

The Feudal Revolution and Europe's Rise: Institutional Divergence in the Christian and Muslim Worlds before 1500 CE

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PRELIMINARY DRAFT

Abstract

This paper investigates the political origins of Europe's economic rise by examining the emergence of increasing ruler durability in Western Europe when compared with the Islamic world. While European rulers were *less* durable than their Muslim counterparts in 800 CE, Christian kings became increasingly long-lived compared to Muslim sultans whose rule became less stable over time. The “break date” in Western European political stability coincides with the emergence of feudal institutions, suggesting a first step in a political evolution that eventually led to medieval parliaments and the emergence of a unique degree of constraint imposed on many Western European sovereigns. While feudal institutions served as the basis for military recruitment by European monarchs, Muslim sultans relied on mamlukism — or the use of military slaves imported from non-Muslim lands. Dependence on mamluk armies limited the bargaining strength of local notables vis-à-vis the sultan, hindering the development of a productively adversarial relationship between ruler and local elites. We argue that Muslim societies' reliance on mamluks, rather than local elites as the basis for military leadership, may explain why the Glorious Revolution occurred in England, not Egypt.

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1 Introduction

An influential literature sees the roots of the industrial revolution in Europe’s unique institutional framework.¹ While it seems increasingly clear that growth-friendly, sovereign-constraining institutions including respect for property rights and the rule of law were key to the emergence of sustained economic development in Europe, the current literature struggles to explain both how such institutions emerged and why they were initially limited to western Europe.

Recent studies focusing on the evolution of European institutions generally begin their analyses after the year 1500 CE, while noting the peculiarity of Europe’s “initial” institutional framework. For example, in the conclusion of their seminal study of the evolution of English institutions following the Glorious Revolution, North and Weingast (1989) acknowledge that English institutions provided abnormal checks on the sovereign from an early (e.g., medieval) date. Similarly, Acemoglu et al. (2005) note that European political institutions established prior to 1500 CE already placed “significant checks on the monarch.”

A distinguished line of scholars has stressed the feudal origins of European institutional exceptionalism. Montesquieu (1989 [1748], p. 619) was an early proponent of this line of thought arguing that feudalism “diminished the whole weight of lordship.”² Recent scholarship suggests that feudalism coincided with a rise of a powerful landed aristocracy that proved instrumental in constraining the sovereign through the development of medieval parliaments.³ Van Zanden et al. (2010) provide an historical treatment of the emergence of European parliaments, arguing that these institutions ultimately facilitated medieval economic and institutional development.

This paper uses data on ruler duration in Western Europe and the Islamic world to investigate the origins of European institutional exceptionalism. We begin by documenting that after 1100 CE rulers in Christian Western Europe (henceforth referred to interchangeably as Latin Europe or Europe) remained in power for significantly longer than their Muslim counterparts. This pattern is robust to geographic controls and restricting the sample to the Iberian Peninsula, where geography, state size and institutional heritage (e.g., Roman/Germanic) can be held constant in a non-parametric manner. Without further interpretation — and in a reduced-form manner — this result suggests that Latin European institutions gave these states an economic advantage over their Muslim counterparts roughly after the year 1100 CE.⁴ Trend break algorithms are used to investigate the origins of the increase in European political stability. Results identify a break in Latin European political stability in the year 790 CE. This date approximately coincides with the midpoint of Charlemagne’s (768-814 CE) reign and is consistent with an influential historical literature stressing the Carolingian origins of both feudalism and European institutional exceptionalism.

¹For the economic importance of Western European institutional arrangements see among a large literature North and Weingast (1989), De Long and Sheifer (1993), Acemoglu et al. (2005), North et al. (2009), Acemoglu and Robinson (nd).

²Max Weber (1978, p. 1082) viewed feudalism as approximating constitutional government. Others have claimed that “the institutional history of Europe, even of the United States, goes back to the age of Charlemagne” (Ganshof, 1968, p. ix) and that feudalism laid “the critical institutional groundwork upon which liberal democracy was built” (Downing 1992, p. 18).

³See Strayer (1970) and Downing (1989).

⁴See Alesina et. al (1996) for a discussion of the link between political stability and economic development.

If the “feudal revolution” (Duby 1978) was the key to the divergence of Western Europe from the rest of the world, what was it about feudalism that promoted both stability and economic growth? And how did feudal institutions compare to methods of social control and organization in the Islamic world? Weakened by the Muslim invasions, European monarchs lacked the financial resources to exclusively outsource their military needs to foreign mercenaries. The feudal relationships which emerged served as the basis for military human resources. The landed nobility of Europe emerged as the “warrior class” of society. When monarchical abuses emerged, European barons were able to impose forms of executive constraint on European kings that laid the foundation for more secure property rights and the rule of law. Sultans in the Muslim world, by contrast, inherited more capable bureaucracies from conquered Byzantine and Sassanid lands and introduced mamlukism — or the use of slave soldiers imported from non-Muslim lands — as the primary means of elite military recruitment. Mamluks — completely segregated from the local population — swore their allegiance to the sultan alone. Local elites in the Muslim world did not serve as the source of elite military recruitment and, thus, were poorly positioned to impose the types of constraints on the executive that became evident in Europe.⁵ Mamlukism — as an institution — enabled the ruler to bypass local elites in the raising of a military, leading to a concentrated, but brittle, form of power held by Muslim sovereigns compared to their European counterparts.⁶

Empirical analysis of ruler duration data is consistent with this mechanism and with theories stressing the importance of political shocks as an impetus for generating Europe’s unique institutional arrangements. We provide evidence that Europe was significantly more politically stable — and European sovereigns more constrained — than rulers in the Muslim world prior to the New World discoveries. In addition, the results are compatible with the analysis in Acemoglu et al. (2001, 2002, 2006, 2008) that suggests that economic downturns can facilitate institutional changes.⁷

The remainder of the paper is structured as follows. The second section provides an historical narrative of our theory. The third section documents that rulers in the Latin West remained in power longer than those in the Islamic world after 1100 CE, and uses trend break algorithms to locate the start of the increase during the rule of Charlemagne. The fourth section investigates observable implications associated with the causal channel we

⁵This pattern suggests a “reversal of fortune” though operating through a different mechanism than described by Acemoglu et al. (2002). While Acemoglu et al. (2002) focus on the institutional reversal achieved in scarcely populated, underdeveloped areas, the reversal we propose is one where fiscal and administrative capacity actually hindered long-term economic prosperity by providing Islamic dynasties with the means to avoid bargaining with their own elite populations.

⁶Mamlukism, in fact, became a defining feature of Muslim polities; indeed, the phenomenon of “slaves on horses” spread across Muslim dynasties and continued for a period of more than 800 years. *Slaves on Horses: The Evolution of the Islamic Polity* is the title of Patricia Crone’s influential study of mamlukism in the medieval Islamic world. She writes that rather than being a “topsy-turvy vision” slaves on horses became in Islam the most “everyday of sights” (Crone 2003, 79).

⁷We view our results as complementary to other studies of the rise of the West. For example, by the end of our sample, political stability appears to decrease in much of Western Europe. Evidence suggesting that the Atlantic discoveries positively affected the evolution of some Western European entities (Acemoglu et al. 2005) while negatively affecting others (Drelichman and Voth 2008) is fundamental to understanding why the sovereign-constraining institutions of the Middle Ages survived to a greater extent in some areas than in others.

have described. A fifth section concludes.

2 Historical Narrative

In 1188 CE, Alfonso IX (1188-1230) of León (Spain) convened the world’s first parliament. By the 13th century similar institutional arrangements had spread throughout Western Europe. One scholar has summarized the importance of this development by noting:

“Late medieval Europe had numerous political characteristics that distinguished it from other major world civilizations. These characteristics, the most important of which were representative assemblies, constituted a basis for liberal democracy, which provided Europe with a predisposition toward democratic political institutions” (Downing 1992, p. 3).

If the emergence of representative parliamentary institutions marks the start of Europe’s political and economic development culminating in the industrial revolution of the 18th and 19th centuries, understanding the origins of these institutions is foundational. Yet explaining how Europe came to develop growth-promoting political institutions is virtually impossible through an examination of Europe alone. Indeed, understanding the determinants of sustained economic growth in Europe demands comparison with an appropriate historical counterfactual case or set of cases. As a result, we explore the roots of the European economic “miracle” through an examination of the *political* origins of institutional divergence in the Christian and Muslim worlds prior to 1500 CE.

2.1 Feudalism, Parliaments and the Rise of Europe

The usual narrative describing the birth of representative, sovereign-constraining political institutions begins with the collapse of the Western Roman Empire.⁸ The fiscal position of the Germanic successor states to the Roman Empire tended to be weak. Unable to fund military expenditure through tax receipts, European rulers sought other avenues for raising armies. The innovations introduced by Charlemagne marked a pivotal change. Lacking the capacity to introduce a system of tax collection, Charlemagne required landholders to contribute troops instead of funds. This change increased the power of large landlords in two ways. First, small, independent landowners pooled their lands with those of larger landholders to avoid having to offer themselves up to in military service. As individual landholders began to “aggregate up,” large landowners emerged who could ensure the cultivation of land while distributing the burden of military service across the larger body of peasants. Second and contemporaneously, European kings, like Charlemagne, required mounted troops, not just infantrymen, as a result of the introduction of the stirrup. The technological innovation

⁸The decline of Rome as a location of centralized authority was accompanied by a depopulation of urban centers as Roman citizens began moving to the countryside. The move to manors, and subsequent development of manorialism, was motivated by a search for basic food security. Egypt was long known to be the breadbasket of the Roman Empire. With the empire’s decline, trade between North Africa and Europe deteriorated to the point that former urban dwellers began to gravitate to manors where they might engage in agricultural production.

of the stirrup meant that “mounted shock combat” became the norm in warfare and the large investment required to purchase a horse and armor for battle meant that monarchs needed to recruit individuals with wealth to serve as the mounted military elite (White 1962). Mounted warriors, or knights, were often compensated for their service to the king through land grants.⁹ Military service and loyalty were expected in exchange for control of land (North et al. 2009, p. 79). European barons operating in the feudal system entered battle with their own, privately financed equipment, archers, and associated infantry. Such individuals often enjoyed opportunities to increase their landholdings or other forms of advancement as a result of their fighting. Together, the methods of military recruitment that emerged in medieval Europe came to be known as the feudal system.¹⁰ The net result of these innovations was the creation of a landed aristocracy in Western Europe.¹¹

Strayer (1970) provides a particularly compelling discussion of the feudal system and its consequences for state development. He argues that in the weakened and cash-strapped environment of early medieval Europe, “standing armies or permanent officer corps were unthinkable” (Strayer 1970, 27). Feudalism, characterized by its “fragmentation of political power” (1970, p. 14), emerged whereby rulers would raise armies on an as-needed basis by offering inducements of land or other privileges in exchange for support. While the system might appear to work against the creation of an effective state in the short run, Strayer argues that ultimately such a system “...can become a basis for state-building” (1970, p. 15). Although he does not bring any systematic empirical data to bear on this question, he argues that there was a notable increase in Western European political stability following the year 1000 and it was this stabilization of the political scene that allowed for an economic revival that included higher levels of agricultural production, population growth and a revitalization of long-distance commerce (Strayer 1970, 19).¹² He finds that during this period of deepening political stability, the basic components of the modern state began to appear in Europe (Strayer 1970, 34).

The stability of European monarchs evolved hand-in-hand with both increased economic opportunities and growing constraints on the executive. Europe’s more stable political environment contributed to the rise of towns and a nascent commercial revolution that became

⁹Eventually European rulers transformed feudal obligations into revenue as vassals paid to commute their service, allowing for the cultivation of standing and mercenary armies (Levi 1989, p. 106).

¹⁰The definition of feudalism is much debated. Here, we define feudalism as a system of military mobilization and organization distinct from manorialism, the economic system that provides the basis for feudalism.

¹¹The process that led to the disintegration of the classical (Roman) institutional framework and the emergence of a decentralized “feudal” framework remains a topic of scholarly division. A competing hypothesis to the one put forward here was introduced in the first half of the 20th century by renowned Belgian historian Henri Pirenne. Pirenne advanced the controversial hypothesis that the Islamic invasions of the Mediterranean basin in the 7th and 8th centuries were the key catalyst leading to the emergence of feudalism and Europe’s unique subsequent institutional development. He claimed that these invasions cut trade between the northern and southern Mediterranean and the subsequent disappearance of trade led to a sharp drop in tax revenues, forcing rulers in what is today France to compensate their military with land. Pirenne saw the empowerment of the aristocracy complete by the reign of Charlemagne. He famously remarked that “[t]he Empire of Charlemagne was the critical point of the rupture by Islam of the European equilibrium” (Pirenne (1980 [1939], p. 234).

¹²A variety of studies show that by the late medieval period, interest rates in Western Europe had begun to decline dramatically [e.g. see Clark (1988), Clark (2007) and Epstein (2000)], perhaps also a result of the increased political stability that we identify.

apparent beginning in the 12th century. Peasants seeking to opportunities to sell handicrafts and agricultural surplus sought out small markets and fairs. Markets were only able arise in places where political stability allowed for defense from bandits and marauders. The nature of elite military recruitment under feudalism also led monarchical abuses to be self-limiting. Barons — who served as vassals to the king — had the military means by which to rebel and demand satisfaction of their grievances (Breay 2002). The independent military power of the barons allowed for a degree of bargaining strength vis-à-vis the monarchy as barons could either rebel against the king or support an opposition figure who might give in to their demands in exchange for support.

English barons, for example, came to limit the power of kings in a number of meaningful ways. The promulgation of the Magna Carta in 1215 and eventual establishment of an English parliament populated by knights and barons in 1265 serve as a useful example. Under feudal institutions, the king had the right to demand “military service...whereby kings expected their vassals to contribute either in men or in money to armies” that might either serve domestically or overseas (Holt 1992, p. 30). Military service was a source of “widespread and perennial acrimony” between the king and his vassals (Holt 1992, 78). King John’s loss of Normandy in 1204 led to a growing reliance on local barons for both men and money. The Magna Carta — which reflected a greater acceptance of baronial demands than King John had hoped to make — was signed in June 1215 with a “renewal of homage and fealty” on the part of English barons (Holt 1992, p. 189). The Magna Carta was a direct product of both King John’s military failures and his future needs, where “war was the compulsive urgency behind administrative experiment” (Holt 1992, p. 24-5).¹³ The Magna Carta laid the groundwork for future demands to limit the power of the monarch in England. Over time, a coalition of English elites established credible constraints on the executive with the Glorious Revolution of 1688, allowing for property rights and security from arbitrary taxation that ultimately encouraged economic growth (North and Weingast 1989).

Feudalism represented a meaningful fragmentation of political authority.¹⁴ Kings — while the technical heads of government in their respective territories — had ceded considerable strength to local strongmen who enjoyed both public and private power, including control over public goods provision and land and rental income (Bisson 1994). In the face of divided and decentralized political power, how were European sovereigns able to increase their length of rule? Our argument is that more consensual government — as it emerged in Europe, with roots in medieval feudalism — enjoyed an advantage in terms of political stability. Forced by economic weakness to bargain and negotiate with local elites, European monarchs developed forms of political organization that exhibited a flexibility which trumped forms of more absolutist rule. These governmental forms sharply with political organization and military recruitment in the Islamic world during the same time period.

¹³At around the same time European monarchs on the continent were also ceding liberties to vassals and barons (Holt 1992, p. 25-6). The Golden Bull of 1222 in Hungary laid out the rights of knights and counts under the feudal system (Holt 1992, p. 77-8). Regional parliaments in France were established in the 13th century. The English parliament began to meet regularly beginning in 1295 (Bosker et al. 2010).

¹⁴See Bisson (1994) for more on this point.

2.2 The Islamic Equilibrium

“The kingdoms known to history have been governed in two ways: either by a prince and his servants, who, as ministers by his grade and permission, assist in governing the realm; or by a prince and by barons...Examples of these two kinds of government in our own time are the Turk and the King of France” (Machiavelli 1903 [1532], p. 14-15).

The Islamic world provides an important comparison to Western Europe.¹⁵ Like the Latin West, Muslim states ruled over some of the wealthiest Roman provinces and had access to the institutional heritage of ancient Greece, Rome and the Germanic states. Muslim states also controlled some areas that eventually reverted to Latin control. And, like Christian Europe, the Islamic world possessed a politically influential “clergy.”

Yet, feudalism — with its complex system of interlocking rights and obligations — did not emerge in the Islamic world. Despite being largely agrarian, no “landed aristocracy or gentry” materialized (Crone 1999, p. 322) nor did nascent parliamentary institutions develop. How were Muslim rulers able to circumvent the emergence of the type of landed aristocracy that proved so critical to constraining monarchs in Europe? This section argues that divergence in the nature of elite military recruitment provides a convincing explanation for why Christian Europe was ultimately able to develop growth-friendly political institutions. We argue that Muslim reliance on mamluks — or military slaves imported from non-Muslim lands — weakened state-society relations and hindered the development of impersonal political institutions. The widespread use of mamluks in the Islamic world limited the bargaining leverage enjoyed by local elites vis-à-vis the sultan, thus handicapping the development of the type of productively adversarial (and mutually dependent) relationship between ruler and ruled that emerged in Europe and which became the basis for forms of executive constraint. This is because mamluks were characterized by both “cultural dissociation” as a result of their emigration from a distant locale and “personal dependence” on the sultan who served as their master (Crone 2003, p. 79). Thus, while European rulers were negotiating with local gentry to raise armies for matters of defense, Islamic rulers bypassed local elites by creating highly-skilled armies of foreigners who had no ties to the existing gentry and swore allegiance directly to the sultan.

Historians of the medieval Islamic world have come to describe the introduction and eventual widespread adoption of mamluk institutions as a uniquely Islamic phenomenon. A mamluk is generally described as a military slave, though the term also refers to such individuals after their emancipation (Irwin 1986, p. 3).¹⁶ Mamluks might better be defined as *elite* military slaves given the fact that they were typically well-trained and generously paid.¹⁷ As such, mamluks were not prototypical slaves, but rather military elite who might

¹⁵Islam first emerged in the Arabian peninsula in the 7th century and within one-hundred years, Arab Muslims came to occupy territory from the Iberian Peninsula to the Indus Valley after successful attacks on the Sassanid, Byzantine and other empires.

¹⁶How can we think about mamluks in comparison to mercenaries that were frequently employed alongside skilled knights and town militias in Europe during this period? While mercenaries might be hired for a particular military campaign, offering their services to the highest bidder, mamluks were bought as slaves, often as children, and then carefully trained in the military arts to serve a particular sultan.

¹⁷While homeborn freemen were still used as foot soldiers, the “crack troops” (Crone 2003, p. 80) or

serve in positions like falconer, provincial governor or treasurer (Irwin 1986, 4).¹⁸

Who became mamluks? The most sought after mamluks were of tribal origin imported from areas “marginal to the settled Islamic world” (Crone 2003, p. 78) like the Caucasus (including present-day Georgia, Armenia and Azerbaijan) and Transoxania (including present-day Uzbekistan, Tajikistan and Kazakhstan).¹⁹ Imported as children, mamluks often underwent years of training which sought to both imbue them with military skills but also to encourage their loyalty to the sultan (Pipes 1981, p. 9).

A number of factors made mamluks from the Caucasus and Transoxania (henceforth described as “Turks” or Turkish mamluks) particularly valuable. Pipes suggests that one advantage Turks may have had over non-Turks in their recruitment as mamluks is related to the stirrup. He writes that the introduction of the stirrup “enhanced the power of the peoples living where horses could be raised — primarily in the steppe lands and in deserts — and reduced the strength of peoples living in densely inhabited areas” (1981, p. 57). Hodgson also points out the “steppes formed the most outstanding source of young slaves” as a result of the “boyhood military training as horsemen” (1977, p. 399). In addition, living in the mountains, deserts and steppes of Central Asia and the Caucasus, Turkish mamluks were raised under conditions of extreme hardship, leading them to be both healthy and lean (Pipes 1981, p. 78).²⁰

In order to stem the “corruption” of military slaves from the luxuries of settled life, mamluk institutions created a disconnect between the soldier slaves and local society. To deter the mamluks from being able to develop ties to either the local population or home-born troops, the mamluks were kept in “strict isolation” (Crone 1999, p. 319). Mamluks typically bore their Turkish names, even after their conversion to Islam, and predominantly used Turkish when speaking to one other with often superficial knowledge of the local language (Ayalon 1994b, p. 16-7). Mamluks were mainly married to female slaves from their countries of origin rather than local women (Ayalon 1994b, p. 16). The sons of mamluks (who did not enjoy mamluk status themselves) more frequently married women from the local population thus offering one opportunity for assimilation into non-mamluk society (Ayalon 1994b, p.

“backbone” (Ayalon 1994b, p. 17) of the sultan’s army typically consisted of soldier slaves.

¹⁸Mamluks were first introduced by the Abbasids in the 9th century as a retinue of three to four thousand Turks of non-Muslim origin (Crone 1999, p. 319). This new army of crack troops became the basis for the sultan’s strength (Kennedy 2004, p. 159). Mamluk armies were quickly adopted by numerous Muslim polities (Ayalon 1994a, p. 25) and spread across the settled areas of the Islamic world (Crone 2003, p. 79).

¹⁹Though less common, black Africans also served as mamluks (Irwin 1986, p. 5). Fellow Muslims could not be enslaved and as “People of the Book,” Christians and Jews were also protected from slavery and thus not eligible to serve as mamluks (Irwin 1986, p. 9).

²⁰The medieval Arab historian Ibn Khaldun offers other ideas for why soldiers brought up in marginal areas enjoyed a huge advantage over those recruited from more settled districts. Marginal areas existed separate from governmental authority forcing local peoples to develop a sense of group solidarity, or what Ibn Khaldun calls *‘asabiyya*. To protect themselves from the harsh environmental conditions and attack, these communities developed codes of honor and social structures for defense (Pipes 1981, p. 78). In practice, it is likely that all of these factors contributed to the desirability of Turks as mamluks. Those individuals that survived to be recruited as military slaves were not only physically powerful but also natural horsemen who were imbued with the group solidarity that would make for ideal soldiers to serve the sultan. Soldier slaves from Greece, India, Sub-Saharan Africa and other areas on the fringe of the Islamic world did exist but were not sought after like the Turks.

16-7).²¹ A mamluk, then, was characterized by both his “personal dependence” on his master, the sultan, as well as his “cultural dissociation” (Crone 2003, p. 74) given both his foreign origin and the development of practices that kept him highly removed from the local populace.

There is no consensus in the existing literature regarding why mamlukism emerged and spread throughout the Islamic world.²² In particular, why didn’t medieval Muslim sultans use indirect rule as we observe emerged in Europe? Patricia Crone offers perhaps the most compelling explanation for why mamlukism arose in the Islamic world. Crone compares the Abbasids explicitly to the Carolingians — their contemporaries — who also faced the challenge of creating a polity for which their past experience offered no model. She writes, “both fell back on private ties, and in both cases, the outcome was political fragmentation. *But because the fiscal and administrative machinery survived in the east, the Abbasids could simply buy the retainers they needed, and so they lost their power not to lords and vassals but to freedmen* [i.e., manumitted mamluks]” (Crone 1999, p. 326, emphasis added).²³ This suggests that the superior economic position of the Muslim rulers allowed them to *import* the military support that they needed rather than to develop a system of feudalism where a king delegated land to lords.²⁴

Imported military slaves were thought to be “safest to rely on” by a sultan (Marshall 1977, p. 399), offering the “most efficient defense” of the ruler’s interests (Lapidus 1973). Indeed, according to one observer, the “principal deterrent to the sultan’s overthrow was the strength and loyalty of the royal mamluks” (Dols 1977, p. 148). If a “well-controlled” mamluk army could bring political stability to a polity, an uncontrolled one was a potential source of regime breakdown and disintegration (Crone 2003, p. 84). In some cases, sultans found themselves “imprisoned” by their own “praetorian guard” (Lapidus 1973, p. 37-8)

²¹Many of the factors that favored Turkish mamluks from marginal areas of the Caucuses and Central Asia were not transferable across generations suggesting that there were both religious and practical reasons for not allowing mamluk status to be passed from father to son. As the qualities that made Turkish mamluks so valuable were not innate but rather acquired characteristics (Pipes 1981, 81), a sultan’s stock of military slaves had to be constantly renewed. Maintaining military slaves was a costly proposition, then, forcing a large percentage of state resources into a human capital investment that required constant renewal.

²²The mamluk institution can be considered a “specifically Muslim institution” as it came to be nearly ubiquitous in the Islamic world and yet totally absent in both the pre-Islamic Middle East as well as the non-Islamic world (Crone 2003, p. 80).

²³Slaves were not permitted to exercise jurisdiction over freemen, and, as such, Mamluks were typically manumitted prior to their first military engagement (Irwin 1986, p. 9). The practice of both converting and freeing a mamluk prior to battle had the important consequence of barring him from passing on mamluk status to his children (Irwin 1986, p. 9). As a result, the sons of mamluks could not belong to the mamluk aristocratic caste that emerged (Ayalon 1994c, p. 205) with important consequences for issues of intergenerational exchange.

²⁴This perspective is largely consistent with other prominent accounts. According to Mann (1986, p. 393), Europe at this time had a “fairly primitive economy” where “no lord could generate the liquid wealth to pay a large number of mercenaries. The only solution was land grants, which gave the vassal soldier a potentially autonomous power base.” Similarly, White (1962, p. 29) describes the Christian west in the 8th century as being a much less sophisticated economy than that found in the Islamic world or the empires which it conquered. According to White (1962, 29), “the bureaucracy of the Carolingian kingdom was so slender that the collection of taxes by the central government was difficult.” Given the expenses associated with raising a military force in an era of mounted shock combat, like horses and armor military service became “a matter of class” (White 1962, p. 30).

who were successful at usurping power from within (Pipes 1981, 91). Purchasing slaves — who needed to be constantly replenished — was also quite expensive, leading to economic problems for many regimes (Pipes 1981, p. 88). In many places, military slaves came to threaten the very dynasties that had trained them, eventually establishing their own slave sultanates (Pipes 1981, p. 23; Dale 2010, p. 16).

Perhaps more pernicious than the direct challenge mamlukism posed on stability was the long-term impact of mamlukism on state-society relations. Military slaves who “had no roots in or commitments to local communities” were responsible for collecting taxes, maintaining order and controlling important resources — the result was a highly exploitative system (Lapidus 1973, p. 39). As a result of their reliance on military slaves, sultans found themselves “alienated from the mass of their subjects” (Lapidus 1973, p. 37-8).²⁵

The provision of military service in medieval Europe, then, was highly decentralized in contrast to the mamluk system where military slaves constituted a centrally-located and ethnically distinct, indeed alien, caste. Mamluks were unable to transform themselves into a “hereditary landed baronage,” in part because of the “impossibility of transmitting mamluk status to one’s children” (Irwin 1986, p. 8).²⁶ Thus, while Western Europe saw a strengthening of lords who were responsible for defense of the land (Duby 1974, p. 43; p. 162), the Muslim world saw a deterioration in the bargaining strength of the aristocracy as control of the means of violence became dominated by a caste of military slaves.²⁷ The relative bargaining strength of the gentry vis-à-vis the ruler has proven to have profound implications for the development of executive constraint and the creation of impersonal economic institutions.

3 Political Stability in Europe and the Islamic World

Scholars have argued that the political institutions that emerged in Western Europe in the late Middle Ages proved to be growth-enhancing. Thus far, we have offered an historical narrative stressing the Carolingian origins of European institutional exceptionalism with a discussion of Islamic political institutions as a contrasting case. In this section, we explore the empirical implications associated with these ideas, particularly as they relate to political stability.

²⁵Extractive institutions, which allow the leadership to siphon off resources from the rest of society, also discourage both investment and development (Acemoglu et al. 2002).

²⁶According to Crone, Islam became unique among civilizations in terms of the extent to which government service ceased to be associated with land ownership (Crone 2003, p. 87). While military slaves did enjoy the ability to serve as tax collectors through the granting of *iqta*’ (Islamic land grant), Crone points out that “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, p. 87).

²⁷A related argument is put forward by Levi (1989) who finds that the relative bargaining power of monarchs against their resource rich constituents was the key variable in explaining divergence in political development in early modern France and England.

3.1 Data

This section uses data on the duration of rulers drawn from Bosworth (1996) and Morby (1989). Bosworth’s book deals exclusively with the Islamic world and contains data on ruler duration in 186 dynasties. Morby’s book is entitled *Dynasties of the World* and provides ruler durations for dynasties across the world and across history with “an admitted emphasis on Europe and on its roots in the ancient world” (Morby 1989, p. vii).

While both Bosworth and Morby attempt to provide as comprehensive an overview as possible, each author admits that their works may omit less important dynasties. Consequently, the data set we use in this analysis can be viewed as a non-random sample of the population of leaders that ruled in both the Islamic world and in Western Europe. Analysis not included here suggests that selection problems do not appear to be a first order concern, however.

We restrict our sample to rulers that assumed power before the year 1500. This was done in order to focus on the evolution of political stability in the period prior to the Atlantic discoveries. The dynasties in the European and Islamic worlds are presented in Tables 1 and 2. The number of rulers contained in the sample in each one-hundred year period is provided below the horizontal line. For most of the period covered by the data, the number of political entities is similar in both regions. Tables 3 and 4 present summary statistics by regions as defined by Bosworth (1996) and Morby (1989).

3.2 Political Stability in Europe

Throughout the remainder of the paper we use ruler duration as a proxy for political stability and will refer to ruler duration and political stability interchangeably. Figure 1 details the evolution political stability in non-Islamic Western Europe and the Islamic world. The moving average calculated with 100 lag years is graphed for both Western Europe and the Islamic world starting in the year 650 CE.

In Western Europe, the average ruler appears to have remained in power for approximately ten years prior to the year 800. After this date, the data show an increase in ruler duration to roughly 16 years. After this jump, ruler durations slowly trend upwards until approximately the year 1200 CE. After 1200 CE, European ruler duration stabilizes and exhibits a downward trend at the end of the sample. In the Islamic world, the average ruler remains in power for roughly 15 years until the year 1200 CE. After this date, the average ruler’s duration in power appears to decrease to around 12 years.

We can test the differences between ruler durations in the Islamic world and Latin Europe by estimating the following equation:

$$duration_{trc} = d_c + \delta_r + \sum_{c \geq 600} \alpha_c \cdot WE_t \cdot d_c + X'_{trc} \gamma + \varepsilon_{trc} \quad (1)$$

where $duration_{trc}$ is the duration in power of rulers who begin their reigns in year t , in region r and in century c , WE_t is a dummy indicating whether the ruler was in power in non-Muslim Western Europe, d_c denotes century dummies, δ_r denotes region dummies, X_{trc} is a vector of additional covariates and ε_{trc} is the disturbance term. The α_c are the parameters of interest and provide an estimate of the differences in ruler duration between

rulers who assumed power in non-Islamic Western Europe and those who rose to power in the Islamic world. Columns 1 and 2 of Table 1 show the mean duration values for European and Islamic world rulers, respectively. Columns 3-5 provide estimates of α_c . Column 3 presents the results omitting all covariates. The fourth column adds region and geography controls.²⁸ The fifth column restricts the sample to the Iberian peninsula where geography and state size (particularly in the interval 1000,1100 CE) were similar.

Regardless of the specification, the statistical pattern is clear: Latin Europe became statistically more stable than the Islamic world around the year 1100 CE.

3.3 The Origins of European Political Stability

To investigate the origins of the observed increase in European political stability we limit the sample to non-Muslim Western-Europe and consider the following multiple linear regression with m breaks ($m+1$ regimes):

$$duration_t = \beta_0 + t\delta_j + \varepsilon_t ; \quad t = T_{j-1} + 1, \dots, T_j \quad (2)$$

for $j=1, \dots, m+1$. Here the variable $duration_t$ is the mean value of ruler duration for rulers who assumed power at year t . The data identify one break point in the year 790 CE.²⁹ This break point has a 95% confidence interval comprising [755 CE, 855 CE]. The fitted values from Equation 1 are plotted in Figure 2. This break date is robust to the specification chosen and implies a discrete jump in political stability in the year 790 CE of approximately six years, followed by a statistically significant change in the trend of duration over time.³⁰ Figure 3 charts the F-statistic over time; the identified break date of 790 CE is indicated with a vertical line.

4 Empirical Implications of Possible Causal Channels

The empirical results show that rulers assuming power in Christian Western Europe remained in power for longer periods than their counterparts in the Islamic world after the year 1100 CE. Trend break algorithms suggest that the roots of this divergence can be found at the end of the eighth century CE.

We now turn to exploration of the causal mechanism that we have argued generates this result. We view this analysis as preliminary, since data limitations do not allow us to pin down the causal channels leading to the observed increase in ruler duration with certainty.

²⁸Region controls correspond to those described in Tables 3 and 4. Geography controls include variables for the ruggedness of terrain, elevation, malaria, distance to coast and Roman influence as used in Nunn and Qian (forthcoming).

²⁹We use the theoretical framework developed by Bai (1997, 1997b, 1999) and Bai and Perron (1998 2003). We use the BIC criteria to select the number of breaks using 15% trimming and setting the maximum number of breaks equal to 5.

³⁰The data rarely identified more than one breakpoint in our experimentation with alternative specifications. One exception occurred when we fitted a simple step function to the data, in which case the breakdates 790 CE [734,852] and 1055 CE [963,1104] were identified (95% confidence intervals in brackets). Since the R^2 was similar in both specifications we decided to retain the more parsimonious of the two specifications.

In this section we seek to investigate whether the data are consistent with the historical narrative developed earlier in the paper.

4.1 Effect of Executive Constraint on Ruler Duration

The estimated break date of 790 CE falls in the middle of Charlemagne’s reign and is consistent with the general consensus among historians that a new political equilibrium emerged in Western Europe during the Carolingian Empire. Our historical focus stresses the rise of a powerful landed aristocracy beginning with Charlemagne. This hypothesis suggests that the political power of this landed aristocracy increased over time, leading to a gradual transfer of power (e.g., control over monetary rents, public goods and the legal system) from the sovereign to his “vassals” (e.g., the landed aristocracy).

Downing concisely summarizes these ideas as follows:

“[t]he key to the rough balance between crown and nobility lies in the incomplete collapse of the Carolingian Empire in the ninth century and [...] then [the] contestation between the prince and local centers of power. Within this dual sovereignty emerged compromises, power sharing, and a climate of partial trust and partial mistrust that formed much of medieval constitutionalism” (1989, pp. 214-215).

The intuition behind how a decrease in the sovereign’s political control can lead to an increase in his duration in power is straightforward. Decentralizing power lowers the payoff from successful revolt against the monarch for the aristocracy. In other words, the development of a landed aristocracy with political power decreases the “wedge” between the payoff to the aristocracy versus the payoff to the sovereign. If the cost of overthrowing the sovereign remains constant, the smaller wedge between payoffs to the king and the aristocracy should lead to revolts in fewer states of the world. While it is possible that the cost of overthrowing the sovereign also declined as political power flowed to his vassals, this point is far from obvious based on our reading of the historical record. Indeed, decentralization of political power appears to have made coordination across nobles more difficult and costly.

To better understand the extent to which the increase in ruler stability in Western Europe is indicative of constrained monarchs we use the metric developed by De Long and Shleifer (1993) to measure constraints on the sovereign. We use their metric to create a dummy variable *Constrained* that is equal to zero if De Long and Shleifer classify the period as “Prince” (i.e., absolutist and non-feudal) and one otherwise. To expand their metric, we assign the variable *Constrained* the value one if De Long and Shleifer do not provide a classification and the ruler assumed power in a political entity that had convened at least one parliament in that century; a value of zero is recorded otherwise.³¹

Equipped with this metric we run the regression:

$$duration_{trc} = d_c + \delta_r + \sum_{c \geq 600} \alpha_c \cdot Constrained_t \cdot d_c + X'_{trc} \gamma + \varepsilon_{trc} \quad (3)$$

³¹The parliament variable is provided in Van Zanden et al. (2010).

The regression results associated with Equation 3 are presented in Table 2. Column 1 presents mean differences for the entire sample of rulers, both Christian and Muslim. Since there is no variation in the dummy variable *Constrained* prior to the year 1000 CE, the first four one-hundred year intervals are omitted. Column 2 considers variation identified by De Long and Shleifer within Latin Europe. Columns 3 and 4 add region and geography dummies to the results presented in Columns 1 and 2. Column 5 reports the effect of constraint on ruler duration within fixed (e.g., current) geographical boundaries. The F-statistic testing the null hypothesis that all of the α_c terms are jointly zero is presented in the row labeled F-Test (p-values are in brackets). Results are consistent with the claim that duration is positively related to constraint on the sovereign.

4.2 Constraints on the Sovereign and Intra-Dynasty Stability

The evolution of ruler duration *within* dynasties provides an additional opportunity to test if political stability is a reflection of increasing constraints on the sovereign. We begin by creating a variable measuring the order in which a ruler falls in the dynastic chain. This metric is equal to 1 for the founder of the dynasty, 2 for the next ruler, etc.

If a ruler is unconstrained, we expect his time in power to be a strong function of his (sovereign-specific) human capital (Jones and Olken 2005). Moreover, we expect the founder of a dynasty to be highly endowed with such capital. Inasmuch as rule remains within a given family we also expect sovereign human capital to mean-revert over time. If correct, this dynamic should produce a downward relationship between the place the ruler occupies in a given dynastic chain and his time in power. On the other hand, if a ruler is constrained as a result of feudal, or other, institutions this should mitigate the expected downward relationship between a sovereign’s place in the dynastic order and his duration in power. The intuition is that when sovereigns are constrained as a result of the institutional framework, sovereign-specific human capital should matter less.

These predictions are consistent with the data linking ruler location in a dynastic chain and his duration. Figure 3 presents the non-parametric relationship (lowess smoother with bandwidth 0.8) between the sovereign’s order in his dynasty and his duration in power. Again, we use our slightly expanded coding of De Long and Shleifer data on executive constraint. The dotted line includes the sample of Western European sovereigns before the year 1000 CE. The solid line includes sovereigns in the Islamic world. For both pre-1000 CE Western Europe and the Islamic world sample, we observe a downward-sloping curve that is consistent with the hypothesis of an unconstrained sovereign and human capital mean reversion. The broken line in Figure 3 presents the “constrained” cases in the Western European sample after the year 1000 CE. These results show that the negative relationship between a ruler’s place in the dynasty and his duration in power largely disappears and ruler duration may even increase within dynasty when there exists constraint on the executive.

5 Conclusion

The Empire of Charlemagne was the critical point of the rupture [...] of the European equilibrium (Pirenne 1980 [1939], p. 234).

Western Europe was considered an economic backwater in 1000 CE; indeed, the biggest cities in the Muslim world at this time were larger than any European city would be until the seventeenth century (De Long and Shleifer 1993). By 1000 CE, however, the fortunes of European political leaders were already improving when compared to their peers in the Islamic world in ways that were probably imperceptible to rulers, elites and citizens of those societies. This study provides the first empirical evidence that Europe’s medieval institutional arrangements were rooted in the Carolingian Empire. We find that political stability in Western Europe underwent a “structural break” in the year 790 CE — the midpoint of the reign of Charlemagne, a pioneer in the introduction of feudal social institutions. By the year 1100 CE the average Western European ruler’s tenure was significantly longer than his counterpart’s reign in the Muslim world. This result provides the first empirical support (to the best of our knowledge) for a distinguished line of scholarship that stresses the emergence of feudalism as an important early step in the economic and political rise of Western Europe.

Although data limitations do not allow us to pinpoint the exact causal mechanism generating the increase in Western European political stability, the results are consistent with a literature stressing the importance of economic and political shocks following the collapse of the Western Roman Empire in empowering a landed aristocracy. This literature stresses that the landed aristocracy slowly gained power during centuries of economic downturn. Eventually, this aristocracy was able to place unusual constraints on the sovereign. These constraints prepared the way for the emergence of parliaments and medieval Europe’s unique institutional framework. We find empirical evidence consistent with the hypothesis that European sovereigns faced increasing checks on their power after the introduction of feudal institutions.

The growth in both stability and prosperity of Western Europe closely paralleled the decline in the economic fortunes of the Islamic world. While both medieval European monarchies and Islamic dynasties cultivated the types of personalistic ties typical of North et al.’s “natural state” (2009), we have argued that the interdependent military, political and economic relationships that developed in Europe under feudalism laid the basis for more impersonal forms of political organization down the line, including institutionalized executive constraint. North et al. (2009) offer some ideas for how to go from a “natural state” — like the type of state that existed in both the medieval Islamic and Christian worlds — to an open access order — or a state characterized by limits on violence and institutions which effectively constrain abuses of power.³² Muslim rulers, unlike their European counterparts, had the administrative and financial capacity to import slaves from outside of their realms to provide military services; Muslim rulers were not, however, able to effectively discipline this military force through non-military means. European rulers found themselves forced to pay their militaries through land grants, a process which eventually created a powerful, landed and independent military class. In this sense, Poggi’s observation that “the ‘feudal state’ is one that undermines itself” (1978, p. 26) is correct; medieval kings, operating from a position of financial weakness and limited state capacity, had no choice but to offer fiefs as payment to elites who provided rulers with military support. Feudalism led this emergent “warrior class” to be “rooted in the land” (Poggi 1978, p. 32) in a way that was very distinct

³²In the North et al. (2009, p. 170) account, the way that society limits and controls violence is an important “doorstep condition” to the development of growth-producing institutions.

from the nature of military recruitment and remuneration in the Islamic world. The landed nobility in Europe were able to eventually extract both concessions and protections from the state, leading to the rise of medieval parliaments and the types of institutions that are believed to be growth-inducing.

This suggests that the Muslim world fell behind because of the inability of Muslim sultans to be credibly constrained. This explanation is distinct from, and complementary to, recent work which has argued that Islamic institutions, like Muslim inheritance laws and charitable endowments, played a crucial role in the region's economic underdevelopment (Kuran 2004; Kuran 2009; Kuran 2010a; Kuran 2010b) as well as a focus on the collectivist nature of "Eastern" societies and the negative externalities associated with informal monitoring and punishment mechanisms (Grief 1994). According to our account, by the time of the New World discoveries European rulers were already uniquely constrained compared to their Muslim counterparts. Although trade and colonialism may have enabled both good (Acemoglu et al. 2005) and bad (Drelichman and Voth 2008) institutional change in European countries, these conclusions suggest that the uniquely European emergence of checks on the sovereign predated the discovery of the Americas.

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Figure 1: *Divergence in Non-Muslim European and Islamic World political stability from 650-1500 CE.*

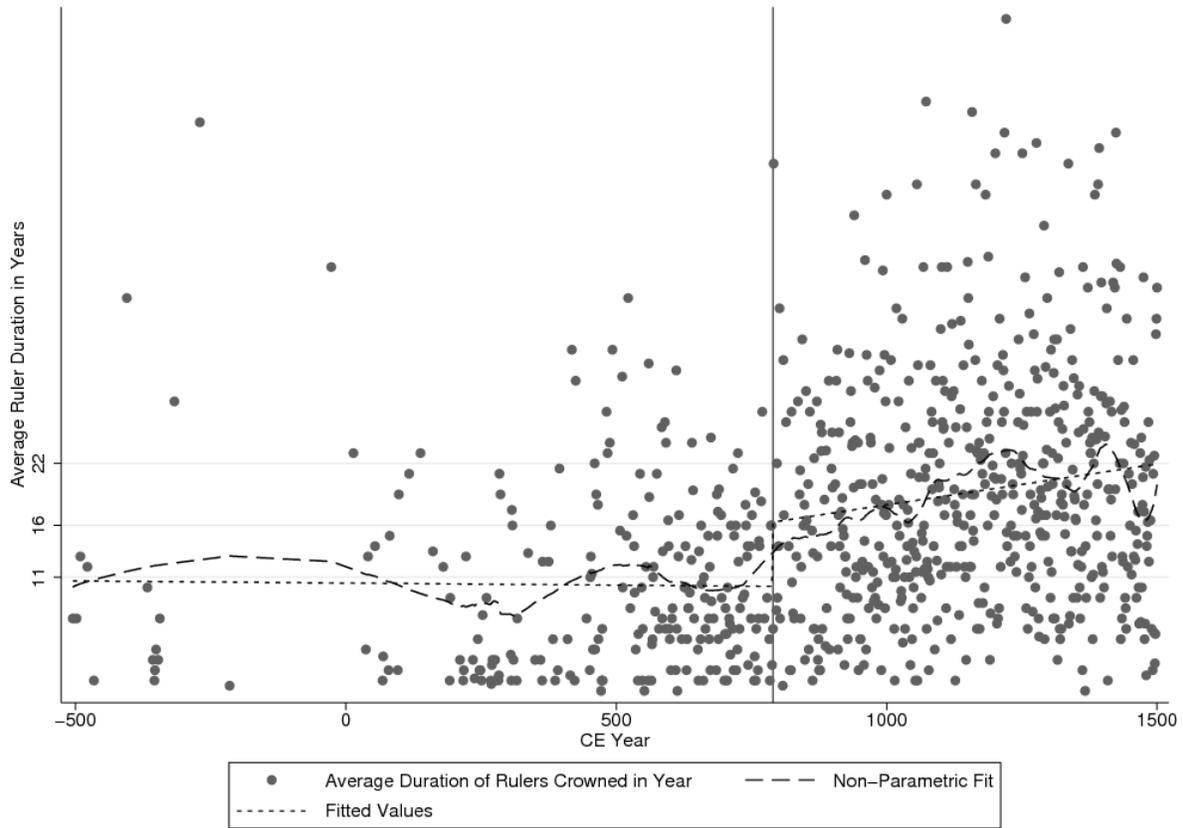


Figure 2: *Political stability in Non-Muslim Western Europe. Graph details non-parametric relationship between ruler duration and common-era years. Vertical line marks estimated break date in 790 CE.*

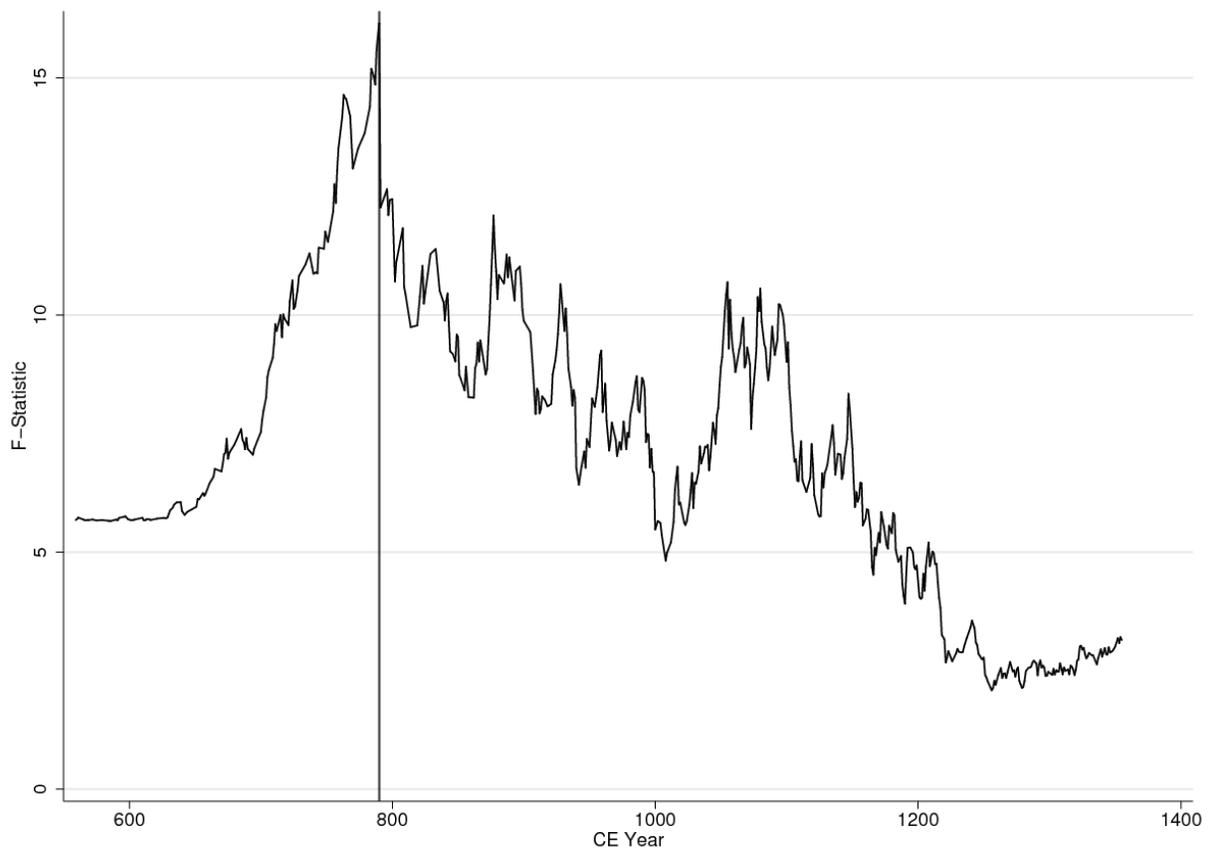


Figure 3: *Identifying the break date in political stability for Non-Muslim Western Europe.*

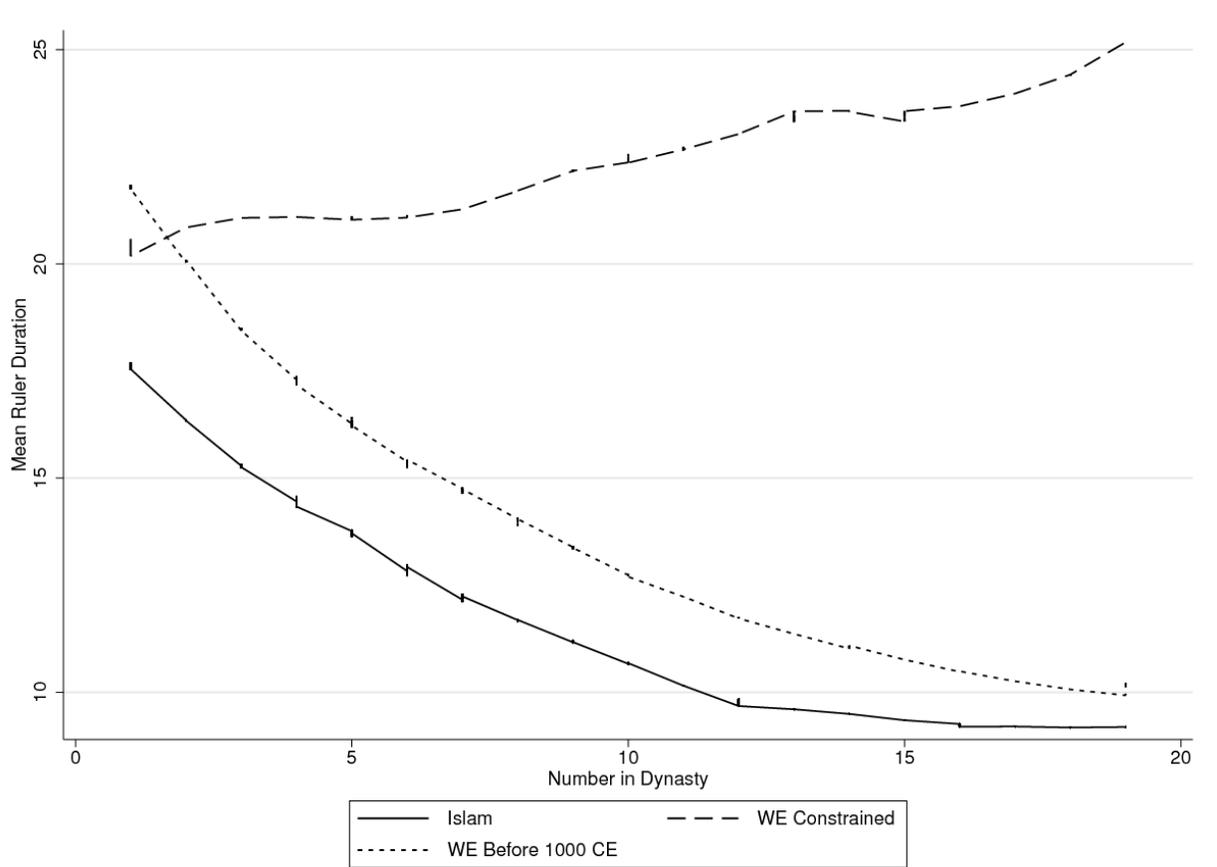


Figure 4: *Non-parametric plot of mean ruler duration within dynasties in Non-Muslim Western Europe and the Islamic World.*

Table 1: Dynasties (Non-Muslim Western Europe)

600-700	700-800	800-900	900-1000	1000-1100	1100-1200	1200-1300	1300-1400	1400-1500
AngloSaxon (27) Frankish (12) Ireland (12) Lombard (11) Visigoths (14)	AngloSaxon (35) Frankish (5) HRE (1) Ireland(10) France(3) Lombard(9) Leon(9) Venice(7) Visigoths(3)	AngloSaxon(20) Burgundy(1) Flandres(2) Toulouse(6) England(7) HRE(7) Ireland(5) France(8) Norway(1) Italy(4) Scotland(7) Barcelona(2) Juran(3) Navarre(5) Austria(2) Venice(9) Wales(7)	AngloSaxon(3) Burgundy(5) Luxembourg(2) Champagne(3) Flandres(4) Hainaut(4) Holland(4) Toulouse(3) Anjou(4) Aquitaine(6) Brittany(7) Normandy(4) England(8) HRE(5) Ireland(5) Denmark(2) France(7) Norway(6) Sweden(2) Italy(5) Scotland(7) Barcelona(4) Castile(3) Bavaria(9) Lorraine(2) Savoy(2) Juran(3) Navarre(5) Leon(12) Austria(2) Venice(9) Wales(7)	Burgundy(4) Luxembourg(5) Champagne(6) Flandres(5) Hainaut(4) Holland(4) Toulouse(3) Anjou(3) Aquitaine (5) Brittany(4) Lorraine(8) Normandy(4) Galicia(1) HRE(7) Ireland(4) Denmark(9) France(3) Norway(9) Portugal(1) Sweden(8) Scotland(9) Sobrarbe(1) Barcelona(5) Castile(2) Bavaria(14) Lorraine(6) Savoy(5) Zahringen(2) Aragon(3) Naples(3) Navarre(5) LeonCastile(4) Austria(4) Venice(9) Wales(4)	Burgundy(2) Luxembourg(3) Champagne(4) Flandres(7) Hainaut(2) Holland(3) Provence(8) Toulouse(4) Anjou(3) Aquitaine(2) Brittany(5) Brittany(4) Lorraine(1) Normandy(4) England(5) HRE(8) Ireland(4) Denmark(7) France(4) Norway(8) Portugal(11) Norway(11) Portugal(2) Sweden(9) Scotland(4) Barcelona(2) Bavaria(7) Lorraine(3) Ferrara(1) Savoy Zahringen(3) Aragon(5) Naples(10) Navarre(4) LeonCastile(6) Austria(5) Venice(8) Wales(6) Bavaria(2)	Burgundy(2) Artois(2) Luxembourg(3) Champagne(4) Flandres(3) Hainaut(1) Holland(6) Provence(4) Toulouse(2) Anjou(3) Brittany(4) England(2) HRE(9) Normandy(4) England(5) HRE(8) Denmark(7) France(4) Norway(3) Portugal(4) Sweden(4) Scotland(5) Lorraine(5) Ferrara(4) Savoy(5) Wurttemberg(3) Zahringen(10) Aragon(4) Majorca(1) Naples(7) Navarre(5) LeonCastile(6) Austria(7) Urbino(4) Milan(1) Venice(8) Wales(3) Bavaria(8)	Burgundy(3) Artois(5) Luxembourg(4) Champagne(1) Flandres(4) Holland(5) Provence(4) Anjou(3) Bourbonnais(3) Brabant(3) Brittany(6) England(4) HRE(7) Brunswick(9) Hesse(4) Denmark(9) France(8) Norway(3) Portugal(4) Sweden(7) Monaco(2) Scotland(4) Lorraine(4) Ferrara(3) Mantua(4) Savoy(7) Wurttemberg(8) Zahringen(5) Aragon(4) Naples(8) Navarre(6) LeonCastile(4) Austria(7) Florence(4) Urbino(4) Milan(6) Venice(11) Bavaria(9) Palatinate(4)	Burgundy(5) Luxembourg(3) Holland(2) Provence(3) Anjou(2) Bourbonnais(5) Brabant(2) Brittany(5) England(8) HRE(5) Brunswick(14) Hesse(6) Hohenzollern(6) Wettin(6) Denmark(3) France(4) Portugal(4) Sweden(7) Monaco(2) Scotland(4) Lorraine(4) Ferrara(3) Mantua(4) Savoy(7) Wurttemberg(8) Zahringen(5) Aragon(4) Naples(8) Navarre(6) LeonCastile(4) Austria(7) Florence(4) Urbino(4) Milan(6) Venice(11) Bavaria(9) Palatinate(4)

Notes: Dynasties with a ruler assuming power in the Non-Muslim Western European sample at any time in the mark intervals are listed.

Table 2: Dynasties (Islamic World)

600-700	700-800	800-900	900-1000	1000-1100	1100-1200	1200-1300	1300-1400	1400-1500
Bawandid (2)	Abbasids (5)	Abbasids (13)	Abbasids (11)	Abbasids (3)	Abbasids (6)	Abbasids (6)	Abbasids (10)	Abbasids (7)
Dabuyid (3)	Aghlabids (8)	Aghlabids (2)	Aghlabids (2)	Abbadids (3)	Abbadids (4)	Abbadids (2)	Artuqids (5)	Artuqids (1)
Orthodox (4)	Banjurids (3)	Banjurids (3)	Annazids (1)	Almoravids (2)	Almohads (4)	Almohads (8)	Ashrafoghullari (2)	Ashrafoghullari (3)
Umayyad (5)	Bawandid (5)	Bawandid (4)	Bawandid (4)	Amirids (5)	Almoravids (4)	Amirids (11)	Ayduoghullari (2)	Ayduoghullari (7)
	Dulafids (2)	Dulafids (5)	Buyids (20)	Annazids (2)	Annazids (15)	Ashrafoghullari (1)	Ayyubids (6)	Baduspanids (6)
	Justanids (1)	Hashimids (3)	Fatimids (6)	Arasids (3)	Arasids (15)	Yazd (7)	Baduspanids (9)	Bahmanids (6)
	Rustamids (2)	Hashimids (7)	Ghaznawid (3)	Banubirzals (2)	Yazd (2)	Ayyubids (28)	Bahmanids (8)	Alanya (2)
	Sharwan (1)	Hamdanids (7)	Ghaznawid (3)	Banukhazrun	Ayyubids (13)	Baduspanids (5)	Bawandid (3)	Delhi (7)
	Umayyads (11)	Afrighids (3)	Hasanymadh (4)	Banuwamid (4)	Baduspanids (4)	Bawandid (6)	Alanya (3)	Dulghadiroghullari (6)
		Hashimids (8)	Bawandid (3)	Banughaniya (6)	Alanya (1)	Chohanoghullari (4)	Delhi (11)	Faruqi (3)
		Idrisids (6)	Buyids (8)	Bawandid (6)	Bawandid (6)	Chohanoghullari (4)	Dulghadiroghullari (4)	Germiyanoghullari (2)
		Ikshidids (5)	Nizari (1)	Beghtiginids (3)	Delhi (12)	Eretnaoghullari (4)	Eretnaoghullari (4)	Bengal (17)
		Ilyasids (3)	Dhualnun (4)	Burids (5)	Germiyanoghullari (1)	Faruqi (2)	Faruqi (2)	Hafids (6)
		Justanids (4)	Fatimids (3)	Burids (5)	Germiyanoghullari (1)	Ghurid (6)	Germiyano (3)	Hazaraspids (3)
		Kalbid (8)	Fatimids (11)	Nizari Isma'ilis (7)	Bengal (23)	Bengal (12)	Bengal (12)	Jandaroghullari (4)
		Afrighids (4)	Ghaznawid (11)	Fatimids (5)	Fatimids (7)	Hafids (11)	Hafids (11)	Nimruz (5)
		Mannuids (3)	Hamdanids (8)	Hamdanids (6)	Hazaraspids (8)	Hamidoghullari (6)	Hamidoghullari (6)	Mamluks (20)
		Tahirids (16)	Mannuids (2)	Ghaznawid (6)	Jandaroghullari (1)	Hazaraspids (5)	Hazaraspids (5)	Marinids (1)
		Mazyadids (1)	Marwanids (3)	Ghurid (9)	Keita (6)	Jandaroghullari (6)	Jandaroghullari (6)	Mentesheoghullari (2)
		Midrarids (8)	Hasanuyids (3)	Bengal (1)	Khwarazmshahs (1)	Keita (10)	Keita (10)	Nabhani (3)
		Muhtajids (6)	Hashimids (15)	Hamdanids (7)	Khwarazmshahs (1)	Luluids (2)	Nimruz (7)	Nasrids (17)
		Mukramids (1)	Hudids (5)	Hamadanids (3)	Nimruz (8)	Mamluks (21)	Mamluks (21)	Qaramanoghullari (7)
		Nunayyids (1)	Jahwarids (3)	Hazaraspids (2)	Nimruz (8)	Marinids (22)	Marinids (22)	Ramadanoghullari (7)
		Ziyadids (3)	Kakuyids (2)	Hudids (2)	Mamluks (15)	Mentesheoghullari (3)	Mentesheoghullari (3)	Rasulids (5)
			Kalbid (2)	Khwarazmshahs (4)	Marinids (5)	Nabhani (4)	Nabhani (4)	Malacca (8)
			Khwarazmshahs (8)	Mahdids (2)	Mahdids (2)	Nasrids (11)	Nasrids (11)	Kanem (14)
			Nimruz (6)	Nimruz (3)	Mentesheoghullari (1)	Parwanaoghullari (1)	Parwanaoghullari (1)	Sarukhanoghullari (2)
			Marwanids (3)	Mazyadids (5)	Mentesheoghullari (1)	Parwanaoghullari (1)	Parwanaoghullari (1)	Jawnpur (4)
			Mazyadids (3)	Mengujekids (3)	Nasrids (2)	Nasrids (2)	Nasrids (2)	Songhay (3)
			Mengujekids (1)	Najahids (4)	Nazari (3)	Qaramanoghullari (7)	Qaramanoghullari (7)	Songhay (3)
			Mirdasids (9)	Nizari (4)	Parwana (2)	Qaramanoghullari (4)	Qaramanoghullari (4)	Achech (4)
			Mukramids (3)	Qarkhamids (16)	Qarkhamids (2)	Qaramanoghullari (4)	Qaramanoghullari (2)	Gujurat (7)
			Mukramids (4)	Kanem (3)	Kanem (3)	Qaramanoghullari (4)	Qaramanoghullari (2)	Kashmir (7)
			Sharwan (6)	Najahids (4)	Murcia (2)	Qaramanoghullari (1)	Qaramanoghullari (1)	Kilwa (15)
			Simjurids (7)	Nizari Isma'ilis (1)	Murcia (7)	Qutlughkanids (8)	Qutlughkanids (8)	Malwa (6)
			Kilwa (4)	Numayrids (4)	Salghurids (4)	Rasulids (4)	Rasulids (4)	Tahirids (4)
			Tulinids (1)	Qarakhanids (19)	Salghurids (5)	Kanem (6)	Kanem (6)	Tajaldhnohullari (1)
			Umayyads (3)	Rawwadids (4)	Salghurids (5)	Sarukhano (4)	Sarukhano (4)	Tekkeoghullari (1)
			Uqaylids (5)	Kanem (2)	Sejjuqs (27)	Sarukhano (4)	Sarukhano (4)	Wattasids (4)
			Yufirids (3)	Ma'jorca (3)	Shaddadids (7)	Murcia (7)	Sarukhano (4)	Ziyayids (10)
			Zaydi (5)	Murcia (3)	Iarmanids (7)	Sahibata (2)	Sahibata (2)	
			Zirids (4)	Sallarids (3)	Sharwanshahs (4)	Salghurids (6)	Salghurids (6)	
			Ziyadids (3)	Sallarids (3)	Kilwa (7)	Saltuqids (2)	Saltuqids (2)	
			Ziyarids (5)	Saltuqids (3)	Zangids (12)	Seljuqs (16)	Seljuqs (16)	
				Seljuqs (15)	Zaydi (4)	Iarmanids (1)	Iarmanids (1)	
				Shaddadids (6)	Zirids (3)	Sharwanshahs (5)	Sharwanshahs (5)	
				Iarmanids (1)	Zurayids (5)	Songhay (2)	Songhay (2)	
				Sharwanshahs (8)		Kilwa (5)	Kilwa (5)	
				Sulayhidids (5)		Zangids (6)	Zangids (6)	
				Kilwa (2)		Zaydi (2)	Zaydi (2)	
				Tujibids (3)		Ziyayids (2)	Ziyayids (2)	
				Umayyads (8)				
				Uqaylids (12)				
				Zaydi (7)				
				Zirids (3)				
				Ziyadids (6)				
				Zurayids (2)				

Notes: Dynasties with a ruler assuming power in the Islamic world sample at any time in the mark intervals are listed.

Table 3: Non-Islamic Dynasty Summary Statistics

<i>Variable</i>	<i>Range</i>	<i>Average Duration</i>	<i>N</i>
Ancient	Rulers of the Ancient World (-2563,-335 CE)	15.79 (0.67)	403
Rome	Rulers of Rome and Byzantium (-203, 1458 CE)	11.64 (0.77)	287
Hellenistic	Rulers in the Hellenistic World (-505, 213 CE)	14.82 (1.05)	169
Barbarian	Rulers of Barbarian Kingdoms (395, 918 CE)	12.19 (0.79)	212
Italy	Rulers in the Italian Peninsula (726, 1497 CE)	15.34 (0.91)	201
Low Countries	Rulers in the Low Countries (864, 1482 CE)	21.54 (1.30)	129
German	Rulers in German-Speaking Countries (800, 1500 CE)	21.30 (0.92)	280
France	Rulers in France (751, 1498 CE)	21.40 (1.13)	181
British Isles	Rulers in the British Isles (445, 1488 CE)	16.09 (1.00)	162
Scandinavia	Rulers in Scandinavia (858, 1497 CE)	15.07 (1.17)	113
Iberia	Rulers in the Iberian Peninsula (718, 1495 CE)	22.54 (1.27)	140

Notes: ruler duration summary statistics for the European sample given by “geographic” region

Table 4: Islamic Dynasty Summary Statistics

<i>Variable</i>	<i>Range</i>	<i>Average Duration</i>	<i>N</i>
Afghanistan and India	Rulers in Afghanistan and India (977, 1499 CE)	10.45 (0.89)	182
Caucuses	Rulers of Caucuses(640, 1500 CE)	16.99 (1.02)	205
East Africa	Rulers of East Africa (957,1495 CE)	16.32 (2.03)	53
Egypt and Syria	Rulers of Egypt and Syria (868, 1500 CE)	9.04 (0.79)	157
Iraq	Rulers of Iraq (961, 1150 CE)	14.68 (2.66)	37
Iberia	Rulers in the Iberian Peninsula (756, 1490 CE)	11.31 (0.98)	135
North Africa	Rulers in North Africa (778, 1494 CE)	11.78 (0.90)	172
South Asia	Rulers of South Asia (1403, 1496 CE)	15.58 (2.23)	12
Arabia	Rulers in Arabia (818, 1489 CE)	16.31 (1.55)	99
Caliphs	Caliphs (632, 1497 CE)	11.22 (1.25)	78
Eastern Persia	Rulers in Eastern Persia (819, 1220 CE)	11.96 (0.97)	118
Seljuqs and Atabegs	Seljuqs (1030, 1499 CE)	14.70 (0.93)	216
Anatolian Turks	Turkish Rulers in Anatolia (1081, 1480 CE)	14.41 (0.96)	176
West Africa	Rulers in West Africa (1085, 1493 CE)	12.20 (1.90)	65

Notes: ruler duration summary statistics for the Islamic sample given by “geographic” region

Table 5: **Political Stability and the Rise of Europe**

	Length of Rule (Years)				
	<u>Euro</u>	<u>Islam</u>	<u>Euro minus Islam</u>		
	(1)	(2)	(3)	(4)	(5)
(600, 700]	10.78 (1.61)	13.50 (3.40)	-2.72 (3.76)	2.25 (4.57)	- (-)
(700, 800]	10.84 (0.71)	14.20 (3.23)	-3.36 (3.31)	1.43 (3.90)	-10.67 (2.71)
(800, 900]	16.02 (1.54)	15.63 (1.95)	0.39 (2.48)	5.00 (3.00)	0.25 (2.33)
(900, 1000]	18.13 (1.69)	14.79 (1.02)	3.35 (1.96)	6.34 (2.52)	-14.54 (5.04)
(1000, 1100]	16.11 (1.22)	13.28 (1.15)	2.83 (1.67)	5.72 (1.86)	9.62 (2.44)
(1100, 1200]	21.28 (1.45)	15.08 (0.90)	6.21 (1.70)	10.73 (3.40)	18.58 (3.40)
(1200, 1300]	21.64 (1.18)	11.24 (1.19)	10.40 (1.67)	15.31 (2.01)	10.65 (8.11)
(1300, 1400]	20.78 (1.24)	12.09 (1.17)	8.69 (1.70)	13.56 (2.04)	11.46 (1.26)
(1400, 1500]	19.96 (1.44)	11.42 (1.15)	8.54 (1.84)	13.76 (2.17)	23.61 (2.25)
<i>N</i>	1329	1705	3034	2943	292
<i>Region Dummies?</i>	No	No	No	Yes	No
<i>Geography Controls?</i>	No	No	No	Yes	No
<i>Sample</i>	All	All	All	All	Iberia

Notes: standard errors clustered by political entity in parentheses.
See text for details.

Table 6: **Constraints on the Sovereign and Political Stability**

	Length of Rule (Years)				
	(1)	(2)	(3)	(4)	(5)
Constrained(1000,1100]	5.96 (2.10)	4.82 (1.15)	4.46 (2.44)	4.17 (2.53)	
Constrained(1100,1200]	6.92 (2.06)	3.50 (0.90)	5.53 (2.43)	2.86 (2.93)	
Constrained(1200,1300]	9.58 (2.13)	2.92 (2.36)	7.83 (2.30)	2.31 (2.27)	
Constrained(1300,1400]	6.91 (1.97)	1.34 (2.33)	4.71 (2.16)	0.68 (2.25)	
Constrained(1400,1500]	11.21 (2.50)	7.09 (1.15)	9.57 (2.38)	6.94 (2.77)	
Constrained					6.67 (1.49)
<i>F – Test</i>	21.73 [0.00]	2.85 [0.03]	8.49 [0.00]	2.24 [0.06]	
<i>N</i>	3034	1329	3034	1307	3034
<i>Region Dummies?</i>	No	No	Yes	Yes	No
<i>Geography Controls?</i>	No	Yes	Yes	Yes	No
<i>State Dummies?</i>	No	No	No	No	Yes
<i>Sample</i>	All	Latin	All	Latin	All

Notes: standard errors clustered by political entity in parentheses.
See text for details.