where the agricultural products were deposited by *iqta'* holders (Garcin 1987, 148). Mamluk soldiers were often deployed to quell disturbances, sometimes using violence to do so.

2.3 The Problem of Intergenerational Wealth Transfer

Mamluk governance was predicated on a set of foundational principles. Perhaps the most important of those principles was what Haarmann (1984, 141) calls the “basic law” of the Mamluk Sultanate — that only a mamluk had access to political and military authority and only a limited group might qualify as a mamluk. This limited group did not include the sons of mamluks (i.e., *awlad al-nas*).¹¹ Haarmann (1984, 144) suggests that the question about how to maintain the status of mamluk sons tested the system’s one-generation principle.

In particular, because the mamluks were not a hereditary landed baronage they faced the core challenge of how to transfer wealth and status to their children. Indeed, the mamluk institutional setting worked against “the predictable desire” of a typical mamluk commander “to retain freely disposable property secure against seizure” (Conermann and Saghbini 2002, 27). These basic conditions associated with the mamluk milieu created incentives for individuals to find workarounds. Because fathers were unable to pass on their status to their sons, they felt “compelled to make a place for them in the larger society” (Lapidus 1984, 74).¹²

The sons of mamluks were often channeled into an auxiliary military force (i.e., *halqa*) which was created to find “socially and financially suitable employment for the sons of former officers” (Lapidus 1984, 116). Members of auxiliary forces would be required to wait with

¹⁰According to Tsugitaka (1997 85), mamluk commanders typically allocated about two-thirds of their *iqta'* revenues to their subordinates, keeping about one-third for themselves. *Iqta'* holders might also be expected to contribute to the upkeep of irrigation canals (Rabie 1972, 68). While Sultanate canals were considered public goods for which the state was responsible, local (i.e., *baladi*) irrigation networks were the responsibility of individual *iqta'* holders (Borsch 2005, 36).

¹¹Conermann and Saghbini (2002) suggest that the term *awlad al-nas* refers most explicitly to the sons of mamluks but may also include reference to the grandsons of mamluks.

¹²In this setting, direct inheritance of an *iqta'* by the descendants of a mamluk was “extremely rare” (Haarmann 1984, 145).

great patience to eventually receive an iqta' in exchange for their military service and the land assignments, when received, were less valuable than those given to the mamluks (Haarmann 1998, 65). This was because the children of mamluks were disfavored relative to mamluks recruited from abroad in the distribution of state resources (Philipps and Haarmann 1998, xi). Other mamluk sons entered civilian life in a variety of occupations including as scholars and clerics as many had received privileged educational opportunities (Stilt 2011, 21).

Among the most commonly attempted approach for solving the intergenerational wealth transfer problem related to the creation of religious endowments (i.e., *awqaf*; sing. *waqf*) which might serve as a wealth shelter over which their children could enjoy benefits and financial control. Philipps and Haarman (1998, 71-72) summarize the problem, and possible solution, as follows:

“The philosophy of limiting Mamluk benefits strictly to the first generation...collided again and again with the powerful and all-too-human urge of an individual Mamluk dignitary to gather possessions that were safe against collections by the fisc and could be disposed of freely to provide appropriate upkeep for his own progeny. Legal stratagems were elaborated that helped to circumvent this prohibition of alienating state land and provided the all-too-often venal judiciary with lucrative sources of income. One popular device seems to have been returning one's fief voluntarily to the army office, then purchasing it back as private property (*milk*) that could now be sold, passed on to heirs, and turned into an endowment (*waqf*) in full consistency with the Sacred Law of Islam.”

In other words, mamluk wealth holders founded religious endowments on behalf of their children to ensure their descendants would be reasonably well taken care of in the future (Sabra 2000, 5). Because the material basis for wealth within the Mamluk Sultanate rested on reaping the benefits of Egypt's agricultural wealth, it is perhaps not surprising that control over land and agricultural resources was among the most reliable sources of income and personal capital accumulation.¹³

The precise mechanics by which religious endowments were created followed a typical pattern. Lapidus (1984, 60) describes the process. Parcels of land could be purchased through negotiation with the public treasury; judicial consent would make them eligible transformation into waqf property. Because the mamluk commanders were high ranking officials they had a favored position that allowed them to use personal influence to obtain property sales (Lapidus 1984, 61). Mamluk society was a contractual one that relied on the use of legal documents to articulate various financial and other relationships. As a result, it was not unusual to see waqf documents articular the economic benefits to kin and others

¹³Sabra (2004, 209) argues that to prevent the state from reasserting their rights over these lands, the new owners quickly turned into trust and endowments. This explanation for the founding of religious endowments differs from the purpose emphasized by Kuran (2004; 2010). While Kuran sees the waqf as a way to work around Islamic inheritance laws, the use of the waqf in Mamluk Egypt was primarily a strategy for sheltering wealth from expropriation by a large and centralized state. According to Lapidus (1984, 74) “family self interest guided the Mamluks...the donation of a religious institution or of waqf properties was a way of providing for the future of their families.”

that the founder wished to support with cash payments, salary, food and housing (Frenkel 2009, 150-151).¹⁴

Establishing a religious endowment and naming one's descendants as hereditary administrators was practiced with increasing frequency over time (Haarmann 1984, 145). And because this practice enjoyed a degree of social sanction by the religious elites, it became "the most expedient way of circumventing the social barrier separating Mamluk fathers from non-Mamluk sons" (Haarmann 1984, 145). This act may have also "won the gratitude of the ulama and an influential place in the community for Mamluk families" (Lapidus 1984, 74). Religious elites often came to rely on these pious endowments as important social and cultural institutions while simultaneously serving as instruments of "estate preservation" (Petry 1994, 9). While private property was "totally unprotected against seizure by the state" (Conermann and Saghbini 2002, 29), religious endowments enjoyed a degree of immunity from state confiscation (Philipps and Haarman 1998, 71-72).

If the goal of an individual mamluk commander was to transform public authority into private power and "state authority into personal superiority" (Lapidus 1984, 50), historians have suggested something about how this goal was accomplished. Yet to do this, mamluks had to circumvent the system by passing on some of their wealth to their children through activities that were "against the rules of iqta'" and existing regulations (Elbendary 2015, 35). In doing so, these actions "meant violating the invisible barrier separating the mamluks from the non-mamluks" (Haarmann 1984, 142). Who enjoyed the benefits of such wealth transfers? Haarmann (1998, 62) draws the important distinction between sons of mamluks in the most elite households versus those that were born into the households of non-royal mamluk officers. In other words, not all mamluks had the ability to engage in the desired outcome of transforming iqta' into, what amounted to, a form of private property (Elbendary 2015, 37).

Frenkel (2009, 150) asks why the military class allowed the transfer of such a considerable amount of agricultural land into religious endowment, diminishing the regime's aggregate resources in the process. Mamluk corporate interests led there to be resistance to any attempts to "hand down to his offspring anything which might have seriously jeopardized the non-hereditary principle on which Mamluk society was based" (Ayalon 1987, 208). Yet the creation of waqf represented a slow creep of private over mamluk corporate interests by the most politically influential of mamluks. Individually rational, these acts of land "privatization" created a negative overall effect for the Mamluk Sultanate. Most perniciously, the aggregation of these individual acts led to the "unavoidable rapid shrinking of the state land that was needed for military grants" (Philipps and Haarman 1998, 71-72).

3 Empirical Analysis

If we were to describe the mamluk institutional setting in game theoretic terms, we would find ourselves with two main players, the mamluks and the sultan (who is, most often,

¹⁴Frenkel (2009, 152) argues that the creation of a waqf was should not be thought of purely as an random act of charity but rather as a deliberately formulated legal arrangement.

himself drawn from mamluk ranks). The sultan wants an army to protect his sultanate with officers that will be loyal to him and chooses to sustain order by training slaves as soldiers, who sustain themselves as through land grants, though their children cannot succeed them. The mamluks, in turn, are happy to acquire wealth for their responsibilities but want to give support to their children. In each “play” of this game (say, each generation) each mamluk who is able adds to his cash account and when he acquires enough wealth seeks to invest in a waqf, which allows his progeny to live securely without concern about having their assets expropriated by the sultan. The key quasi-parameter here is the tax base of the sultanate. Each time the game is played and with each waqf created, the taxable land volume of the sultanate decreases. Over time, this undermines the resources that can be transferred to the sultan, thereby making stability more precarious with every successive generation.

While it was in the interest of the mamluk collective to maintain centralized control of agriculture resources, this objective came into conflict with the goal of individuals to maximize their personal revenue and intergenerational wealth transfers. In this setting, state agricultural land constituted a “common pool” in the sense that there was a limited quantity of agricultural land and it was costly to completely exclude politically influential actors from exploiting that resource.

To counter the challenges associated with this problem, the mamluk regime sought to create protocols for the self-management of the resource.¹⁵ First, the parties with access to state resources were part of a rigid caste system with strong norms restricting individuals from entering or exiting social classes. Second, there existed well-defined norms associated with rotation of mamluks to particular land plots which decreased their claims to a certain locale or connections to local elites who might aid them in usurpation of resources. Third, conflicts within the community of mamuks over thorny issues — like succession — were handled using internal dispute resolution strategies. For example, rather than succession from father to son, long-lived sultans were those mamluks who won support from their fellow military slaves (Faroqhi 2010, 314-315).

Yet some of the very factors which sought to counter the common pool problem generated additional, negative externalities. By creating a closed social class of military elites who did not have the chance to pass their elite status to their sons, Egypt’s slave soldiers had a relatively short time horizon with respect to the future of the Mamluk Sultanate. This led to the usurpation of iqta‘ land in a way that tended to disperse political power and fragment the state (Lapidus 2002, 123). The alienation of state land, particularly in rural areas, was a major cause of state revenue loss — a problem which was compounded over time as attempts to increase taxes and raise more revenue for the state increased the incentives for rural unrest and disorder (Daisuke 2009, 30).¹⁶ And finally, the success with which mamluks were able

¹⁵See Ostrom (1990) for more on how communities create common pool protocols to avoid overuse and destruction of a shared resource.

¹⁶According to Daisuke (2010, 105-106), “the ruling elite of the Mamluk state — the amirs, and the sultan as the principal among them — were personally accumulating various rights and interests and were forming their power bases outside the framework of the traditional state structure.” In principle, decentralization of political power and state fragmentation has been shown to have positive externalities for executive constraint and ruler stability (Blaydes and Chaney 2013). There may be important distinctions, however, between

to successfully resolve disputes within their community over issues like succession suggest the possibility for resolving disputes about wealth sharing in pragmatic ways, as well.

3.1 Data from Cadastral Surveys of Mamluk Egypt

State control of agricultural land holdings created the basis from which the regime was able to generate the revenue needed to pay for the military and maintenance of the mamluk system. To this end, it was in the interest of the regime to survey agricultural resources with the goal of assessing land value for purposes of taxation and distribution. Cadastral surveys were a primary method used by the state in order to understand, and in some cases reassert control over, the state agricultural resources (Steenbergen 1972, 476). The Nasiri cadastral survey (i.e., *al-Rawk al-Nasiri*) of 1315, for instance, surveyed cultivated land with the goal of allocating land holdings (Rabie 1972, 54-55). Surveys typically measured the size of cultivated land measured in feddans, a traditional Egyptian unit of measurement, as well as the land's estimated annual tax revenue in a theoretical currency — the army dinar (i.e., *dinar jayshi*) (Steenbergen 1972, 476). Cadastral surveys also indicated the “legal status of each piece of land” (Steenbergen 1972, 476).

Rare are examples of medieval regimes for which state records survive which allow for a comprehensive view of the core systems of governance and taxation. The Domesday Book, medieval England's “Great Survey” which documents taxes and land ownership, represents among the most detailed surveys of this sort. Scholarly studies have long sought to analyze and map the patterns therein. The cadastral land surveys of medieval Egypt which I analyze in this paper provide the closest equivalent of the Domesday Book for medieval Egypt.

The data used in this analysis were compiled by Ibn al-Gi'an, who lived during the reign of Sultan Qaytbay (who ruled from 1468-1496). The data were collected by Heinz Halm in his two volume *Agypten Nach Den Mamlukischen Lehensregistern*. Ibn al-Gi'an provides data for two points in time — 1376 during the reign of al-Ashraf Sha'ban (who ruled from 1363-1377) and 1480 during the reign of Sultan Qaytbay.¹⁷ The information collected included the name of the settlement or village, the area of arable land measured in feddans, the hypothetical tax value of the land in army dinar (i.e., *dinar jayshi*) and the land type or ownership.¹⁸ In many cases, one location was indicated as having multiple land types. In addition to providing information about village and settlement size, value and type, Halm also includes a series of historical maps indicating location.

Land in Mamluk Egypt could take on a number of different forms, most of which were associated with forms of state control. The *iqta'* — land holdings granted to mamluk soldiers or other offices in exchange for military or other service — was a common land type in the cadastral surveys. Another state-controlled form of land were the sultanic lands, either listed

appropriating and seizing state land versus the granting of land rights through feudal institutions as was observed in Europe, for instance.

¹⁷It is believed that the 1376 survey was undertaken with the goal of bringing the 1315 Nasiri survey up-to-date (Irwin 1986, 148).

¹⁸One feddan equaled 6,368 square meters until reforms introduced by Mohammed Ali in the 19th century. One unit of the *dinar jayshi* reflected both currency (i.e., *dinar*) and goods (e.g., wheat, barley).

as part of the sultanic “bureau” (i.e., *al-diwan al-sultani*) or the domains of the Sultan. In the late 14th century, an additional bureau was created as a special fund for officers and Royal Mamluks (i.e., *al-diwan al-mufrad*).¹⁹ Deserving retired and disabled mamluks, as well as their widows or orphans, might be given pensions in the form of land grants (i.e., *rizaq*) which would be for a limited period of time and with no permanent legal claim (Haarmann 1998, 70; Sabra 2000, 72).

In addition to state lands, land could also be privately held (i.e., *milk*). Although this was the preferred way for an iqta‘ holder to convert his land assignment into a lifelong and hereditary possession (Poliak 1939, 36), institutional norms stood as an obstacle to this occurrence. In response, land was more frequently transformed into religious endowment (i.e., *waqf*), which was another major category of agricultural land holding. The waqf was a revenue-generating property which was held outside of state control and whose revenues were paid to persons stipulated by the founder (Sabra 2000, 70).

Land was also held by bedouin, nomadic or pastoral people who often laid claim to fringe land areas (Rapoport 2004). In some cases, bedouin bandits predated on settled areas, a pattern which required mamluk intervention (Petry 2012, 47). Disturbances would sometimes take place in the poorly-defined rural areas; in some cases the peasants allied with the Bedouin against the regime while in other cases the peasants were victims of Bedouin aggression (Garcin 1987, 147-148). Land assignments were sometimes conferred to bedouin who served as an auxiliary military force, with responsibilities for guarding roads and peripheral areas (Rabie 1972, 34). Bedouin control often occurred because the power of the urban-based military varied over space within Egypt (Garcin 1987, 151).

Agricultural land was also listed as belonging to or allocated to named individual people as well as to titled individuals.²⁰ These titled individuals included positions like governor (i.e., *wali*), the market regulator (i.e., *muhtasib*) and various other administrators like the head chamberlain (i.e., *hagib al-huggab*) and members of the royal court like the sultan’s cupbearer, the chief eunuch and the master of robes. These individuals likely enjoyed temporary, revocable land grants similar to the iqta‘ but for bureaucratic and administrative service rather than military service. In the next section, I discuss the cross-sectional variation in land type for two time periods during the Mamluk Sultanate.

Figure 1 is a scatterplot of the relationship between the size of arable land for each location and its value in army dinars (i.e., *dinar jayshi*) in 1376. Both variables are represented in log terms. Although the value of the army dinar varied somewhat across locations, Figure 1 suggests a high degree of correlation between the tax value of a location and its size.

Table 1 provides some summary indicators about the distribution of land type in 1376 and 1480. Column 1 lists the main land types. Columns 2 and 4 provide estimates about the total number of feddans of each type in 1376 and 1480, respectively. Because many villages had more than one property type listed, I provide both a lower bound and an upper bound

¹⁹See Elbendary (2015, 42) for additional details on this point.

²⁰How should we think about property ownership? Individual peasants may have enjoyed the ability to sell or rent their rights to use of a particular plot of land but ownership was an “inappropriate category for describing overall revenue relations between the peasantry and the rulers” (Hodgson 1974, 99). Hamid (2002, 39) suggests that even under the mamluk system, “farmers still retained their usufruct.”

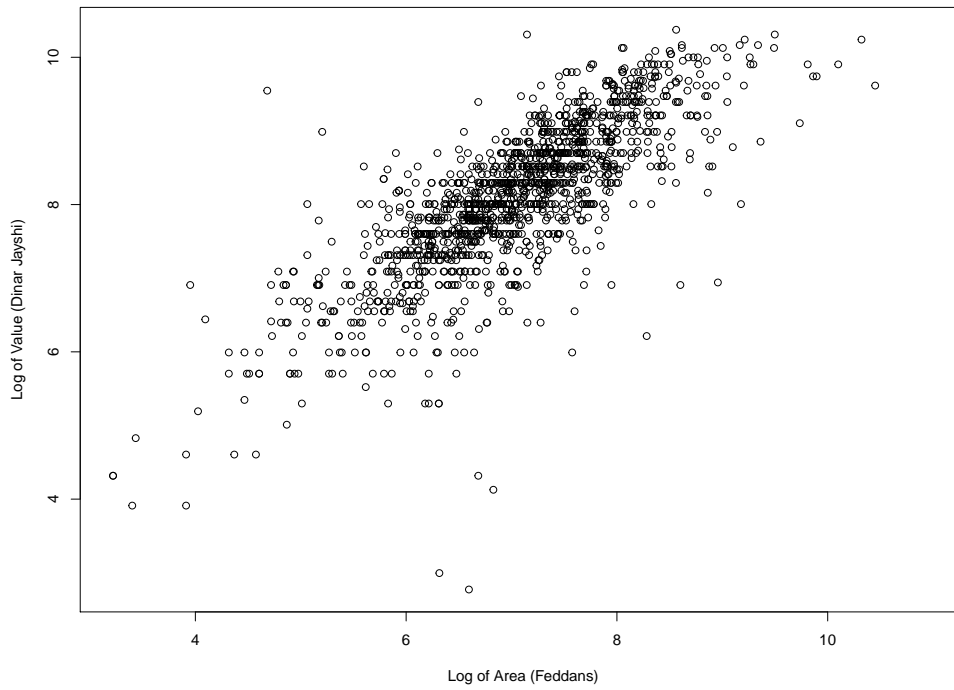


Figure 1: *Scatterplot of the relationship between the dinar jayshi (ln) and feddans (ln), 1376 CE.*

on those values.²¹ The lower bound adds up all feddans represented by each land type when a single land type is indicated.²² The upper bound adds up all the feddans associated with each land type for both single and multiple types. Columns 3 and 5 provide the average size for each land type for both single and multiple types in 1376 and 1480, respectively.

The calculations reported in Table 1 suggest a number of important trends. While it is not possible to precisely estimate the total size of state versus non-state forms of land-holding, it is possible to undertake some “back of the envelope” calculations. In 1376, state lands would have included iqta‘ properties as well as lands belonging to the sultan and the mamluk commanders. If we considered the lower bounds as our estimates for the size of these properties, they would have accounted for at least one-half of all agricultural lands in Egypt. Yet this probably represents a vast underestimation. Not only were many of the multiple type properties probably primarily iqta‘, some percentage of individually held lands were temporary, revocable (yet non-military) land grants offered to bureaucrats and other state officials as payment for service. Similarly, some scholars have suggested that land allocated to bedouin might also be thought of as iqta‘ in the sense that rights to that property may have been temporary and revokable as well.²³

There also existed considerable variation across land types in terms of their average size. In 1376 CE, sultanic land and land assigned to mamluk emirs tended to be — on average — twice as large as other land units. Bedouin assigned properties were notably small, on average.

As mentioned previously, the mamluk sultan established a special bureau charged with paying the Royal Mamluks (i.e., *diwan al-mufrad*) in the late 14th century. The Royal Mamluks were increasingly important from the perspective of the state leading the sultan to seek more direct forms of control over their compensation (Daisuke 2009, 29). Because of usurpation of iqta‘ property, the state was increasingly forced to pay monthly wages to some soldiers (Daisuke 2009, 30). The bureau associated with the Royal Mamluks was also separate from the state treasury (Daisuke 2009, 29). The state treasury of the Mamluk Sultanate saw an expansion of its role over time which suggested some of the challenges and limitations associated with the original iqta‘ system (Daisuke 2010, 105). By the late 15th century, the state treasury was providing pensions to retired emirs and stipends to emirs who did not hold an iqta‘ (Daisuke 2010, 105). As a result, we observe an increase in the relevance of both the Royal Mamluk bureau as well as the state treasury in 1480.

The patterns for land type in 1480 reflect a vastly different situation when compared to 1376. Most notably, the single land type villages in Egypt fell dramatically between 1376 and 1480. A drop of large magnitude was also witnessed for land held by the sultan, as well

²¹The most common land types in 1376 were single type. By 1480, however, this had changed. Some of the most common land types in the latter period included hybrid designations of iqta‘-waqf-milk and iqta‘-waqf-milk-rizaq as well as iqta‘-waqf and iqta‘-rizaq.

²²Scholars have pointed out the difficulty in measuring the precise size of agricultural land holdings as a result of the way that Ibn al-Gi‘an cadastre was compiled, particularly the multi-type designations for each village or agricultural land unit (Sabra 2004, 205; Elbendary 2015, 25). I deal with these challenge by using a conservative approach to this problem.

²³See Garcin (1987) for a discussion of Bedouin in this context.

<i>Land Type</i>	<i>1376 CE Total Size (Lower - Upper Bound)</i>	<i>1376 CE Average Size (Single/Multiple Types)</i>	<i>1480 CE Total Size (Lower - Upper Bound)</i>	<i>1480 CE Average Size (Single/Multiple Types)</i>
<i>Iqta'</i>	692,027 - 834,203	1,294/1,268	65,253 - 822,975	1,125/1,496
<i>Waqf</i>	76,345 - 143,052	1,497/1,212	161,645 - 806,312	1,253/1,471
<i>Bedouin</i>	29,257 - 131,901	861/884	46,932 - 218,216	939/1,291
<i>Private</i>	31,001 - 100,874	1,824/1,345	21,199 - 617,115	1,247/1,566
<i>Rizaq</i>	899 ^a - 45,487	899/1,197	13,407 - 351,305	559/1,582
<i>Sultanic</i>	248,929 - 283,970	2,417/2,218	25,294 - 94,343	2,299/2,144
<i>Emir</i>	96,517 - 250,924	2,298/3,690	56,005 - 142,916	2,333/2,917
<i>Royal Mamluks</i>	1,611 ^b - 3,846	1,611/1,923	336,450 - 393,622	3,144-3,099
<i>Treasury</i>	NA	NA	124,608 - 143,191	3,665/3,330
<i>Individual</i>	1,017,742 - 1,158,512	2,412/2,645	577,760 - 616,563	3,025/2,950

Table 1: *Summary of land types. Lower bound refers to the total number of feddans for single-type properties. Upper bound refers to the total number of feddans for single and multiple type properties. Columns 3 and 5 show the average size of the land units for both single and multiple types in feddans.*

^aThere was only one observation of single type rizaq in 1376 CE.

^bThere was only one observation of single type royal mamluk land in 1376 CE.

as by the mamluk emirs. Looking at the lower bound estimates undoubtedly represents a vast under-estimation of actual state holdings given the likely fact that multiple type land holdings probably included iqta‘ at a very high rate. That said, sultanic lands were less likely to have multiple types, so it is possible to have much tighter bounds on those estimates. Even if we use the lower bound estimate for 1376 and compare it to the upper bound estimate of sultanic land for 1480, there was a dramatic decrease in land held by the sultan himself. Much of the reduction of land held by the state appeared to move into the lands of religious endowments. The average size of land types did not change as much across the two periods as how land was allocated.

Figure 2 graphically displays changes in the number of single type land observations. By looking at single land types we are able to consider our most conservative estimate for the relative distribution of agricultural land. The top graph shows the change over time for each period in the number of single type observations. The iqta‘, for example, drops from being a large percentage of land observations to a much smaller percentage between 1376 and 1480. The number of waqf increase considerably, on the other hand. Changes occur in the relative magnitude of other land types as well but the decline — and hybridization — of the iqta‘ stands out as a dramatic change across the two periods. The bottom graph of figure 2 shows a pie chart for the distribution of single and multiple type iqta‘ lands in 1376 (left) compared to 1480 (right). The changing distribution across the two pie charts suggests the growth in the number of hybrid iqta‘ villages and settlements.

It is possible to provide geographic information about the relative distribution of different land types. Figure 3 indicates the distribution of iqta‘ land in 1376 and 1480 where darker colors reflect higher valued properties. The number of individual iqta‘ properties appears to decrease over time and this pattern appears to take place for regions across Egypt. Figure 4 provides that same information for the properties designated as waqf. Waqf properties appear to grow in number and value across Egypt during the century interval between the two cadastral surveys.²⁴

3.2 Analysis Changing Land Types

In 1376, iqta‘ settlements were a common property type and the most important way in which mamluks were offered payment for their military service to the state. As I have empirically demonstrated, and other scholars have noted (e.g., Philipps and Haarmann 1998, 72), large numbers of iqta‘ properties were being converted to other property types, particularly the waqf over the course of the late 14th and 15th centuries. In the case of the establishment of a waqf, a family member was often named the waqf administrator (i.e., *mutawalli*) offering him or her control over valuable financial resources (Philipps and Haarmann 1998, 72).

What factors were associated with changes to iqta‘ properties? In this section, I empirically investigate the covariates associated with the transfer of single-type iqta‘ land into a

²⁴The general patterns that I have reported were discussed and observed by scholars of mamluk Egypt, though typically in a very general form. For example, Haarmann (1984) reports on land grants offered to the *awlad al-nas* using the Halm material but does not do so for other land types.²⁵ Petry (1994, 106) points out that only a minute percentage of land in mamluk Egypt was held in private freeholdings (i.e., *milik*).

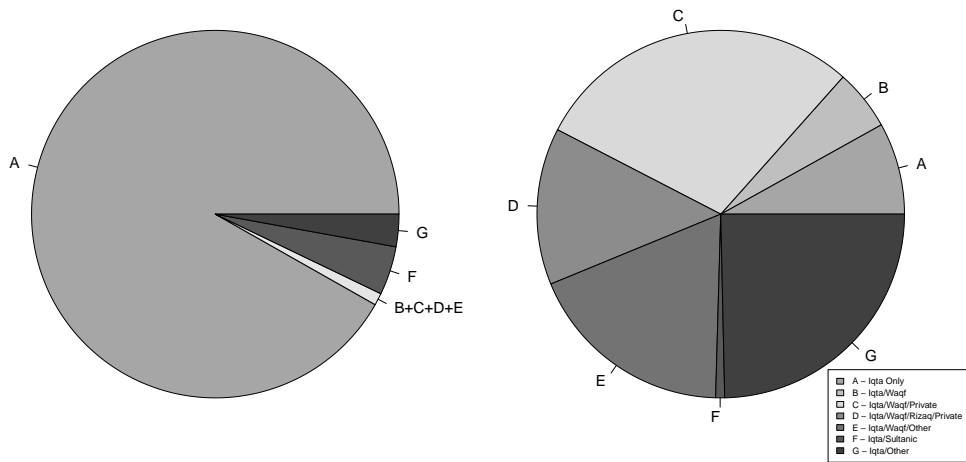
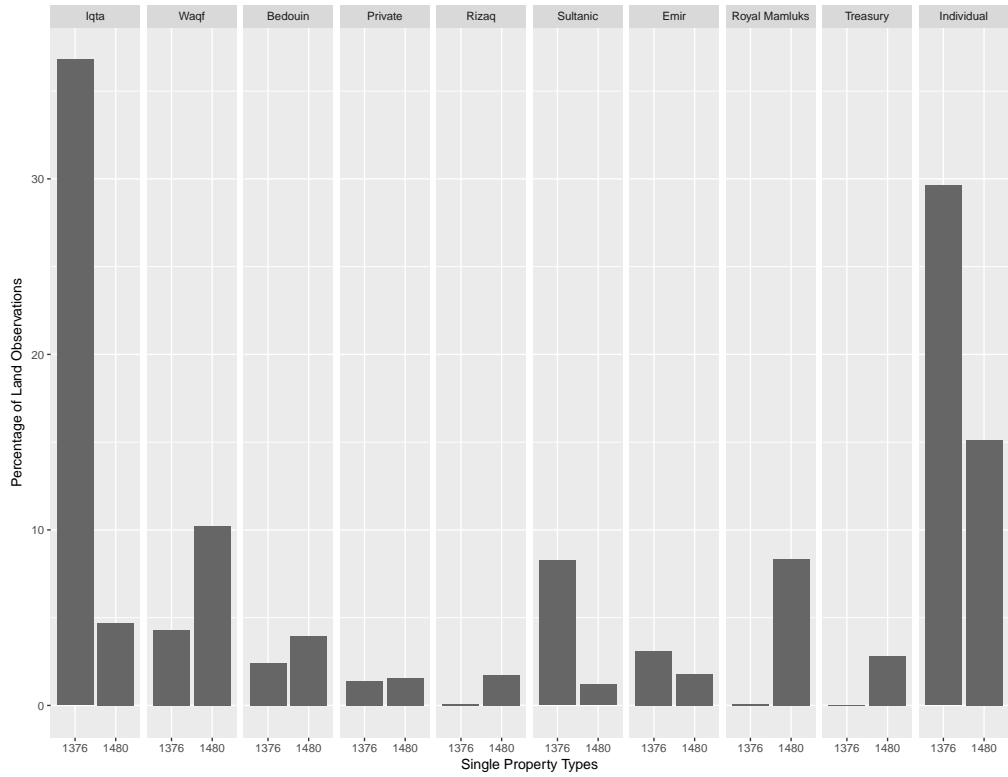


Figure 2: *Hybridization of the Iqta'*. Bar graph of single type land observations in 1376 and 1480 CE [top]; pie chart of the relative distribution of iqta' and iqta'-hybrid land observations in 1376 and 1480 CE [bottom].

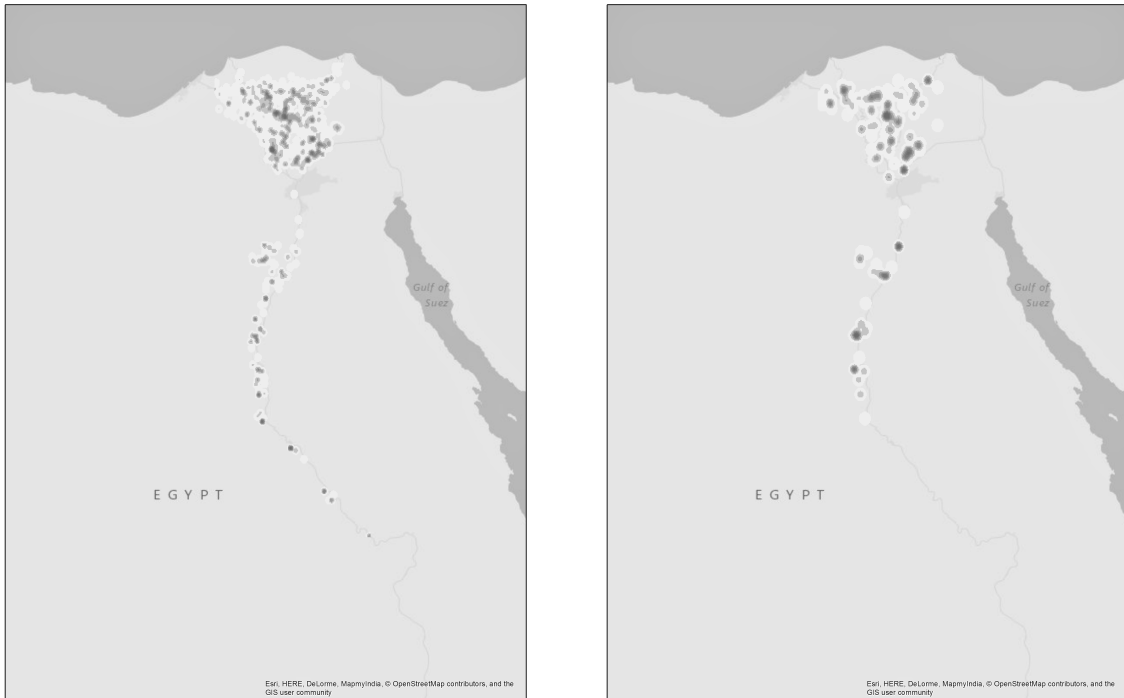


Figure 3: *Distribution of iqta' lands and their value in 1376 and 1480 CE as measured by tax value. Darker colors indicate higher values.*

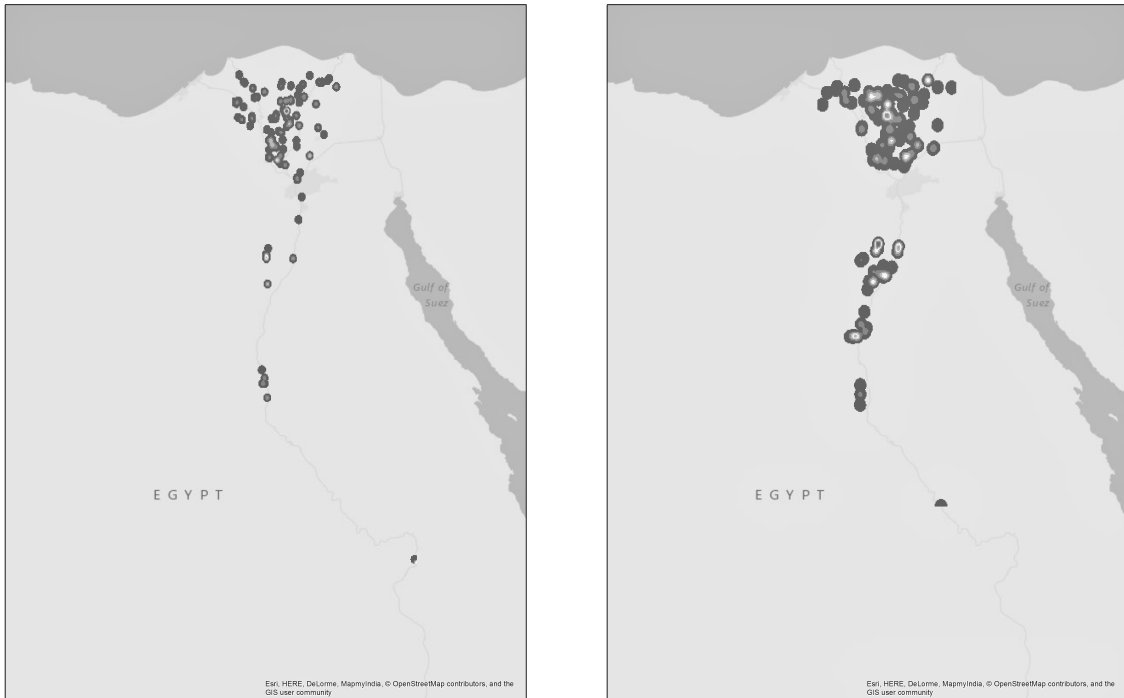


Figure 4: *Distribution of waqf lands and their value in 1376 and 1480 CE as measured by tax value. Darker colors indicate higher values.*

number of different land forms. The dependent variable in this analysis takes four forms. The first is if the iqta' is transferred to a hybrid iqta'-waqf settlement. This outcome represents about 50 percent of all transformations of single-type iqta' properties from 1376 to 1480. The second is if the iqta' becomes some combination of waqf and other property types, but with no remaining iqta'. This outcome accounts for about 18 percent of all outcomes. The third is if the single-type iqta' either remains the same land type or becomes an iqta'-hybrid other than an iqta'-waqf. This represents about 16 percent of outcomes. Finally, the fourth outcome is if the iqta' becomes anything else (i.e., does not remain an iqta' and does not become a waqf). This outcome represents about 14 percent of outcomes. Results from a multinomial logistic regression are reported in Table 2.

The three predictors that I include in the analysis are 1) the distance of the settlement to either the Nile River or the closest Sultanic Canal, 2) the distance of the settlement to Cairo and 3) the size of the settlement measured in feddans. All variables enter the regressions logged. The distance to the Nile River and Sultanic Canals provides information about the quality of the arable land.²⁶ The second variable reflects whether the settlement was close to the center of power or peripheral at a time when travel was costly.²⁷ The third variable gives a sense of the value of the property as size was closely correlated with taxable value.²⁸

The regression results suggest that single-iqta' properties that transfer to waqf or waqf-hybrid (outcome 2) are typically further from the Nile River and Sultanic Canals and smaller properties. This finding is consistent with the idea that collective management of land would have made it difficult for individuals to usurp the most profitable and largest settlements. Holding distance to Cairo and feddans at their mean values, we can isolate the effect of increasing a settlement's distance from a major water source. I find that going from close to far from the river or Sultanic Canal leads to an increase in the probability of an iqta' becoming entirely waqf, or a waqf-hybrid with no remaining iqta' (0.15 to 0.31 when comparing settlements very close to a water source versus 400 km away). This suggests that villages that became primarily waqf were typically on land of worse quality, holding other factors constant. A similar finding is observed for predictors of a shift from single-iqta' properties to non-iqta', non-waqf property types (outcome 4).

What factors explain why some properties remain entirely iqta', while others become an iqta'-waqf hybrid, an outcome which represents about half of all observations? Settlements that remained iqta' or became an iqta'-hybrid (category 3) are typically smaller property types. On the other hand, larger properties were typically hybridized. For example, if we hold the two distance measures at their mean and increase the size of the settlement from a low value (145 feddans) to a high value (8,000 feddans) in the data, the predicted probability of transferring from an iqta' to an iqta'-waqf hybrid (category 1) increases from 0.16 to 0.84, suggesting that larger settlements were much more likely than smaller ones

²⁶This measure was created by georeferencing Borsch (2016)'s map depicting the flow of the Nile and Sultanic canals in 15th century Egypt. Distance to the nearest water source — either canal or the Nile River — was then measured for each settlement point.

²⁷See Stasavage (2010) for more on this point in medieval Europe.

²⁸See Figure 1.

<i>1: iqta'-waqf hybrid</i>	(reference category)
<i>2: waqf or waqf-hybrid</i>	
Distance to Canals	0.254 (0.088)
Distance to Cairo	-0.187 (0.353)
Feddans	-1.155 (0.175)
Constant	7.238 (2.039)
<i>3: iqta' or iqta'-hybrid</i>	
Distance to Canals	0.121 (0.090)
Distance to Cairo	0.444 (0.362)
Feddans	-0.478 (0.173)
Constant	-0.974 (2.029)
<i>4: other (non-waqf, non-iqta')</i>	
Distance to Canals	0.183 (0.096)
Distance to Cairo	-0.028 (0.387)
Feddans	-1.033 (0.187)
Constant	5.580 (2.215)
Observations	503
Pseudo R^2	0.06

Table 2: *Coefficient estimates from multinomial logit regression for four outcomes (the omitted outcome is category 1). All covariates are logged.*

to see hybridization of this form. See figure 5 for a graphical depiction of the impact of settlement size on land type changes.

To what extent might monitoring capacity have mattered? Holding size and land quality constant, we can examine the effect of increasing distance to Cairo. As distance to Cairo increases, iqta'-waqf hybrids are common. These results suggest that hopeful private property holders most frequently sought to carve out a small holding out of large, agriculturally-productive settlements closer to the capital. This result is consistent with the idea that mamluk commanders were constrained in their ability to confiscate the most valuable land easily or at will. Wholesale expropriation of valuable land plots was not the norm; rather the Mamluk Sultanate was hurt by the accumulated losses associated with more privatized forms of land control.

4 Implications for the Decline of the Mamluk Sultanate

I have put forward an argument which focuses on the endogenous sources of institutional collapse for the Mamluk Sultanate in Egypt — a regime which was among the most populous and economically influential of the medieval period. In particular, I have provided empirical evidence about the “chipping away” of state-controlled agricultural land by regime insiders who pursued personal, nepotistic interests at the expense of the economic health and stability of the regime as a whole.

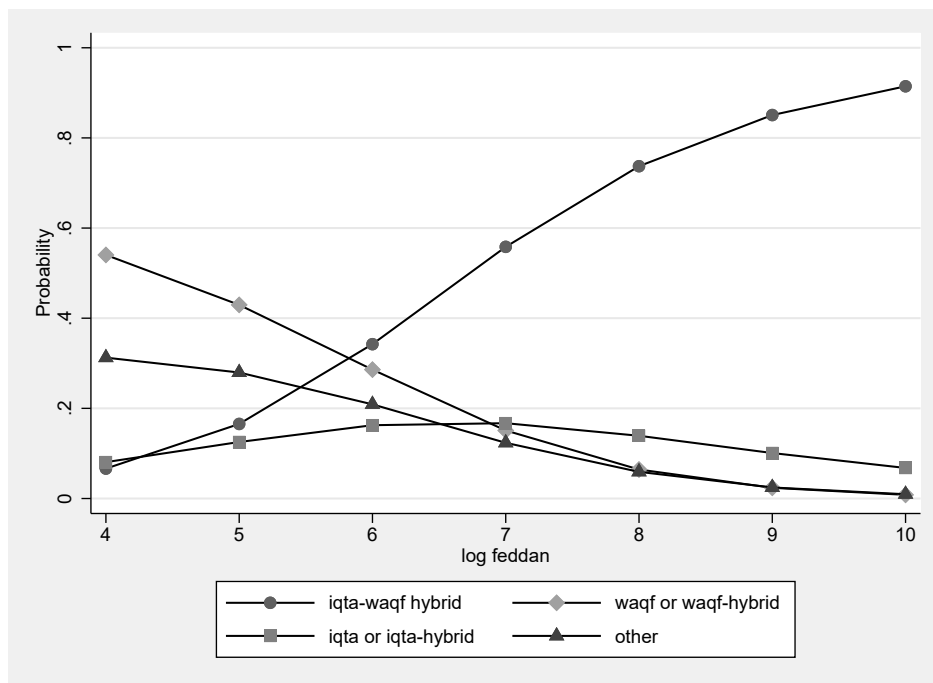


Figure 5: *Changing land types as a function of size.*

This argument enjoys considerable support within the existing historical literature. A number of scholars have suggested that the regime’s declining economic fortunes were related to the process of the privatization of iqta’ land. The weakening of the iqta’ system represented a major change in the social structure of Egypt, hurting the mamluk collective as resources were shifted into private hands (Sabra 2004, 208; Elbendary 2015, 27). Decreasing agricultural revenues had important knock-on effects, creating a host of additional problems. Budget shortfalls “exerted pressure for a variety of economically disruptive measures such as heavier taxation of urban commerce, confiscations, and forced purchases, all intended to buttress sagging Mamluk incomes” but instead led to a “descending spiral of urban economic decay” (Lopez et al. 1970, 118). Petry (1994, 81) argues that the most important issue of the late mamluk period was that “the regime’s shortfalls of cash” came up against demands for troop compensation and pay increases. Maintaining the heavy cost of the system became too much for the regime to bear (Lapidus 1984, 36).

Lapidus (1984, 36) has argued that in the 15th century, the compensation for mamluk commanders declined in what amounted to a “catastrophic reduction in Mamluk incomes.” Sabra (2004) also sees the 15th century as a turning point with regard to fundamental changes in land tenure. While there is consensus among scholars that the regime faced an economic crisis by the 15th century, there are multiple explanations for why (Elbendary 2015, 7).

What are the alternative hypotheses to the one I have put forward? A number of different explanations have been offered regarding the decline of the regime. Unsurprisingly, one would be hard pressed to suggest that a single explanation accounts for the outcome entirely

given the complexities associated with regime change.²⁹ I review the alternative and, in some cases, complementary arguments here:

Poor Incentives for Agricultural Investment: The mamluk system of agrarian management discouraged economic investment and, subsequently, good economic performance. To what extent did a crisis of agricultural investment create dysfunction independent from the land type transformations I have described? Hodgson (1974, 136) writes that uncertain ownership dampened incentives for investment, discouraging individual wealth holders from putting funds into agricultural maintenance. Elbendary (2015, 26) expresses a similar sentiment, suggesting that the iqta' system "did not create enough incentives for the amirs to invest in maintenance." More generally, Petry (1994) argues that the mamluk system encouraged the hoarding of capital assets, blocking them from more effective deployment. He writes that the system depressed innovation and failed to cultivate the type of "aggressive investment in ventures conducive to economic growth or technical change" (Petry 1994, 221-222). One hypothesis related to these arguments is that the economic collapse of the regime can be tied to the negative accumulated effect of the poor investment environment. Two pieces of evidence work against this mechanism as the sole source of the regime's economic crisis. The first is that the core form of investment required to maintain the productivity of the land — the maintenance of canals — was controlled by the state and monitored in the interest of sustaining agricultural productivity. In addition, the regime did not suffer an economic crisis for long periods of time with these particularly institutions in place (Petry 1994, 72).

The Black Death and Rural Depopulation: Changing environmental conditions impacted agricultural productivity in societies around the world and may have also contributed to the occurrence of the Black Death (Campbell 2016, 22). Abu-Lughod (1989, 239) suggests that reductions in agricultural surplus associated with the plague may have led the mamluks to engage in "increasingly exploitative strategies" which can be interpreted as "desperate attempts to maintain revenues in the face of a severely eroded economic base." The Black Death may have led to more turnover of iqta' (Irwin 1986, 138) and could also have empowered bedouin to take over agricultural land in the Nile Delta (Elbendary 2015, 49). This hypothesis would suggest that plague-induced reductions in population would have led to lower agricultural productivity with negative implications for the regime's economic fortunes. One problem with this explanation relates to the timing of the Black Death relative to the patterns that I have shown. The most significant wave of Black Death in Egypt occurred in 1347-1348 while the data for my baseline analysis (1376) is more than thirty years later. Although there were subsequent waves of Black Death, it would be difficult to explain the patterns that I have described with a thirty-year lag from the main occurrence of the plague.³⁰

²⁹Petry (1994, 103) has suggested that much of the existing work has focused on external shocks rather than examining the changes taking place inside the regime. In addition, the issue of kinship is not typically a focus of mamluk studies, given only marginal attention (Steenbergen 2006, 77). My account considers mechanisms related to internal change and kinship to a greater degree than the existing literature.

³⁰Plague was recurrent in later years as well but none of the subsequent (or previous) plague waves receive the attention of the 1347-1348 occurrence.

Loss of Spice Trade Monopoly: Over my interval of analysis, the Mamluk Sultanate lost its monopoly of the spice trade to Portuguese explorers who discovered an all-sea route to India from Europe. In the years leading up to 1500, Mamluk sultans dominated virtually the whole pepper trade, which provided a dependable source of revenue to pay for military expenses (Labib 1970, 77). Indian Ocean commerce had a highly positive impact on Egypt’s economy (Meloy 2015, 79). Crowley (2015) goes as far as to argue that the Mamluk Sultanate lived “parasitically” off merchant commercial success. Portuguese — and later Dutch and English — entry into the spice trade, and associated sultanic mismanagement of the economy, has also been cited as a factor associated with regime decay (Petry 1994, 118). With virtually no indigenous wood resources for the building of ships, the Mamluk Sultanate was not a maritime power (Crowley 2015).³¹ Blaydes and Paik (2017) estimate the negative economic impact of European seafaring breakthroughs on Middle Eastern and Central Asian trade entrepôts more generally. The timing of the decline in the spice trade is consistent with the narrative that I have discussed. As a result, it is important to consider the negative economic impact of declining trade in combination with the endogenous processes that I have described. It is likely that both of these factors contributed to the worsening economic situation.

Indeed, many of these external shocks may have heightened the incentives for state actors to predate on the state. For example, Lapidus (1984, 40) has argued that mamluk efforts to stave off economic collapse only made things worse in terms of taxation and extortion. Elbendary (2015, 11-12) discusses the interrelated nature of economic and administrative crises where the regime undertook a variety of bureaucratic measures to try to mitigate the challenges of a collapsing economy.³² While a number of exogenous and endogenous factors must have impacted the strength of the regime, there is little doubt that a smaller tax base would have made all shocks more difficult to withstand contributing to the regime’s fall.

5 Conclusion

The Mamluk Sultanate has been described as the “culmination of a long evolution of military slavery” (Philipps and Haarmann 1998, xi). And although slave soldiers were long a commonplace feature of Middle Eastern regimes (Crone 2003), Egypt represents a case where

³¹Goiten (1967, 38) suggests that the Mamluks “turned their backs on the Mediterranean,” perhaps not unexpected given the roots of the regime in the Caucasus and Central Asia.

³²Sabra (2004, 209) argues that the Ottoman invasion reversed the trend towards the privatization of land. Like in the case of the Mamluk Sultanate, the Ottoman state established ownership of land and bestowed hereditary usufruct on peasant families in a system that persisted until the 19th century (Pamuk 2004, 230). Indeed, Ottoman military success depended on the empire’s centralized, land-tenure system which supported its large, cavalry-based army (Pamuk 2004, 229). In this setting, agriculture was the economic livelihood for 90 percent of the Ottoman Empire population and a key fiscal pillar of support for the state leading Pamuk (2004, 230) to argue that “neither the durability nor the eventual demise of the empire can be understood without attention to its agrarian institutions.”

the mamluks took power for themselves by establishing a sultan from within their caste. The Mamluk Sultanate was in power for almost three centuries, its longevity suggesting aspects of durable institutional design. Indeed, scholars have argued that the institutions associated with the mamluk system of governance were relatively stable until at least the mid-14th or early 15th century.³³ The Mamluk Sultanate represents both a case of institutional persistence but also institutional change as a result of the way the core resource of agricultural land became undermined over time.

This paper has sought to characterize the core institutional features of the Mamluk Sultanate while also providing evidence for why and how those institutions were weakened. I find that the regime had difficulty maintaining authority over agricultural resources as state actors predated on state land with the goal of providing wealth transfers to their progeny, who were unable to become mamluks themselves. Mamlukism created a fundamental problem of intergenerational wealth transfer. While the mamluks were largely successful at creating protocols of self-management which prevented abuse and expropriation of the shared resource, self-undermining qualities of the institutional equilibrium eventually led to the degradation of the state.

How should we think about the Mamluk Sultanate compared to other autocratic regimes? And was the mamluk regime so unusual as to render it an historical case poorly suited for comparative analysis? On the one hand, the organization of a state of slave soldiers, reinvigorated by continuous import of new foreigners, has been described as “in many respects, very remarkable” (Goiten 1967, 38). On the other hand, rulers have long developed a wide range of institutional arrangements associated with public finance and the rule of law. For example, Levi (1997, 19) points out that while some property rights regimes are long maintained others prove to be unsustainable and are eventually abandoned.³⁴ While scholarly research has paid much attention to the institutional development of Western Europe, there is much less focus on the history of institutions and institutional change in areas outside of Western Europe. A failure to engage comparatively will render students of historical institutionalism unable to identify the types of institutions that were critical for creating economic development.

Finally, the existence of a single-generational elite, institutionally constrained in its ability to engage in intergenerational wealth transfer, has long been a feature of the pre-modern world. For example, eunuchs have served in critical governance roles across the ancient societies of Greece, Rome and Byzantium, as well as in Asian dynasties of China and the Indian subcontinent. Similarly, Catholic clergy made trusted advisors to European monarchs

³³For example, Steenbergen (2006, 169) argues that the system was stable until the end of the reign of al-Nasir Mohammad in 1341. Sabra (2004, 204) argues that the centralized agrarian system was largely in place until 1400.

³⁴To what extent are extractive regimes sustainable over the long term? The types of extractive institutional structures observed in this setting may emerge as equilibrium institutions by increasing the rents captured by groups with political power, despite potentially adverse effects on aggregate economic performance (Acemoglu et al 2002).

as clerymen could not aspire to dynasties of their own.³⁵ Indeed, Hofert (2018, 3) writes that reliance on celibate and childless men was a “transculturally common feature of pre-modern history” and that these gelded elites served as an “integral part of the ruling elites in different societies and regions.” Fukayama (2011) argues that celibacy was vital for battling corruption within the Catholic Church, giving Europeans an advantage over other societies with regard to the establishment of a bureaucratically-competent and rule-governed institution in the church. Yet clerical celibacy also introduced its own self-undermining processes since priests who fathered children or engaged in child abuse generated hypocrisies that reduced the moral standing of the church.³⁶ While mamluks were permitted to have children, the key principle of non-heredity generated similar challenges. Perhaps it is not surprising that non-hereditary social castes like eunuchs, priests and mamluks have not persisted in their political influence. The problems of nepotism, corruption and inefficiency which gelded elites were empowered to solve may have been self-undermining over the long term.

Bibliography

- Abdullah, Thabit. 2001. *Merchants, Mamluks, and Murder: The Political Economy of Trade in Eighteenth-Century Basra*. Albany, NY: State University of New York Press.
- Abu-Lughod, Janet. 1989. *Before European Hegemony: The World System A.D. 1250-1350*. Oxford: Oxford University Press.
- Acemoglu, Daron, Simon Johnson and James Robinson. 2002. “Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution.” *Quarterly Journal of Economics*. 117(4): 1231-1294.
- Acemoglu, Daron and James Robinson. 2012. *Why Nations Fail*. New York, NY: Crown.
- Ayalon, David. 1987. “Mamluk Military Aristocracy — A Non-Hereditary Nobility.” *Jerusalem Studies in Arab and Islam*. 9-10: 205-210.
- Ayalon, David. 1993. “Some Remarks on the Economic Decline of the Mamluk Sultanate.” *Jerusalem Studies in Arab and Islam*. 16: 108-124.
- Ayalon, David. 1994. “Mamluk: Military Slavery in Egypt and Syria.” *Islam and the Abode of War: Military Slaves and Islamic Adversaries*. Aldershot: Variorum.
- Bates, Robert, Avner Greif, Margaret Levi, Jean-Laurent Rosenthal. 1998. *Analytic Narratives*. Princeton, NJ: Princeton University Press.
- Bell, Stephen. 2011. “Do We Really Need a New ‘Constructivist Institutionalism’ to Explain Institutional Change?” *British Journal of Political Science*. 41(4): 883-906.

³⁵Hofert (2018, 31) writes that “by being excluded (usually) from a father-son succession...bishops and eunuchs offered societies the potential to use different reproduction patterns, thus providing flexibility and presenting alternatives that other social groups could not offer to this degree.”

³⁶See Gryzmala-Busse (2015) for more on the importance of moral authority and the Catholic Church.

- Blaydes, Lisa. 2017. "State Building in the Middle East." *Annual Review of Political Science*. 20.
- Blaydes, Lisa and Eric Chaney. 2013. "The Feudal Revolution and Europe's Rise: Political Divergence of the Christian West and the Muslim World Before 1500 CE." *American Political Science Review*. 107(1): 16-34.
- Blaydes, Lisa and Eric Chaney. 2016. "Political Economy Legacy of Institutions from the Classical Period of Islam." *New Palgrave Dictionary of Economics*. Editors, Steven Durlauf and Lawrence Blume. Palgrave Macmillan.
- Blaydes, Lisa and Christopher Paik. 2017. "Muslim Trade and City Growth before the 19th Century: Comparative Urbanization in Europe, the Middle East and Central Asia." Working paper.
- Borsch, Stuart. 2005. *The Black Death in Egypt and England: A Comparative Study*. Austin, TX: University of Texas Press.
- Borsch, Stuart. 2016. "Plague Depopulation and Irrigation Decay in Medieval Egypt." *Medieval Globe*. 1(1): 125-156.
- Bosworth, Clifford. 1996. *Islamic Dynasties*. New York, NY: Columbia University Press.
- Bueno de Mesquita, Bruce. 2000. "Popes, Kings, and Endogenous Institutions: The Concordat of Worms and the Origins of Sovereignty." *International Studies Review*. 2(2): 93-118.
- Campbell, Bruce. 2016. *The Great Transition: Climate, Disease and Society in the Late-Medieval World*. New York, NY: Cambridge University Press.
- Chaney, Eric. 2013. "Revolt on the Nile: Economic Shocks, Religion and Political Power." *Econometrica*. 81: 2033-2053.
- Conermann, Stephan and Suad Saghbini. 2002. "Awlad al-Nas as Founders of Pious Endowments: The Waqfiyah of Yahya ibn Tughan al-Hasani of the Year 870/1465." *Mamluk Studies Review*. 6: 21-50.
- Crone, Patricia. 2003. *Slaves on Horses: The Evolution of the Islamic Polity*. Cambridge: Cambridge University Press.
- Crowley, Roger. 2015. *Conquerors: How Portugal Forged the First Global Empire*. New York, NY: Random House.
- Daisuke, Igarashi. 2009. "The Financial Reforms of Sultan Qaytbay." *Mamluk Studies Review*. 13(1): 27-51.
- Daisuke, Igarashi. 2010. "The Evolution of the Sultanic Fisc and al-Dhakhirah during the Circassian Mamluk Period." *Mamluk Studies Review*. 14(1): 85-108.
- Elbendary, Amine. 2015. *Crowds and Sultans: Urban Protest in Late Medieval Egypt and Syria*. Cairo: American University in Cairo Press.

- Frankel, Yehoshua. 2009. "Awfaq in Mamluk Bilad al-Sham." *Mamluk Studies Review*. 13(1): 149-166.
- Fukuyama, Francis. 2011. *The Origins of Political Order: From Pre-Human Times to the French Revolution*. London: Profile Books.
- Garcin, Jean-Claude. 1987. "Note sur les Rapport entre Bedouins et Fellahs l'Epoque Mamluke." *Espaces, Pouvoirs et Ideologies de l'Egypte Medievale*. 147-163.
- Gellner, Ernest. 1983. *Nations and Nationalism*. Ithaca, NY: Cornell University Press.
- Goiten, Shelomo. 1967. *A Mediterranean Society (Volume 1)*. Berkeley, CA: University of California Press.
- Goldberg, Jessica. 2012. *Trade and Institutions in the Medieval Mediterranean: The Geniza Merchants and their Business World*. New York, NY: Cambridge University Press.
- Greif, Avner and David Laitin. 2004. "A Theory of Endogenous Institutional Change." *American Political Science Review*. 98(4): 633-652.
- Greif, Avner. 1994. "Cultural Beliefs and the Organization of Society." *Journal of Political Economy*, 102(5): 912-950.
- Gryzmala-Busse, Anna. 2015. *Nations Under God: How Churches Use Moral Authority to Influence Policy*. Princeton, NJ: Princeton University Press.
- Haarmann, Ulrich. 1984. "The Sons of Mamluks as Fief-holders in Late Medieval Egypt." *Land Tenure and Social Transformation in the Middle East*. Editor, Tarif Khalidi. Beirut: American University of Beirut.
- Haarmann, Ulrich. 1998. "Joseph's Law — The Careers and Activities of Mamluk Descendants before the Ottoman Conquest of Egypt." *The Mamluks in Egyptian Politics and Society*. Editors, Thomas Philipp and Ulrich Haarmann. New York, NY: Cambridge University Press.
- Hamid, Rauf Abbas. 2002. "Why Study Ownership? An Approach to the Study of the Social History of Egypt." *Money, Land and Trade: An Economic History of the Muslim Mediterranean*. Editor, Nelly Hanna. London: I.B. Tauris.
- Hodgson, Marshall. 1974. *The Venture of Islam: Conscience and History in a World Civilization, Volume 2*. Chicago, IL: University of Chicago Press.
- Hofert, Almut. 2018. "Celibate and Childless Men Placed into Shared Focus: Ruling Eunuchs and Bishops between the Intersections of Power, Networks, Sacredness and Gender." *Celibate and Childless Men in Power: Ruling Eunuchs and Bishops in the Pre-Modern World*. Editors Almut Hofert, Matthew Mesley and Serena Tolino. London: Routledge.
- Irwin, Robert. 1986. *The Middle East in the Middle Ages: The Early Mamluk Sultanate, 1250-1382*. Carbondale, IL: Southern Illinois University Press.

- Krasner, Stephen. 1984. "Approaches to the State: Alternative Conceptions and Historical Dynamics." *Comparative Politics*. 16(2): 223-246.
- Kuran, Timur. 2004. "Why the Middle East Is Economically Underdeveloped: Historical Mechanisms of Institutional Stagnation." *Journal of Economic Perspectives*. 18.
- Kuran, Timur. 2010. *The Long Divergence: How Islamic Law Held Back the Middle East*. Princeton, NJ: Princeton University Press.
- Labib, Subhi. 1970. "Egyptian Commercial Policy in the Middle Ages." *Studies in the Economic History of the Middle East: From the Rise of Islam to the Present Day*. Editor, Michael Cook. London: Oxford University Press.
- Lapidus, Ira. 1973. "The Evolution of Muslim Urban Society." *Comparative Studies in Society and History*. 15(1): 21-50.
- Lapidus, Ira. 1984. *Muslim Cities in the Later Middle Ages*. Cambridge: Cambridge University Press.
- Levanoni, Amalia. 1990. "The Mamluks' Ascent to Power in Egypt." *Studia Islamica*. 72: 121-144.
- Levanoni, Amalia. 2005. "The al-Nashw Episode: A Case Study of 'Moral Economy'." *Mamluk Studies Review*. 9(1): 207-220.
- Levi, Margaret. 1997. "A Model, a Method and a Map: Rational Choice in Comparative and Historical Analysis." *Comparative Politics: Rationality, Culture and Structure*. Editors, Mark Lichbach and Alan Zuckerman. New York, NY: Cambridge University Press.
- Lombard, Maurice. 1975. *The Golden Age of Islam*. New York, NY: Elsevier.
- Lopez, Robert, Harry Miskimin and Abraham Udovitch. 1970. "England to Egypt, 1350-1500: Long-term Trends and Long-distance Trade." *Studies in the Economic History of the Middle East: From the Rise of Islam to the Present Day*. London: Oxford University Press.
- Meloy, John. 2015. *Imperial Power and Maritime Trade: Mecca and Cairo in the Later Middle Ages*. Chicago, IL: Middle East Documentation Center.
- North, Douglass. 1990. *Institutions, Institutional Change and Economic Performance*. New York, NY: Cambridge University Press.
- Olson, Mancur. 1993. "Dictatorship, Democracy, and Development." *American Political Science Review*. 87(3): 567-576.
- Ostrom, Eleanor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. New York, NY: Cambridge University Press.
- Pamuk, Sevket. 2004. "Institutional Change and the Longevity of the Ottoman Empire, 1500-1800." *Journal of Interdisciplinary History*. 35(2): 225-247.

- Petry, Carl. 1994. *Protectors or Praetorians: The Last Mamluk Sultans and Egypt's Waning as a Great Power*. Albany, NY: State University of New York Press.
- Pierson, Paul. 2000. "Increasing Returns, Path Dependence, and the Study of Politics." *American Political Science Review*. 94(2): 251-267.
- Pipes, Daniel. 1981. *Slave Soldiers and Islam: The Genesis of a Military System*. New Haven: Yale University Press.
- Rabie, Hassanein. 1972. *The Financial System of Egypt A.D. 1169-1341*. London: Oxford University Press.
- Rapoport, Yossef. 2004. "Invisible Peasants, Marauding Nomads, Taxation, Tribalism, and Rebellion in Mamluk Egypt." *Mamluk Studies Review*. 8: 1-22.
- Rubin, Jared. 2017. *Rulers, Religion and Riches: Why the West Got Rich and the Middle East Did Not*. Cambridge: Cambridge University Press.
- Sabra, Adam. 2004. "The Rise of a New Class? Land Tenure in Fifteenth-Century Egypt: A Review Article." *Mamluk Studies Review*. 8(2): 203-210.
- Solnick, Steven. 1998. *Stealing the State: Control and Collapse in Soviet Institutions*. Boston, MA: Harvard University Press.
- Stasavage, David. 2010. "When Distance Mattered: Geographic Scale and the Development of European Representative Assemblies." *American Political Science Review*. 104: 625-643.
- Stasavage, David. 2016. "Representation and Consent: Why they Arose in Europe and Not Elsewhere." *Annual Review of Political Science*. 19: 145-162.
- Steerbergen, Jo Van. 2006. *Order out of Chaos: Patronage, Conflict and Mamluk Socio-Political Culture, 1341-1382*. Leiden: Brill.
- Stilt, Kristen. 2011. *Islamic Law in Action: Authority, Discretion and Everyday Experiences in Mamluk Egypt*. New York, NY: Oxford University Press.
- Steinmo, Sven and Kathleen Thelen. 1992. "Historical Institutionalism in Comparative Perspective." *Structuring Politics: Historical Institutionalism in Comparative Analysis*. Editors, Kathleen Thelen, Sven Steinmo and Frank Longstreth. New York, NY: Cambridge University Press.
- Thelen, Kathleen. 1999. "Historical Institutionalism in Comparative Politics." *Annual Review of Political Science*. 2: 369-404.
- Timilsina, Raja Rajendra, Koji Kotani, Yoshio Kamijo. 2017. "Sustainability of Common Pool Resources." *PLoS ONE*. 12(2).
- Tsai, Kellee. 2006. "Adaptive Informal Institutions and Endogenous Institutional Change in China." *World Politics*. 59(1): 116-141.