INSTITUTIONS, THE RISE OF COMMERCE AND THE PERSISTENCE OF LAWS: INTEREST RESTRICTIONS IN ISLAM AND CHRISTIANITY*

Jared Rubin

Why was economic development retarded in the Middle East relative to Western Europe, despite the Middle East being far ahead for centuries? A theoretical model inspired and substantiated by the history of interest restrictions suggests that this outcome emanates in part from the greater degree to which early Islamic political authorities derived legitimacy from religious authorities. This entailed a feedback mechanism in Europe in which the rise of commerce led to the relaxation of interest restrictions while also diminishing the Church’s ability to legitimise political authorities. These interactions did not occur in the Islamic world despite equally amenable economic conditions.

Over the past few decades, a significant amount of research has been conducted in search of the causes underlying the ‘rise of the West’ (North and Thomas, 1973; Jones, 1981; Diamond, 1997; Landes, 1998; Pomeranz, 2000; Acemoglu et al., 2005; Greif, 2006; Clark, 2007). In relation to the Middle East, such research takes on a special significance. By almost any account, the Middle East was far more advanced economically and scientifically than Western Europe as late as the thirteenth century, yet Middle Eastern economies did not develop nearly as rapidly as Western European ones did in the ensuing centuries and were far surpassed economically after the Industrial Revolution (Ibn Khaldun, [1379]1958; Mokyr, 1990; Kuran, 1997; Lewis, 2002).1 Perhaps instead of searching for the factors underlying the rise of the West, the correct question to pose is the converse one Bernard Lewis (2002) suggests: ‘What went wrong?’

Until recently, popular explanations for the economic divergence, especially those espoused by Max Weber, suggested that the ‘conservative’ or ‘mystical’ nature of Islam discouraged curiosity (to learn non-Muslim languages or European cartography, take foreign expeditions, adopt foreign methods and techniques, and so forth) and prevented risk-taking, innovation and mechanisation (Weber, [1922] 1978; Cromer, 1908; von Grunebaum, 1966; Lewis, 1982, 2002). In this view, Islam is seen as inherently

* Corresponding author: Jared Rubin, California State University, 800 N. State College Blvd; Fullerton, CA 92834, USA. Email: jrubin@fullerton.edu.

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1 Throughout this article, I use the terms ‘Christian world’ and ‘Western Europe’ to denote the pre-Reformation Christianised regions under the Church of Rome. I use the term ‘Islamic/Muslim world’ somewhat broadly, comprising North Africa and the ‘Middle East’ (i.e. the entire Arab world, Iran, Turkey, the Balkan Peninsula and Spain up to the Reconquista). Muslim regions of Central Asia, the Indian subcontinent and the Malay Peninsula are not the direct focus of this article, although the arguments are applicable to these regions.
hostile to commerce and finance. Indeed, there are numerous historical phenomena which, on the surface, encouraged this line of analysis. In particular, both religions advocated several laws which inhibited economic development – such as regulations on taking interest and printing, suppression of women and laws discouraging mass education. Although such laws were equilibrium outcomes in the pre-modern settings in which they emerged, they generally persisted for longer in Islam than in Christianity despite changing circumstances under which they inhibited economic activity.

Several theories have recently emerged that shed light on these divergent outcomes. Kuran (1995, 1997) suggests that social pressures in the Islamic world encouraged individuals to falsify their preferences. In this view, European financial instruments and organisational forms that were known to Muslims could not be discussed and certainly not adopted. Greif (1994) contends that cultural differences – Christian ‘individualism’ versus Islamic ‘collectivism’ – led to the emergence of different institutional forms in which contract enforcement and coordination based on legal, political and economic organisations prevailed in Europe instead of the small-group sanctions seen in the Islamic world. Ekelund et al. (1989, 1996) suggest that monetary incentives drove the mediaeval Church’s actions. Although they are not concerned with the Islamic world per se, their argument can easily be extended to suggest that differing monetary incentives led to differential relaxation of religious laws in the two regions.

Devoid of any historical context, any of these differences may have entailed that economically inhibitive laws were more likely to persist in the Islamic world than in Western Christendom. Yet, if any of these hypotheses could be considered the driving force behind the divergence in economically inhibitive laws, they must be able to account for one of the most ubiquitous of such laws – restrictions on taking interest (usury) on loans. Such restrictions prevailed in both religions throughout the medieval period and had an immense impact on the institutional structure and the types of financial instruments employed in both regions (De Roover, 1948; Noonan, 1957; Kuran, 1986; Munro, 2003, 2008; Koyama, 2010; Rubin, 2010). However, there are numerous phenomena associated with interest regulations for which these and other proposed hypotheses cannot account. For example, why were Islamic interest restrictions initially more relaxed than Christian ones but Islamic restrictions persisted while Christian restrictions eroded? Why did the Christian Church maintain its interest prohibition for centuries after commerce re-emerged in Western Europe?

This article suggests an alternative solution which can account for numerous aspects of Islamic and Christian interest histories. I argue that the differential persistence of economically inhibitive laws in general and interest restrictions in particular, resulted from the greater degree to which early Islamic political authorities depended on conforming to the dictates of religious authorities for legitimacy.

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2 For an overview of this literature, see Kuran (1997, pp. 49–53).
3 See Rubin (2008) for an extended discussion of other hypotheses that could explain the divergence in economic outcomes in the Christian and Islamic worlds.
4 Although the terms interest and usury have different meanings in their modern context, in pre-modern times they were largely synonymous, and will thus be used interchangeably throughout the article (Divine, 1959; Persky, 2007).
5 In contrast, many scholars have argued that because interest restrictions were easily evaded, they ‘belong less to economic history than to the history of ideas’ (quoted in Kindleberger, 1980; also see Labib, 1969; Rodinson, 1973; Udovitch, 1975; Le Goff, 1979; Jones, 1988; Pamuk, 2004).

Religious legitimisation has historically been extremely important for political authorities in both religions, permitting them to extract more from the populace, discouraging revolt and enabling access to property rights assignment (Mann, 1986; Greif, 2002, 2006). Although the degree of dependence on religious legitimisation is endogenous over time, I argue that the initial differences between the Islamic and Christian worlds were an exogenous remnant of the circumstances surrounding each religion’s birth. The unintended, endogenous consequences of this exogenous difference on equilibrium outcomes are thus amenable to a theoretical analysis which falls into a broader literature seeking exogenous roots of institutional and economic differences (Diamond, 1997; Acemoglu et al., 2001, 2005; Kuran, 2001, 2003, 2005; Engerman and Sokoloff, 2002).

Moreover, unlike works directly connecting religious beliefs (Weber, [1905] 2002; Tawney, [1926] 1954; Barro and McCleary, 2003; Guiso et al., 2003) or religious education (Botticini and Eckstein, 2005, 2007; Becker and Woessmann, 2008, 2009; Meyersson, 2010; Chaudhary and Rubin, 2011) to economic outcomes, this article seeks an institutional pathway connecting initial, exogenous religious institutional structures to differences in economic development. In turn, it provides a connection between Islam and underdevelopment that does not rely on any feature of religion itself.

To shed light on the unintended consequences of these exogenous institutional differences, I construct a theoretical model containing three salient features: the existence of a productive action (such as lending at interest) which is regulated by political and religious authorities; political authorities are dependent on religious authorities for legitimacy; and the degree of this dependence is endogenously determined, although the initial level is exogenous. The model does not attempt to explain why the initial institutional differences emerged, as they are viewed as exogenously given. Instead, the model analyses how an exogenous increase in the returns to production (such as the emergence of capitalistic markets allowing for investment lending) endogenously affects the interactions between political and religious authorities under varying degrees of exogenous ‘initial’ dependence. That is, it shows how both religious laws and the endogenous degree of dependence are in part determined by exogenous initial conditions (the initial degree of dependence).

I show that when the initial level of dependence is large, institutions which support economically inhibitive laws are more likely to be self-enforcing. The intuition underlying this result begins with political authorities in ‘low-dependence’ economies having greater incentive to relax regulations on productive actions that are highly regulated by religious authorities. In these economies, the religious authority also has greater incentive to relax its regulation, as it stands to lose influence or funding from the political authority otherwise. Moreover, since the religious authority reinterprets its supposedly ‘eternal doctrine’, the legitimising relationship is undermined to a greater extent, resulting in an endogenous change of dependence.

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6 For more on the role that religious authorities have played in legitimising the state in the Islamic and Christian worlds, see Mann (1986), Tierney (1988), Greif (2002, 2006), Coggel and Miceli (2009) and Coggel et al. (2009, 2010).

7 This article thus provides an alternative explanation for findings of cross-country regressions connecting religion, especially Islam, to economic development (Grier, 1997; Barro and McCleary, 2003; Guiso et al., 2003). For a different view, see Noland (2005).
The model also helps to explain other, counter-intuitive aspects of interest history. For one, it provides a rationale why the Christian Church maintained an interest ban for centuries after the onset of the Commercial Revolution, only to relax laws in the fourteenth/fifteenth centuries. It suggests that the Church relaxed laws only after its legitimising relationship with political authorities was endogenously undermined over time by the rise of commerce. Moreover, the model also helps to explain why Islamic interest restrictions were initially more relaxed but eventually stricter than Christian regulations. It suggests that early commercial pressures encouraged Islamic reinterpretation of interest doctrine, but because of the high level of dependence, the restrictions were not fully alleviated and the subsequent levels of dependence were not endogenously undermined. In contrast, the relatively low levels of initial dependence in Christianity meant that once commerce was reborn in Europe, endogenous processes commenced which eventually undermined both religious interest restrictions and the legitimising relationship between political and religious authorities.

Finally, the model has implications that extend well beyond the history of interest restrictions. Most importantly, it provides a distinction between observed conservatism, which is an outcome, and inherent conservatism, which is part of the preference set. It provides testable predictions which show that conservative outcomes may emerge not from a preference for conservatism nor an inherent resistance to change (as was the preferred explanation of the Weberian school) but instead from the legitimising relationship between political and religious authorities. In turn, the analysis of this relationship sheds a new light on why the ingenuity associated with early Islamic legal doctrine ultimately stagnated.

1. Interest Restrictions in Islam and Christianity

1.1. Interest Restrictions in Western Christianity

The Church’s ban on taking interest emerged in the fourth century ce and officially became doctrine in 325 when it was included in Canon 17 of the first Ecumenical Council (Nicæa). The ban was supported by subsequent Church councils, establishing the basis for the ‘campaign against usury’ in the medieval period.

With European commerce stagnating and most loans being taken for consumption prior to the tenth century, there was little need for the Church to re-consider its interest prohibition. When commerce revived, however, investment lending became more important – as Lopez (1971, p. 72) notes, ‘unstinting credit was the great lubricant of the Commercial Revolution’. Yet, in this period, the Church actually maintained the interest ban, issuing decrees at the Second, Third and Fourth Lateran Councils (1139, 1179 and 1215) which prescribed excommunication for usurers, refused usurers burial in Christian grounds and interdicted usurers’ offerings (Le Goff, 1979; Munro, 2003, 2008). In 1234, Pope Gregory IX (1227–41) issued his Decretales, which forever classed usurers as infames (making them ineligible to hold public office, honours or to testify in court), commanded princes to expel usurers from their realms, forbade landlords from renting property to usurers, and invalidated the wills and testaments of usurers (Munro, 2003, 2008). Throughout the twelfth and thirteenth
centuries, the Church’s ‘campaign against usury’ crystallised into a staunch prohibition in any form and the money-lender was linked with the worst type of evil-doers.

Despite these condemnations, a growing number of secular authorities permitted moderate interest in the thirteenth century, setting laws that merely capped the legal interest rate.\textsuperscript{8} Several rulers at least partially promulgated these laws for personal reasons – there are many accounts of rulers needing access to credit, which was often obtained through forced loans (Munro, 2003). Such loans, which were also known in Venice, Genoa and Florence since the thirteenth century, were incontestable and received relatively small interest (Lane, 1966, ch. 6; Mueller, 1997, ch. 10–14). Larger loans made by entrepreneurs (which were also often forced) to secular authorities were risky and default was common and this was reflected in the interest rate they received.

From the twelfth century forward, the Church explicitly prohibited manifest usury, or low-risk credit extended on collateral. This prohibition applied primarily to pawn-brokers and lombards (who lent for consumption) and was generally not imposed on the merchant-bankers who dealt in financial instruments with non-guaranteed interest. This left the door open for religious authorities to permit (through theoretical manipulation) commercial practices which were in spirit similar to lending at interest but were not riskless and hence not considered manifest usury. Early alternatives to guaranteed loans at interest included partnerships (societas or commenda) and the census (or rente), an annuity on a fruitful good which often funded public finance. These contracts had features implicit in interest-bearing loans and grew deeply embedded in commercial relations. They were eventually justified by religious authorities in the fourteenth and fifteenth centuries as legitimate within the context of Christian thought, centuries after they were permitted by secular authorities (Noonan, 1957, ch. 6–7).\textsuperscript{9} Likewise, bills of exchange incited controversy amongst the Scholastics (religious scholars). Bankers used the bills to make low-risk profit by taking advantage of differences in exchange rates across regions (De Roover, 1963). However, religious authorities were willing to accept their validity in the fifteenth century, centuries after their secular legality was assured and they became entrenched in European finance (Noonan, 1957).

Closer substitutes to interest-bearing loans emerged in subsequent centuries, including the triple contract,\textsuperscript{10} mortgage and fictitious sales. These contractual forms were eventually justified by Christian religious authorities, often by resolving them into other, lawful contracts (Noonan, 1957; Divine, 1959; Gilchrist, 1969).\textsuperscript{11} A final blow to

\textsuperscript{8} In different locales, different types of legal systems were employed to uphold such laws. Mercantile law was especially important in facilitating contracts which either implicitly or explicitly included a title to interest (Berman, 1983, ch. 11). For a sample of such laws, see Rubin (2010).

\textsuperscript{9} The first arguments by Church authorities favouring the societas appear in 1270, but the broader relaxation of restrictions on partnerships arose in the following centuries (Noonan, 1957). Innocent IV declared rentes legitimate in 1251 but this issue was hotly debated and not fully resolved for two more centuries (Munro, 2008).

\textsuperscript{10} The triple contract was made up of three different types of transactions: a contract of partnership (societas), insurance on the principal of the partnership and a contract where an uncertain future gain is sold for a lesser certain gain. Each individual contract was valid but when combined, simulated a risk-free loan.

\textsuperscript{11} The scholastics permitted these practices by appealing to theoretical concepts, such as lucrum cessans (literally ‘profit ceasing’, a pre-Smithian term for the opportunity cost of lent money), damnum emergens (loss occurring due to not having lent money) and interesse (originally a penalty paid for late repayment), all of which quickly gained currency in theological circles and presaged the Church’s official relaxation of the ban (Noonan, 1957, ch. 5, 12).
anti-usury doctrine occurred at Lateran V (1512–7), when the Church officially sanctioned the monte di pietà, or pious pawn bank. The ban was officially lifted in a series of decisions between 1822 and 1836 (although it had long been a dead letter) in which the Holy Office publicly declared moderate interest legal to everyone. In 1917, the Church offered the Codex iuris canonici, which replaced all earlier collections of canon law and allowed a legal title to interest (Noonan, 1957).

1.2. Interest Restrictions in Islam

The prohibition of interest (ribā) has always been a cornerstone of Islamic doctrine. The Qur’ān contains numerous injunctions forbidding ribā, which in pre-Islamic times was a usurious process in which the principal sum was doubled and re-doubled (Rahman, 1964; Schacht, 1995).

In the early Islamic period, commerce thrived to a much greater extent than in Europe, and lenders frequently employed straightforward devices (hiyal) designed to facilitate evasions of the ban (Khan, 1929; Schacht, 1964, 2006; Coulson, 1969; Grice-Hutchinson, 1978; Ray, 1997). Most of these devices were not only permitted by religious authorities but were also created by them. A famous example of a hiyal is the double sale (mukhātara), in which the prospective debtor sells to a creditor some commodity for cash, then immediately buys it back for a greater sum payable at a later date. This essentially amounts to a loan at interest, with the interest being the difference between the two prices. This simple stratagem was known in Medina as early as the eighth century.

Documentary evidence reveals that transactions involving overt, guaranteed interest were not a common means of extending commercial credit in early and medieval Islam (Udovitch, 1979). In a detailed study of the early twelfth-century Cairo Geniza, Goitein (1967, p. 170) observes that although credit and commerce flourished in Egypt, ‘even a cursory examination of the Geniza material reveals that lending money for interest was not only shunned religiously, but was also of limited significance economically . . . therefore, the economic role of financial investment today was then fulfilled by various forms of partnerships’. By the mid-twelfth century, contracts stipulating interest can be found but they were either derived from another type of contract or concealed in another way (Goitein, 1967). Illicit transactions could be brought to court where they were generally voided without further legal consequence (Gerber, 1999, p. 129, 141).

Under the Ottomans, more straightforward interest-bearing lending was permitted. For example, the Ottoman mufti Ebu’s-su’ud (c. 1490–1574) permitted lending at moderate interest (although charging greater than 15% was considered a criminal offence) under the euphemistic designations ‘transaction’ or ‘legal transaction’ (Imber, 1997, p. 146). Jennings (1973) shows convincing evidence, in a study of seventeenth-century judicial records in Anatolian Kayseri, that interest was regularly charged on credit in accordance with the Islamic law and ‘secular’ law (kanun) and with the consent and approval of the judge’s (kādī) court, the religious scholars (‘ulamā’)

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12 Partnerships, which were the most common form of credit extension and were widespread within the first few Islamic centuries, most frequently took the form of mudāraba (sleeping partnership) or ‘inān, in which both partners invested some capital (Goitein, 1967; Labib, 1969; Udovitch, 1970). For an extended analysis of partnerships in the medieval Islamic world, see Udovitch (1970).
and the sultan. These records indicate that 20% per annum was considered acceptable and in accordance with the sharī’a. Almost all interest-bearing transactions Jennings observes involved some sort of ruse, the most popular of which was istīqāl, which involved the debtor giving his creditor a piece of real estate, supposedly as a sale but actually as a pawn (Gerber, 1988, ch. 7). It is unlikely that most lenders actually resorted to such tricks, however. Indeed, many scholarly works indicate that lip service paid to sharī’a prevailed throughout the Ottoman Empire.13

Yet, the interest ban has never been fully alleviated in Islam. Direct breaching of the interest prohibition has always been considered a deadly sin and remains so in modern times, even if, as a practical matter, interest has been de facto legal for centuries.

2. A Hypothesis: Legitimacy and Institutions

Is it possible to account for differences in interest histories both between Islam and Christianity and within both religions over time? Although I do not claim that a mono-causal explanation exists for such complex phenomena, these histories provide numerous facts that any convincing hypothesis must account for. For example, why did the Church initially react to the onset of the Commercial Revolution by maintaining interest restrictions, only to relax these restrictions a few centuries later? Why were interest restrictions relaxed in the Ottoman Empire? Why were interest restrictions initially stronger in Christianity but eventually stricter in Islam? Most importantly, why did interest restrictions dissipate in Christianity but not in Islam?

I suggest that the histories of economically inhibitive religious laws in general and interest history in particular can be explained by differences in the degree to which political authorities depended on religious authorities for legitimacy. In both regions, religious legitimisation has historically been extremely important to political authorities, as it created an environment in which individuals believed in the content of the espoused rules as well as their efficacy in regulating economic exchange (Greif, 2006). Legitimacy permitted secular rulers to extract more from the populace (although it also allowed religious authorities to extract from the rulers), discouraged revolt by both citizens and rivals to the throne, and increased the ruler’s ability to assign property rights (Mann, 1986; Greif, 2002, 2006).

Although the degree of dependence over time is a function of the political and religious authorities’ interactions with each other and is thus endogenous (and is modelled as such), I argue that the initial level of dependence stems from the birth of these religions and is thus exogenous to the specific doctrines in question. Early Christians were forced to live under Roman authority, where it was both unnecessary and infeasible to create a legal system based on religious principles, and early Church

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13 Imber (1997) argues that the fact that waqf trustees required borrowers to deposit a pledge suggests that they lent at interest directly. Likewise, Ğizakçı (1995) shows that the instruments used by the cash waqfs in Bursa were approved by the courts but their relatively constant returns suggest that economic interest prevailed. Gerber (1988, ch. 7) shows that interest ranging between 10 and 15% was considered legal in seventeenth-century Bursa, but such transactions were primarily conducted via ruses (mainly istīqāl). Other common ruses, such as the ‘wool-sale’ (where a piece of wool is purchased with the price being an interest payment) and resale with a stated profit (murabaha), attest that transactions conformed with the letter of the law in this period, even though interest-bearing lending was de facto legitimate.

leaders advocated a separation between political and religious institutions (Mann, 1986, ch. 10; Tierney, 1988; Feldman, 1997). The most famous support for this position is attributed to Jesus: ‘Render unto Caesar the things which are Caesar’s, and unto God the things that are God’s’ (Matthew 22:21).

In contrast, Islam was formed at a time of weak centralised power and tribal feuding in the Middle East. The response of the earliest Muslim caliphs to rival claims of power was to establish a system of ‘descendent-based legitimacy’, which supported the Caliph’s claim to rule via a blood relationship with Muhammad (Greif, 2002). Later Muslim rulers (after the Umayyads) could not reasonably claim a blood-line to the Prophet but this early history entailed a situation in which Islamic leaders could legitimise their rule by obeying Islamic dictates, or what Greif (2002) calls ‘faith-based legitimacy’. Hence, early Muslim history led to Islamic ideals becoming those of the state, and there has never been a clear demarcation in the Islamic world between religious and legal authority like there was for much of Christian history (Lewis, 1974, 1993, 1995; Kuran, 2005). The exogeneity of these initial differences is argued forcefully by Brian Tierney, who suggests that

... as a society grows from primitive tribalism into an ordered civilisation, a common religion permeates all its activities and helps to form its characteristic institutions. The rise of medieval Islam provides a typical example. In such circumstances the creation of political institutions quite separate from the organisation of the accepted religion seems hardly conceivable. Christianity, on the other hand, irrupted into an ancient civilisation that already had its own established hierarchy of government and its own sophisticated tradition of political thought based on non-Christian concepts. In the early centuries, therefore, the Christian church had to develop its own structure of governing offices, sometimes parallel to but always apart from those of the secular hierarchy (Tierney, 1988, p. 7).

This is not to imply that Christian rulers were never dependent on religious rulers for legitimacy or that Christian doctrine is not conducive to encouraging a legitimising relationship. Indeed, early pre-Christian Jewish leaders ruled at the behest of religious authorities and the papacy had a significant degree of power over lay rulers between the eleventh and thirteenth centuries. I merely suggest that initial differences in the circumstances surrounding the births of the religions led to differences, however small, that fundamentally affected the future relationship between political and religious authorities in the two regions.

But can this institutional difference account for all of the peculiarities of interest history? Although it does not directly contradict any of the facts, it does not obviously account for some of them. To explore this possibility, I build a theoretical model which captures the salient institutional elements of both religions and analyses how changes in these elements, particularly the degree to which political authorities are legitimised by religious authorities, affect equilibrium actions and the sustainability of economically inhibitive religious laws. The model is not intended to shed light on why these initial differences in institutional relationships emerged – as argued before, these differences emerged for historical reasons which are exogenous to the model. Instead, I analyse the effects of these exogenous differences.
3. Model: Legitimacy, Institutions and Regulations

3.1. One-period Model

In this Section, I model the relationship between political and religious authorities to shed light on how their interactions affect secular and religious regulations, such as lending at interest. The model analyses the consequences of exogenous events which affect the socially optimal level of regulation bestowed by the authorities. In the context of lending at interest, such an event could be the emergence of capitalistic markets allowing for investment lending. Indeed, Brenner (1983), Glaeser and Scheinkman (1998) and Rubin (2009) argue that laws banning interest were socially optimal in the context of a pre-modern economy with weak social safety nets and missing contingent markets. Moreover, Rubin (2009) suggests that the initial promulgation of Christian interest restrictions in the fourth century arose due to the self-interest of the Church, who acted as a social insurer facing commitment problems (it could not commit to not helping those who over-borrowed). However, none of these models explains why interest bans persisted in spite of changing economic circumstances, such as the Commercial Revolution, under which banning interest (full regulation) was no longer optimal. The present model thus focuses on the institutional relationships that determine the extent to which religious regulations are relaxed. It generates other, complementary predictions as well, relating to the timing of such religious relaxations as well as the conditions under which strict regulations become less severe in the long run.

Part of the explanation for the persistence of religious regulations (and religious laws in general) arises from the self-interested resistance of religious authorities to change their doctrine, as they derive much of their power from their monopoly on ‘eternal truths’ (Rodinson, 1973; Noonan, 1993, 2005; Hallaq, 2001). ‘Resistance to change’ is modelled as a preference, not an outcome. One goal of the model is to provide testable predictions related to conservative outcomes that distinguish between whether they are rooted in a preference for ‘resistance to change’ or other salient features of the relationship between political and religious authorities, especially the legitimising role of religious authorities. To this end, the model employs historically motivated behavioural assumptions to generate testable predictions which help to explain the differential paths of interest regulations across the two religions as well as within the religions over time.

Consider an economy consisting of two players: a political authority (P) and a religious authority (R). In Europe, the religious authority can be thought of as the Catholic Church, whereas in the Middle East, the religious authorities can be thought of as local jurisconsultants (muftis), who are the primary source of legal and religious

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14 Another example is restrictions placed on the reproduction of words and images, which may have made sense prior to the invention of the printing press but were clearly restrictive, especially in the Ottoman Empire, after the introduction of the press.

15 I omit the citizenry as a player for the sake of analytical simplicity, although Rubin (2008) considers such a model and derives similar results. One potential shortcoming of omitting the citizenry is that the model does not allow for coordination between the citizens and political authority or amongst the citizens themselves. This type of coordination could encourage political authorities to relax laws, although it would also require that citizens coordinate to decrease the importance of religious legitimacy. In any case, it is not clear why this would explain differences in the Middle East and Western Europe, as the latter was more individualistic, whereas the former was more communal (Greif, 1994), and hence one would expect coordination to be more feasible in the Middle East.

reinterpretation in Islam.\textsuperscript{16} These players interact in a one-period game of complete information, choosing political and religious interpretations of laws, which can be thought of as the degree of regulation imposed on the action in question (such as lending at interest). The political authority chooses a regulation, $p$, to maximise its utility, which it derives from two sources: conforming to its intrinsic optima, $\bar{p}$, and conforming to the dictates of the religious authority, $r$. The parameter $\bar{p}$ can be thought of as the legal regulation which maximises the surplus of the (unmodelled) citizenry. In this case, the tax base available to the political authority is decreasing in the distance its regulation is from $\bar{p}$. Thus, the closer the law is to $\bar{p}$, the more relaxed is the regulation.\textsuperscript{17} The regulation $\bar{p}$ is continuous, as are all parameters, reflecting the idea that there are many possible degrees of regulation. For instance, in the case of interest laws, the political authority may choose to prohibit interest, permit interest or allow interest as long as a sufficiently large transaction cost is undertaken (such as hiyal).

The political authority loses utility when it chooses actions that differ from those chosen by the religious authority $(p - r)$. The extent to which it loses utility from choosing such actions, denoted by $\gamma \in \mathbb{R}^+$, is interpreted as the exogenous degree to which the political authority derives legitimacy by conforming to the regulation of the religious authority. In other words, we can write the political authority's utility as:

$$U^p = -(\bar{p} - p)^2 - \gamma(p - r)^2.$$ (1)

The religious authority chooses its regulation, $r$, to maximise its utility, which it derives from two sources: conforming to its intrinsic optima, $\bar{r}$, and conforming to the political authority’s law, $p$. The parameter $\bar{r}$ can be thought of as the religious authority’s initial doctrine. This cost associated with diverging from $\bar{r}$ arises from the historical observation that both Christian and Islamic religious authorities have derived much of their power in society from their monopoly on ‘eternal truths’ (Rodinson, 1973; Noonan, 1993, 2005; Hallaq, 2001). The extent to which the religious authority loses utility from reinterpretating its eternal doctrine, denoted by $\alpha \in \mathbb{R}$, is interpreted as the degree of the religious authority’s resistance to change. The religious authority

\textsuperscript{16} It is reasonable to question whether it is appropriate to consider the game played in the Islamic world as one between political and religious authorities, since the latter were much more decentralised than in Christianity. Sunni Islam crystallised in its first few centuries into four primary schools of law, all separated geographically. Thus, much like Church leaders in Christianity, local religious authorities (mufifin and ‘ulama’) provided dictates – independent from political authorities (Masud et al., 1996; Berkey, 2003; Hallaq, 2005) – within the constraints of their legal tradition. Even though it certainly could have been possible for a rogue mufti to grant an opinion not in line with his legal tradition, it is unlikely that such an opinion would have become part of the mainstream (which is of concern in the model), as it would have been quite unlikely to be upheld by ijma’ (consensus), one of the four pillars of Islamic legal doctrine. We would expect that due to the decentralised nature of Sunni Islamic religious authority, there would be different rulings in areas with different commercial and political pressures (as is suggested by the model). Indeed, Rubin (2010) notes that two schools of Sunni Islam (Maliki and Shafi’i) explicitly forbade bills of exchange (safatij), fearing that they could be used usuriously, one school (Hanbali) permitted them as long as no fee was charged and they were disapproved of, although permitted, by the Hanafi school. Thus, the broad comparative statics of the model should still hold – both across the two religions and over time in Islam – since similar institutional relationships and the same corpus of Islamic doctrine are shared in all Muslim regions.

\textsuperscript{17} $p$ could be modelled endogenously, where the actions of the (unmodelled) citizenry reveal the potential surplus available to the political authority and, the more relaxed the political interpretation is, the more the citizens reveal. I have considered such a model in a previous version of this article (Rubin, 2008) and the qualitative results do not change when $p$ is endogenous; instead, the results are exacerbated. I leave $p$ as exogenous in the present model merely for purposes of analytical simplicity.

also loses utility when its level of regulation diverges from that imposed by the political authority \((r - p)\), as this decreases the religious authority’s influence with the political authority (Ekelund et al., 1996; Greif, 2002).\(^{18}\) The religious authority’s utility can be written as:

\[ U^R = -(r - p)^2 - z(r - \bar{r})^2. \]  

(2)

I employ the Nash equilibrium concept and denote equilibrium actions with the superscript *. Assume without loss of generality that \(\bar{r} \leq \bar{p}.\)

The first-order conditions provide the following best responses:

\[ p^* = \frac{\bar{p} + \gamma r}{1 + \gamma}, \]  

(3)

\[ r^* = \frac{\bar{p} + z \bar{r}}{1 + z}. \]  

(4)

The Nash equilibrium actions are thus:

\[ p^* = \frac{(1 + z)\bar{p} + z\gamma \bar{r}}{1 + z(1 + \gamma)} = \bar{r} + \frac{(1 + z)(\bar{p} - \bar{r})}{1 + z(1 + \gamma)}, \]  

(5)

\[ r^* = \frac{\bar{p} + z(1 + \gamma)\bar{r}}{1 + z(1 + \gamma)} = \bar{r} + \frac{\bar{p} - \bar{r}}{1 + z(1 + \gamma)}. \]  

(6)

The model sheds light on how differences in resistance to change \((z)\), dependence on religious authorities for legitimacy \((\gamma)\) and the surplus maximising regulation \((\bar{p})\) affect equilibrium regulations. In particular, the model shows how religious and political laws change when such laws change from being socially optimal \((p^* = r^* = \bar{p} = \bar{r})\) to sub-optimal (when \(\bar{p}\) increases).

It follows directly from (5) and (6) that \(\partial p^*/\partial \bar{p} = (1 + z)/(1 + z(1 + \gamma)) > 0\) and \(\partial r^*/\partial \bar{p} = 1/[1 + z(1 + \gamma)] > 0.\) That is, political and religious relaxation of regulations should follow the occurrence of exogenous shocks that increase the surplus available to the political authority. The intuition underlying these results is that an increase in the surplus-maximising regulation encourages the political authority to relax its regulation, which, in equilibrium, encourages the religious authority to relax its regulation.

Inequalities (7) to (10) indicate that economies with religious authorities more resistant to change \((z)\) and those with political authorities who have greater dependence on religious authorities for legitimacy \((\gamma)\) have less relaxed regulations. The intuition is straightforward: a greater resistance to change discourages religious authorities from choosing regulations differing from the initial doctrine, which leads to less relaxed political regulations in equilibrium. Meanwhile, an increase in dependence

\(^{18}\) It is also possible that the religious authority is directly affected by setting regulations that differ from the surplus maximising regulation, as this may affect its ability to extract rent from the populace (Duby, 1980; Ekelund et al., 1996). However, adding this concern to the utility function does not affect the qualitative results of the model, as the religious authority indirectly receives disutility, through \((r - p)\), by choosing regulations which differ from the surplus maximising one.

\(^{19}\) This entails that \(r^* \leq p^*.\) I employ this inequality when taking first-order conditions.

encourages political authorities to choose regulations closer to religious ones, which are in turn closer to initial doctrine in equilibrium.

\[
\frac{\partial p^*}{\partial \alpha} = -\frac{\gamma(p - \bar{r})}{[1 + \alpha(1 + \gamma)]^2} < 0, \quad (7)
\]

\[
\frac{\partial r^*}{\partial \alpha} = -(1 + \gamma)(p - \bar{r}) \frac{1}{[1 + \alpha(1 + \gamma)]^2} < 0, \quad (8)
\]

\[
\frac{\partial p^*}{\partial \gamma} = -\alpha(1 + \alpha)(p - \bar{r}) \frac{1}{[1 + \alpha(1 + \gamma)]^2} < 0, \quad (9)
\]

\[
\frac{\partial r^*}{\partial \gamma} = -\frac{\alpha(p - \bar{r})}{[1 + \alpha(1 + \gamma)]^2} < 0. \quad (10)
\]

Inequalities (7) to (10) suggest that political and religious authorities in economies with greater religious resistance to change as well as those with greater dependence on religious authorities for legitimacy impose less relaxed regulations. On the one hand, the model supports the hypothesis outlined in the previous Section that Islamic political and religious authorities ultimately had more conservative (less relaxed) regulations regarding interest due to the legitimising relationship between the two. However, the model is not able to disprove the alternative hypothesis that this result emerged because of ‘inherent conservativeness’ in Islam (\(\alpha\)) – that Islamic authorities merely had a greater preference for resistant to change than Christian authorities. Indeed, the model suggests that the two are observationally equivalent. Moreover, there are important historical phenomena for which the model cannot account – for example, why were interest restrictions more relaxed in much of the Islamic world relative to western Europe for much of their shared history (until the fourteenth/fifteenth centuries), only to become much more relaxed in western Europe? To shed light on such questions and differentiate between alternative hypotheses, I complicate the model slightly in the following Section by endogenising the dependence parameter (\(\gamma\)).

3.2. Two-Period Model with Endogenous Dependence

The simplicity of the model presented in the previous Section obscures some of the nuances that drive the relationship between political and religious authorities. In particular, it assumes that the degree to which political authorities depend on religious authorities for legitimacy, \(\gamma\), is exogenous to the interactions between players.\(^{20}\) Yet, it is possible that part of the reason that religious authorities derive utility from conforming to

\(^{20}\) There is a reason to believe that the resistance to change parameter \(\alpha\) could also be endogenous, as conservative actions taken in one period may encourage even further conservative actions in the future, especially if other arguments are forgotten once they fall out of the mainstream (Kuran, 1995). However, adding such a specification into the model would only exacerbate the same shortcomings of purely conservative arguments spelled out in the present model.

initial doctrine and from imposing laws similar to those of political authorities is that doing so also strengthens their ability to legitimise political authorities. That is, the legitimacy bestowed by the religious authority may be strengthened or undermined by the interactions between the players, and thus the dependence parameter, $c$, is endogenous.

To clarify how endogenous legitimacy affects actions and outcomes, I consider a two-period model similar to the one-period model analysed in the previous Section, where authorities have the same utility functions in each period as they do in (1) and (2). The level of dependence in period 1, $\gamma_1$, is exogenous but it is endogenously determined in period 2. The level of dependence in period 2, $\gamma_2$, is a function of the exogenous level of dependence in the previous period, the degree to which the religious authority reinterprets ‘eternal’ doctrine in period 1 $(r_1 - \bar{r})^2$ and the distance between the political and religious authorities’ regulations in period 1 $(p_1 - r_1)^2$. The second factor stems from the historical observation that both Christian and Islamic religious authorities have generally derived both power as well as the ability to legitimise secular leaders from their monopoly on ‘eternal truths’. When such truths are reinterpreted, the very nature of their authority is threatened (Rodinson, 1973; Noonan, 1993, 2005; Ekelund et al., 1996; Hallaq, 2001). The third factor underscores the notion that religious authority itself is undermined when religious dictates are widely transgressed or misaligned with the actions of political authorities. Indeed, this is largely the reason why accommodating custom has historically been an open concern of Islamic and Christian religious authorities (Schacht, 1964, pp. 78–85; Noonan, 1966, 1993, 2005; Rodinson, 1973; Imber, 1997; Libson, 1997; Gerber, 1999; Hallaq, 2001; Zubaida, 2003, ch. 1–3).

In this light, the dependence parameter follows the following path:

$$\gamma_2 = \gamma_1 - \beta (r_1^* - \bar{r})^2 - \eta (p_1^* - r_1^*)^2,$$

where $\beta \in R^+$ and $\eta \in R^+$ are the relative weights placed on the two sources of legitimacy and $\gamma_2$ is constrained so that $\gamma_2 \geq 0$.

I assume that religious and political authorities do not consider their second-period utility when making their first-period decisions. In other words, (11) represents the non-internalised dynamic costs associated with the religious authority’s actions, whereas its utility function, seen in (2), represents its internalised, static costs. That is, the difference between $\alpha$ and $\beta$ is that $\alpha$, the inherent resistance to change, is internalised by religious authorities, whereas $\beta$ represents a non-internalised measure of the erosion of legitimising ability that occurs over time as a result of religious authorities ‘changing’ doctrine.

This specification is chosen in part because it allows for a tractable result but, more importantly, because period 2 can be interpreted as the ‘very long run’. In fact, if players have a sufficiently high discount rate (which would be expected if the actual difference between periods one and two were many generations), the results presented here are qualitatively similar to a model where players take into account the discounted effect that their actions have on legitimacy. In reality, it often takes many years for the

---

\[21 \text{I have formulated an alternative model where players consider their discounted utility when making choices in period 1 and I show that this specification does not alter the comparative statics, although it does provide less tractable results. This model is available upon request.}\]
relationship between political and religious authorities to change fundamentally; the political or religious authority in period 1 will generally be a different individual than in period 2. In the terms of Greif and Laitin (2004), this means that $\gamma_2$ is a ‘quasi-parameter’ – one that is exogenous to the players at any given point in time but endogenous to the game as a whole. This allows for the study of actions where the institutional setting is endogenously changing (slowly) over time. The institutional parameters (in this case, $\gamma_2$) are viewed by all players as exogenous, yet their actions unintentionally undermine or reinforce the very institutional structures which constrain their action set.

This framework employed in the present context explains why the religious authority may lose its ability to legitimise despite choosing actions that conform to the political authority. This occurs when $\beta$ is sufficiently large relative to $\eta$, meaning that the religious authority draws its long-run power to legitimise primarily from its hold on eternal truths. Greif (2002) notes, for example, that the ability of Islamic religious authorities to legitimise political authorities has often been undermined when it appeared that they favoured political authorities over Islamic doctrine. The religious authority may choose such actions which eventually limit its ability to legitimise because it internalises the static parameters represented in (2) but not the long-run, institutional parameters in (11).

The political and religious authority’s regulations are the same in the first period as they were in (5) and (6) (replacing $c$ with $c_1$). This entails that the equilibrium level of dependence in period 2 is:

$$\gamma_2 = \gamma_1 - \frac{(\hat{p} - \hat{r})}{1 + \alpha(1 + \gamma_1)} \left( \beta + \alpha^2 \eta \right).$$

(12)

The Nash equilibrium actions in period 2 are:

$$p_2^* = \hat{r} + \frac{(1 + \alpha)(\hat{p} - \hat{r})}{1 + \alpha \left( 1 + \gamma_1 - \frac{(\hat{p} - \hat{r})}{1 + \alpha(1 + \gamma_1)} \left( \beta + \alpha^2 \eta \right) \right)},$$

(13)

$$r_2^* = \hat{r} + \frac{\hat{p} - \hat{r}}{1 + \alpha \left( 1 + \gamma_1 - \frac{(\hat{p} - \hat{r})}{1 + \alpha(1 + \gamma_1)} \left( \beta + \alpha^2 \eta \right) \right)}.$$

(14)

As in the previous Section, consider first the effect of a change in the surplus-maximising regulation ($\hat{p}$). The model sheds light on how religious and political laws change when such laws change from being socially optimal ($p^* = r^* = \hat{p} = \hat{r}$) to sub-optimal (when $\hat{p}$ increases). Unlike in the one-period model, changes in the surplus-maximising regulation ($\hat{p}$) affect equilibrium actions through two avenues. First, such changes encourage the political authority to relax its interpretation because they directly affect the political authority’s utility. Secondly, an increase in $\hat{p}$ negatively affects the legitimacy parameter, as it increases the distance between the religious authority’s interpretation and optimal action, $(r_1^* - \hat{r})^2$ and it increases the equilibrium distance between the political and religious regulations, $(p_1^* - r_1^*)^2$.

This setup provides testable predictions related to three aspects of the interactions between changes in political and religious laws and changes in the economic
environment \((\tilde{p})\): the degree of change of religious laws; the speed and timing of changes in religious laws; and the ‘reversal effect’, whereby the one economy has more relaxed religious regulations (higher \(r_1^t\)) in the short run but stricter regulations (lower \(r_2^t\)) in the long run. These three features are discussed in the following.

3.2.1. The level of change in regulations

It follows directly from (13) and (14) that an increase in the surplus maximising regulation \((\tilde{p})\) results in a relaxation of equilibrium regulation levels. This can be seen in inequalities (15) and (16):

\[
\frac{\partial p_2^*}{\partial \tilde{p}} = \left[ \frac{1 + \alpha}{1 + \alpha(1 + \gamma_1)} \right] \left[ 1 + \frac{\alpha(\tilde{p} - \tilde{r})^2(\beta + \alpha^2\eta)}{1 + \alpha(1 + \gamma_2)} \right] \left\{ \frac{1}{1 + \alpha(1 + \gamma_1)} + \frac{2}{1 + \alpha(1 + \gamma_2)} \right\} > 0,
\]

(15)

\[
\frac{\partial r_2^*}{\partial \tilde{p}} = \left[ \frac{1 + \alpha}{1 + \alpha(1 + \gamma_1)} \right] \left[ 1 + \frac{\alpha(\tilde{p} - \tilde{r})^2(\beta + \alpha^2\eta)}{1 + \alpha(1 + \gamma_2)} \right] \left\{ \frac{1}{1 + \alpha(1 + \gamma_1)} + \frac{2}{1 + \alpha(1 + \gamma_2)} \right\} > 0.
\]

(16)

As in the previous Section, the model also reveals how changes in resistance to change \((\alpha)\) and initial dependence on religious authorities for legitimacy \((\gamma_1)\) affect equilibrium levels of regulation. The comparative statics relating to the political and religious authority’s choices in the first period are the same as they were in equations (7) to (10) (replacing \(\gamma\) with \(\gamma_1\)). However, endogenising \(\gamma\) provides the following comparative statics in period 2:

\[
\frac{\partial p_2^*}{\partial \alpha} = -\frac{\tilde{p} - \tilde{r}}{1 + \alpha(1 + \gamma_2)^2} \left\{ \gamma_2 + \frac{2\alpha(1 + \alpha)(\tilde{p} - \tilde{r})^2}{1 + \alpha(1 + \gamma_1)^2} \left[ (1 + \gamma_1)\beta - \alpha\eta \right] \right\},
\]

(17)

\[
\frac{\partial r_2^*}{\partial \alpha} = -\frac{\tilde{p} - \tilde{r}}{1 + \alpha(1 + \gamma_2)^2} \left\{ 1 + \gamma_2 + \frac{2\alpha(\tilde{p} - \tilde{r})^2}{1 + \alpha(1 + \gamma_1)^2} \left[ (1 + \gamma_1)\beta - \alpha\eta \right] \right\},
\]

(18)

\[
\frac{\partial p_2^*}{\partial \gamma_1} = -\frac{\alpha(1 + \alpha)(\tilde{p} - \tilde{r})}{1 + \alpha(1 + \gamma_2)^2} \left\{ 1 + \frac{2\alpha(\tilde{p} - \tilde{r})^2(\beta + \alpha^2\eta)}{1 + \alpha(1 + \gamma_1)^2} \right\} < 0,
\]

(19)

\[
\frac{\partial r_2^*}{\partial \gamma_1} = -\frac{\alpha(\tilde{p} - \tilde{r})}{1 + \alpha(1 + \gamma_2)^2} \left\{ 1 + \frac{2\alpha(\tilde{p} - \tilde{r})^2(\beta + \alpha^2\eta)}{1 + \alpha(1 + \gamma_1)^2} \right\} < 0.
\]

(20)

Equations (19) and (20) reveal that the degree of relaxation of regulations is decreasing in the exogenous initial level of dependence \((\gamma_1)\), whereas (17) and (18) indicate that the degree of relaxation of regulations is decreasing in the level of resistance to change \((\alpha)\) when \(\beta\) is sufficiently large or \(\eta\) is sufficiently small. The
intuition underlying these results is straightforward: higher levels of initial dependence \((\gamma_1)\) encourage political authorities to choose regulations closer to religious authority’s regulation, which in turn has two effects. First, it directly entails that the equilibrium choice of regulation is closer to initial doctrine \((\bar{r})\). Secondly, it provides incentive for the authorities to take first period actions that endogenously undermine the second-period dependence parameter to a lesser extent. In contrast, high levels of resistance to change \((x)\) encourage religious authorities to choose regulations closer to initial doctrine \((\bar{r})\). Yet, if \(\eta\) is large, the equilibrium choice of strict regulation has the unintended consequence of undermining the religious authority’s ability to legitimise \((\beta_1 - \bar{r}_1)^2\) is large in this case), and this negative effect on legitimacy can outweigh the direct effect that resistance to change has on the equilibrium level of regulation.

Moreover, inequalities (21) and (22) show that, on the margin, religious and political regulations become less relaxed in economies where the initial level of dependence \((\gamma_1)\) is high after there is a positive change in the surplus-maximising regulation.\(^{22}\) The intuition underlying this result is that political authorities with lower levels of dependence on religious authorities are more flexible and thus have greater incentive to relax their interpretations. This also has the indirect effect of endogenously decreasing second-period legitimacy \((\gamma_2)\), which further provides incentive for the political authority to relax its regulation.

\[
\frac{\partial^2 \beta_2^*}{\partial \gamma_1 \partial \beta} = -\frac{x(1 + x)}{[1 + x(1 + \gamma_2)]^2} \left(-1 + 2 \left\{ 1 + \frac{2x(\bar{p} - \bar{r})(\beta + x^2\eta)}{[1 + x(1 + \gamma_1)]^3} \right\} \right) < 0, \tag{21}
\]

\[
\frac{\partial^2 \gamma_2^*}{\partial \gamma_1 \partial \beta} = -\frac{x}{[1 + x(1 + \gamma_2)]^2} \left(-1 + 2 \left\{ 1 + \frac{2x(\bar{p} - \bar{r})(\beta + x^2\eta)}{[1 + x(1 + \gamma_1)]^3} \right\} \right) \times \left\{ 1 + \frac{2x(\bar{p} - \bar{r})^2(\beta + x^2\eta)}{[1 + x(1 + \gamma_1)]^2[1 + x(1 + \gamma_2)]} \right\} < 0. \tag{22}
\]

These inequalities do not suggest that religious authorities implement religious restrictions in an \textit{ad hoc} manner. What they do suggest is that once a restriction (which may have been socially optimal at one point in time) is implemented, the flexibility that authorities have to relax the laws is a function of the broader institutional structure. Indeed, inequalities (21) and (22) merely indicate that higher levels of initial dependence dampen (but do not eliminate) the impact of changes in the economic environment \((\bar{p})\) on future policies \((\beta_2^*\) and \(\gamma_2^*)\). This does not mean that high-initial dependence or highly resistant to change economies are forever

\(^{22}\) I do not discuss \(\frac{\partial^2 \beta_2^*}{\partial x \partial \beta}\) and \(\frac{\partial^2 \gamma_2^*}{\partial x \partial \beta}\) in this Section because their signs are ambiguous and these results do not factor in the historical analysis.

stuck in a ‘high-regulation’ state but that the level of the shock necessary to push
them away from this equilibrium is larger.

In sum, the analysis presented in this Section suggests that the following relationship
exists between the degree of regulatory change and the parameters of the model:

**Prediction 1:** The degree to which religious and political authorities relax regu-
latory laws is decreasing in the initial level of dependence of political authorities on
religious authorities for legitimacy as well as the resistance to change of the religious
authority.23

3.2.2 The timing of changes in regulations
Reconsider equations (15) and (16). Comparing these second-period results to the
first-period statics $\frac{\partial p_1}{\partial \bar{p}} = \frac{(1 + x)}{[1 + x]}$ and $\frac{\partial r_1}{\partial \bar{p}} = \frac{1}{[1 + x]}$ reveals that $\frac{\partial p_2}{\partial \bar{p}} > \frac{\partial p_1}{\partial \bar{p}}$ and $\frac{\partial r_2}{\partial \bar{p}} > \frac{\partial r_1}{\partial \bar{p}}$. This is true because an increase in
the surplus-maximising regulation ($\bar{p}$) affects period 2 actions through its direct effect
on the political authority’s utility as well as through its endogenous effect on period 2
legitimacy, whereas it only affects period 1 actions through the former.

This outcome sheds light on the timing of policy change ($p_2$ and $r_2$) following a
change in $\bar{p}$. That is, political and religious regulations may not change much in the
short run (period 1) following a change in the surplus-maximising regulation ($\bar{p}$) but
may change substantially in the long run (period 2). Indeed, when resistance to change
($x$) or the initial level of dependence ($\gamma_1$) are sufficiently large, the regulations of the
political and religious authorities will not change significantly in period 1 after a
change occurs in the surplus-maximising regulation ($\bar{p}$). However, if the ‘delegitimis-
ing’ parameters, $\beta$ and $\eta$, are large enough or the initial religious doctrine ($\bar{r}$) is
sufficiently smaller than $\bar{p}$, then an increase in the surplus-maximising regulation ($\bar{p}$)
will lead to significant deregulation (large $p_2$ and $r_2$) in period 2. This occurs because
the change in the surplus-maximising regulation endogenously undermines the
dependence of the political authority on the religious authority for legitimacy. In other
words, both authorities may remain adamant in regulating the action for a period of
time after an exogenous shock increases productivity but they will begin to relax their
interpretation after the salient interactions undermine the legitimising relationship
between authorities. As I show in the next Section, this insight sheds light on lay and
religious views on interest in reaction to the Commercial Revolution in Europe.

This provides a prediction that does not arise from the simpler, one-period model.
The one-period model did not provide a way of differentiating whether resistance to
change (a preference) or dependence (an institutional feature) is the root cause of
observed conservatism (an outcome). In this light, (15) and (16) provide a testable
prediction which only arises when legitimacy is the salient force underlying differences
in observed outcomes. This is, namely, that religious and political regulations may not
be relaxed much in the short run (period 1) in response to changes in the surplus

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23 Greater resistance to change does not entail less relaxed laws if $\eta$ is sufficiently large, as is shown in (17)
and (18). I do not belabour this point because it works in favour of my hypothesis that the relaxation of
religious laws is tied more to the legitimising relationship between political and religious authorities than it is
to the willingness of religious authorities to change.
maximising level of regulation, but are relaxed significantly in the long run (period 2). This occurs when the change in the surplus-maximising regulation endogenously undermines the ability of the religious authority to legitimise the political authority. It is only after the de-legitimising occurs that the regulations are relaxed.

In sum, a second testable prediction arises from the model:

Prediction 2: After a shock occurs that affects the surplus maximising level of regulation, religious and political regulations may continue to be severe for some time. They will only begin to be relaxed after the religious authority’s ability to bestow legitimacy is endogenously undermined.

3.2.3 The ‘reversal effect’

Finally, the model can also account for the ‘reversal effect’, which occurs between two different economies when a religious authority in one economy is initially more restrictive (low $r^*_1$) than the other but becomes less restrictive over time (higher $r^*_2$). To see this, consider two economies, I (Islamic) and C (Christian), where all parameters are the same except for initial doctrine ($\gamma$) and initial dependence ($\gamma_1$). Denote $\bar{r}^j$ and $\gamma^j_1$ the economy-specific parameters, for $j \in \{C, I\}$, and denote the religious authority’s action $r^j$. Assume that $\bar{r}^I \geq \bar{r}^C$ and $\gamma^I_1 \geq \gamma^C_1$.

It follows directly from (6) and (10) that if $\bar{r}^I$ is sufficiently greater than $\bar{r}^C$ relative to $\gamma^I_1$, then the religious authority in economy I has a more relaxed regulation in period 1 (higher $\gamma^I_1$). This is seen qualitatively in Figure 1, which graphs the religious authorities actions in the $\bar{r}^j \times \gamma^I_1$ plane (where the axes should be interpreted as $\bar{r}^I - \bar{r}^C$ and $\gamma^I_1 - \gamma^C_1$, since $\bar{r}^C$ and $\gamma^C_1$ are placed at the origin). It is straightforward to show that, given $\gamma^I_1$, there is a threshold level of $\bar{r}^I$, where any $\bar{r}^I$ above the threshold entails that the religious authority in economy I has a more relaxed period 1 regulation.

![Graph showing the reversal effect](image_url)

Fig. 1. Reversal in Religious Interpretation

However, it is possible that a greater initial level of dependence ($c_I^1$), combined with a more relaxed initial doctrine ($\tilde{r}_I^1$), may be the very reason why the religious authority in economy $I$ has a more restrictive regulation in period 2. This result arises because the second-period dependence parameter endogenously falls by less in economy $I$. This follows directly from (12), and intuitively holds because the religious authority in economy $I$ chooses actions in period 1 which are closer to both the initial doctrine and the political authority’s action – thus endogenously undermining legitimacy to a lesser extent. That is, the factors that undermine legitimacy are less present in economies with greater levels of initial dependence and more relaxed initial doctrine, all else being equal.

This logic entails that a ‘reversal’ happens in part of the parameter space. It is possible that the religious authority in economy $I$ has a more relaxed regulation in period 1 ($r_I^1 > r_C^1$) but a less relaxed regulation in period 2. The range over which a reversal arises can be seen in Figure 1. In this range, sufficiently high levels of both $\tilde{r}_I^1$ and $\gamma_I^1$ entail that the dependence parameter in economy $I$ does not endogenously decrease by much relative to the dependence parameter in economy $C$. In economy $C$, the relatively low levels of $\gamma_C^1$ and $\tilde{r}_C^1$ mean that the religious authority chooses actions in period 1 which either diverge from initial doctrine or from the political authorities’ action (or both), thus endogenously undermining dependence. Hence, a ‘reversal’ can occur when the parameters which encourage a stricter regulation in period 1 (namely, $\tilde{r}$ and $\gamma_1$) also work to undermine dependence.

The following prediction thus arises:

**Prediction 3:** A ‘reversal’ can happen between two economies, where the religious authority in the economy with a more relaxed initial doctrine ($\tilde{r}_I$) and greater initial dependence ($\gamma_I^1$) has a more relaxed regulation in period 1 but a less relaxed regulation in period 2. This can only occur if the dependence parameter is endogenously undermined less in this economy than it is in the other economy between the two periods.

### 4. Interest History, Institutions and Legitimacy in the Context of the Model

In this Section, I employ the insights of the model to shed light on numerous aspects of interest history and changes in relations between political and religious authorities. I begin by discussing how the institutional histories relate to the level of change in interest history (Prediction 1) and proceed to analyse the timing of changes (Prediction 2) and the reversal effect (Prediction 3).

#### 4.1 Institutions and the Level of Change in Interest Laws in Islam and Christianity

A convincing hypothesis must account for two stylised facts noted in Section 1 regarding the level of change of interest doctrine. These are: interest was strictly banned until the fourteenth/fifteenth centuries in Christianity, when the Church be-

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24 That a ‘reversal’ happens in part of the parameter space, as shown in Figure 1, is straight-forward to prove. The proof has been omitted but is available upon request.

gan to relax interest laws; and even though interest laws were stricter in early Christianity than in early Islam, interest restrictions were never fully alleviated in Islam.

In the context of the model, the growth of commerce in the late-tenth to thirteenth centuries can be viewed as the event which sparked interactions between western European political and religious authorities. Prior to this period, loans were primarily taken for consumption, and hence usury laws were not necessarily inhibitive (Glaeser and Scheinkman, 1998; Rubin, 2009). Yet, the emergence of capital markets meant that investment lending was feasible and that interest restrictions thereby inhibited economic activity.

Access to credit continued to grow and commercial opportunities became more abundant at the height of the Commercial Revolution in the twelfth and thirteenth centuries (Lopez, 1971). In terms of the model, this meant that regulations on taking interest were more detrimental to economic efficiency ($\tilde{p}$ increased), and secular authorities had greater incentive to legalise moderate interest, which they did throughout the continent.25 The model predicts that political authorities should have responded by relaxing their regulations in spite of religious condemnation. And indeed, the twelfth and thirteenth centuries saw a flurry of secularly approved but religiously prohibited innovations of commercial instruments – bills of exchange emerged as a commercial instrument of importance at the Champagne fairs, rentes were employed for public finance, and the Church-prohibited sea-loan was widely used (Berman, 1983; Munro, 2003, 2008). This is precisely what is predicted by (21) – lower levels of initial dependence ($c_1$) exacerbate the impact of changes in the economic environment ($\tilde{p}$) on future policies ($\tilde{p}'_2$).

These events eventually undermined (endogenously) the Church’s authority vis-à-vis political authorities, as suggested by the model. Tierney (1988) and Feldman (1997) argue that ecclesiastical leaders lost much of their authority over secular rulers in the mid-to-late thirteenth century ($\gamma$ decreased) as a result of the growth of secular power into national kingdoms, new theories of the state based on Aristotelian foundations, and movements of criticisms within the Church. The loss of ecclesiastical power in this period is perhaps best exemplified by the Avignon Papacy (1309–77), where the papal chair was largely under control of the French monarch. It was only after this loss of legitimising power ($\gamma$) that the Church began to relax interest laws, as noted in Section 2.

In the Islamic world, however, widespread commercial opportunities arose well before they did in Europe (Goitein, 1967; Labib, 1969; Udovitch, 1975). It is thus misleading to compare the two regions at any one given point in time – instead, we should focus on the consequences of the semi-institutionalised enactment of interest restrictions in the Middle East and North Africa upon the adoption of Islam.

As noted in Section 1, devices for circumventing the interest ban (hiyal) were known from the first Islamic centuries. Despite their questionable legality, most hiyal were permitted by religious authorities and many were even created by them. Yet, transactions involving guaranteed interest were not a common means of extending

25 An alternative hypothesis is that secular leaders legalised interest as soon as centralised states emerged rather than after dependence on religious authorities diminished. While states and secular law were indeed emerging in this period (Berman, 1985), such a hypothesis would have difficulty explaining why previous secular leaders such as Charlemagne denounced interest.
commercial credit in early and medieval Islam (Udovitch, 1979). In terms of the model, early Islamic religious authorities did reinterpret doctrine but their regulations remained restrictive. Why were interpretations initially flexible but ultimately stagnant?

Again, the model focuses our attention on the interactions between political and religious authorities. Within the first Islamic century, muftis (the primary source of legal and religious reinterpretation in Islam) and other religious scholars gained considerable power as an independent legitimising force (Masud et al., 1996; Berkey, 2003; Hallaq, 2005). In turn, early Islamic leaders, who attained and maintained their right to rule by obeying Islamic dictates (Greif, 2002), faced significant costs from not complying with Islamic law ($r$ was very large). This meant that Muslim political authorities and lenders had little incentive to ‘push the envelope’ of what was permissible and, hence, overwhelmingly permitted and conducted transactions that could be construed as within the confines of religious law. In turn, such transactions were relatively inexpensive for Muslim religious authorities to permit, as they did not entail a significant reinterpretation of doctrine. This led to the emergence of an equilibrium in which lending at interest was permitted but only if a sufficient transaction cost ($hiyal$ or other cumbersome transaction) was undertaken. In terms of the model, religious regulations were more relaxed than the initial ban on interest ($r$), but not by much.

This equilibrium entailed that little endogenous institutional change (related to the legitimising relationship between religious and political authorities) occurred in the Islamic world after the first few Muslim centuries. Religious regulations on interest were partially relaxed and the exogenous level of initial dependence ($\gamma_1$) was large, so no player had incentive to change actions much – and thus endogenously undermine dependence – without the presence of a large shock. This does not mean that political authorities faced no challenges, only that ‘faith-based’ legitimacy remained extremely important in most Islamic polities and was unlikely to be undermined by endogenous factors.

These histories can now be compared in the context of the model. The high, exogenous initial level of (relative) dependence in the Islamic world provided little incentive for changes to occur in either interest laws or subsequent (endogenous) levels of dependence. In contrast, the lower, exogenous initial levels of dependence in Christianity encouraged changes on both fronts, in turn entailing that interest restrictions persisted for much longer in Islam than in Western Christendom (Prediction 1).

Commercial pressures to relax interest restrictions existed earlier in the Middle East than in Western Europe. Hence, the relaxation of interest restrictions happened earlier in the Middle East. Yet, due to a higher degree of exogenous initial dependence in the Middle East, interest restrictions were not fully alleviated, and the endogenous processes that eventually undermined both Christian interest restrictions and the Church’s ability to legitimise political authorities in Europe did not occur in the Islamic world. The model suggests that the endogenous erosion of dependence was more likely to happen in Europe, where the initial level of dependence was lower.

Once the dependence of political authorities on religious authorities for legitimacy was eroded, Christian interest restrictions became relaxed. In contrast, such an institutional change did not occur (at least to that extent) in much of the Islamic world, where interest restrictions are still a salient economic feature today. For instance, a
significant factor underlying the recent rise of Islamic banking is that loans are formed in ways which do not officially constitute interest (ribā). These histories provide evidence for the primary prediction of the model: higher degrees of exogenous initial dependence of political authorities on religious authorities for legitimacy encourage more severe religious regulations of productive actions in the long run. In more general terms, exogenous initial differences in institutional arrangements, however small, can encourage the relevant players to interact in such a manner that vastly different equilibria emerge over time.

4.2 The Timing of Changes in Interest Laws

As noted in Section 1, Christian interest restrictions were maintained in the twelfth and thirteenth centuries. On the surface, the rationale for this attitude is not obvious – why would the Church maintain the prohibition just as access to credit was beginning to lubricate commerce? Does the model say anything about the timing of changes in Christian interest restrictions?

The model provides an explanation that relates the Church’s maintained anti-usury stance to its increased legitimising role. In general terms, Prediction 2 suggests that religious authorities may initially remain conservative after a positive economic shock, such as the Commercial Revolution, but they will reinterpret doctrine after the interactions of the relevant players endogenously undermine the legitimising relationship between political and religious authorities. That is, religious authorities will continue to regulate the action strictly for some time, as they incur a cost from reinterpreting ‘eternal’ doctrine. In fact, the Papacy and the Scholastics (religious scholars) cited such ‘eternal’ doctrine, synthesised with Aristotelian thought, in their efforts to maintain the ban (Noonan, 1957; Munro, 2003).

The growth of commerce was at least partially responsible for the endogenous undermining of the legitimising relationship between political and religious authorities, in the manner described in the model. Mann (1986) and Greif (2005, 2006, ch. 4, 8, 12) argue that national kingdoms emerged due to the growing importance of commerce and medieval cities, not the Church. Merchants needed pacification between states and in foreign states and hence turned to secular leaders to provide such protection in return for loans or taxes. Pacification, in turn, fostered urban growth and the further development of trade, which necessitated more complex (and usurious) financial instruments. Michael Mann suggests:

26 Moreover, institutional arrangements similar to those in the Ottoman period still exist today; state muftīs were appointed in the twelfth century in Egypt, Saudi Arabia, Lebanon, Malaysia, Yemen and Indonesia; twelfth century constitutions in Egypt, Syria, Kuwait, Morocco and Iran (to name a few) include provisions making the shari‘a the law of the land (Schacht, 1964, pp. 107–10; Masud et al., 1996).

27 If anything, papal power increased in this period but for reasons exogenous to the model. The papacy maintained significant power vis-à-vis secular authorities following the Papal Revolution led by Gregory VII in the late-eleventh century and the resolution of the Investiture Controversy at the Concordat of Worms (1122). Both of these events gave the Church immense power until the end of the 13th century (i.e. γ was relatively large) (Berman, 1983; Mann, 1986; Tierney, 1988; Feldman, 1997).

28 Lopez (1971), Jones (1997) and Greif (2006) similarly argue that the Italian city-states were built by merchants for merchants. Although religion was extremely important in the communes, the interests of religious authorities were generally subordinate to those of the merchant elite.

By the 12th century, economic growth was generating technical problems involving more complex economic relations between strangers to which the church was more marginal. The closer relationship between markets, trade and property regulation, on the one hand, and the state, on the other, gave the state new resources that it could use to enhance its own power, especially against the papacy (Mann, 1986, p. 437).

One link made in this article is that the growth of national kingdoms and commerce was in part made possible by widespread secular alleviation of anti-interest dictates. On the one hand, employment and secular acceptance of prohibited financial instruments and transactions were essential for the commercial growth that preceded the rise of kingdoms and cities. On the other hand, these events also endogenously undermined the Church’s power over secular authorities. These two forces reinforced each other until a new equilibrium emerged – as more profitable commercial opportunities became available, merchants further evaded the Church’s dictates and sought protection from secular authorities. This provided greater incentive for rulers to provide security and legalise interest, as it decreased the importance of religious legitimacy (γ) and increased the profitability of credit extension (p). Hence, the Church’s loss of power vis-à-vis secular rulers was itself both a cause and a consequence of the rise of commerce and the resulting interactions between merchants, the Church and political authorities.

Although the Church initially responded to the Commercial Revolution by maintaining its anti-usury stance, this had the unintended consequence of eventually diminishing its ability to legitimise political authorities. Prediction 2 suggests that, in turn, the Church should begin to relax interest restrictions only after its legitimacy was endogenously undermined. In fact, it was only after the importance of the legitimising relationship diminished in the mid-thirteenth century that political authorities relaxed their restrictions, and the Church followed suit over the subsequent centuries. The ‘campaign against usury’ halted in the late-fourteenth and late-fifteenth centuries and the Church slowly began to permit alternatives to interest thereafter. By the end of the fifteenth century, religious authorities permitted even more openly usurious practices, such as bills of exchange and the triple contract. The timing of changes of Christian interest restrictions thus accords with the model’s intuition – as secular dependence on the Church endogenously diminished in medieval Europe, political and religious authorities relaxed interest restrictions and the institutions supporting the ban were undermined.

This history also provides evidence in favour of the primacy of legitimising relationships (γ) over inherent resistance to change (α) in the determination of religious and political laws. Prediction 2 indicates that when the legitimising relationship is important, a lag between economic shocks (such as the Commercial Revolution) and changes in religious interpretations may occur, as the shock leads to interactions which over time undermine the ability of religious authorities to legitimise. However, there is

29 Conversely, Berman (1983, p. 338) argues that the Church encouraged commerce in this period, noting that the Church ‘encouraged the pursuit of money or riches provided that such pursuit was carried on for certain ends and according to certain principles’. This line of thought is not completely contradictory to the argument made in this article, however. I never claim that the Church opposed profit or was even ultimately inflexible in its views on interest. Instead, I suggest that this flexibility was only realised after merchants transgressed some of the Church’s stricter dictates.

no clear avenue through which an inherent resistance to change has the same effect on equilibrium outcomes. Hence, the model provides a prediction – supported by the history – whereby institutional features and not conservative preferences are shown to be the driving force behind conservative outcomes.

As explained earlier, endogenous institutional change like that experienced in Western Europe was less likely to occur in the Islamic world, since the initial level of dependence was much greater in the latter. Yet, a ‘natural experiment’ which further tests the model occurred when exogenous economic and socio-political changes took place in the early Ottoman period. The two primary changes were increased demographic heterogeneity (which limited the coordinative ability of the masses) and decreased external threats (Coşgel et al., 2009). Both of these changes decreased the ruler’s need for legitimacy from religious authorities ($\gamma$ decreased, though it was still large), since the threat posed by both internal and external rivals was greatly diminished. In turn, the Ottoman sultans brought the religious authority (the mufti hierarchy) into the state, a change which enabled a ‘limited but significant expansion in the ruler’s prerogatives in relation to the shari’a’ (Berkey, 2003, p. 264).

These changes provide a further test for the theory, which predicts that a relaxation of interest restrictions should follow these events. Indeed, Section 1 notes that interest restrictions were significantly relaxed in this period, although lip service paid to the shari’a was still necessary to ensure the legality of the contract. Contracts indicating that the interest was considered acceptable and in accordance with the shari’a were common; it is possible that the actions which provided coherence with the shari’a were never actually carried out. The necessity of including some sort of ruse, however, indicates that neither interest regulations nor the legitimising relationship were fully undermined, and indeed, religious authorities remained extremely influential vis-à-vis the Ottoman sultans. This history indicates, therefore, that exogenous institutional changes that undermined the legitimising relations between political and religious authorities ($\gamma$) – but not the inherent resistance to change ($\alpha$) – were the driving force behind religious relaxations of interest. Indeed, there is little reason to believe that a change in the religious authorities’ inherent resistance to change occurred prior to the relaxations of interest restrictions.

4.3 The Reversal Effect

Finally, the model also sheds light on the fact that Islamic interest restrictions were more relaxed than Christian ones until at least the fourteenth century. As noted before, early Islamic religious authorities not only permitted evasions of the interest ban ($hiyal$), but often created the evasions. It can be readily explained why these phenomena occurred centuries before Christian relaxation of interest restrictions: there were greater commercial pressures ($\hat{p}$) for change in the first few Islamic centuries. Yet, the interest ban was not alleviated in early Islamic history, which created a situation where any future relaxations of Islamic doctrine would have come relative to a more ‘relaxed’ doctrine (higher $r$) than in Christianity.

Ironically, the model suggests that these early relaxations, combined with a higher degree of initial dependence, may have been the cause of subsequent stagnation of interest restrictions. Because Islamic religious restrictions were relatively relaxed – and
there was a higher level of exogenous, initial dependence in these economies – there was less endogenous erosion of the legitimising relationship over time, as religious authorities chose actions closer to both the political authorities as well as long-established religious precedent.

In contrast, the Christian interest ban remained quite strong through the thirteenth century. When the Commercial Revolution commenced in the tenth and eleventh centuries, religious authorities maintained the full ban on interest ($r$ was lower [less relaxed] in Christianity than in Islam). However, over the course of the next few centuries, the more restrictive regulations, along with a lower level of dependence, also encouraged actions between political and religious authorities which ultimately undermined dependence.

As noted in Prediction 3, such a ‘reversal’, where Christian interest doctrine was initially less relaxed but ultimately more relaxed than Islamic interest doctrine, can only occur if the dependence relationship is endogenously undermined before the reversal occurs – which is shown to be the case. In other words, although the initial interest regulations in Islam were more relaxed than in Christianity, the endogenous weakening of the legitimising relationship between political and religious authorities led to a ‘reversal’.

In all, this analysis is by no means meant to indicate that the interactions between political and religious authorities in relation to economically inhibitive laws were the sole driving force of change in Church–State relations in Europe (and the relative lack of such change in much of the Middle East). Yet, this history reveals how small exogenous differences in institutional arrangements and initial conditions can have immense consequences. It suggests that the European Commercial Revolution was in part made possible by the exogenous type of relationships between political and religious authorities stemming from the conditions surrounding the birth of Christianity – and it was precisely due to these initial conditions that religious authorities eventually had to adapt to keep up with economic and political change.

This is not to say that a Commercial Revolution could not have happened in the Islamic world. As the model suggests, these differing institutional structures merely meant that a larger ‘shock’ was necessary in the Islamic world to precipitate interactions that could undermine the legitimising power of religious authorities as well as interest restrictions.

These differences were exacerbated by the fact that institutions do not emerge in isolation but are contingent on historical events, path dependence and institutional complexes (Kuran, 2005; Greif, 2006). The interactions between the relevant players pushed the institutional paths of the Islamic world and Western Christendom in vastly different, self-enforcing directions. On the one hand, the interaction between the rise of secular authority and European trade networks supported further economic develop-

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30 Indeed, another important difference between the two religions which is not considered in the model is that the pre-Reformation Church was extremely hierarchical while Islamic religious authorities were much more decentralised. Yet, this should work in favour of Islam being the less conservative religion, as jurisdictional competition would encourage innovation and accommodation of custom. For the same reason, it is more likely that Islamic political authorities would be able to bribe religious authorities to relax restrictions, as decentralised Islamic authorities had less power to lose by reinterpretting doctrine and much more to gain relative to their wealth.

ments, such as complex financial instruments, impersonal exchange and the corporate form (Greif, 1993, 2000, 2006; Kuran, 2005; Rubin, 2010). On the other hand, the constraints faced in the Islamic world discouraged such a path – or at least, a greater shock was necessary to undermine the political and religious relationship than in Christendom. Instead, less economically beneficial institutions and smaller, personal exchange networks persisted for centuries in the Islamic world (Goitein, 1967; Udovitch, 1975; Kuran, 2001; Greif, 2002; Rubin, 2010).

5. The Big Picture: Was the ‘Gate of Ijtihād’ Really Closed?

This article tackles an important route through which religion directly impacts economic outcomes: the perpetuation of laws inhibiting economically productive actions. By refraining from attributing anything inherent in religion as the force underlying the economic divergence, this framework encourages a reconsideration of traditional notions of conservatism (based on a preference for conservatism) in the Islamic world. The most influential of these ideas is that the ‘gate of independent reasoning (ijtihād)’ was closed in the tenth century (CE). Until recently, historians generally agreed that in this period some informal consensus arose that independent reasoning, an important method of reinterpretation in the first three Islamic centuries, was no longer an acceptable means of finding truth and that henceforth jurists were only allowed to follow precedents (Schacht, 1964, ch. 10; Coulson, 1969; Weiss, 1978). Under this theory, juristic ingenuity was stifled in Sunni Islam after the founding of the four schools consolidated what had been widely dispersed judicial authority. Instead of exercising ijtihād, jurists were confined to accept religious authority (Hallaq, 2001, ch. 4).

Some recent scholarship disputes this notion. Gerber (1999, ch. 4–7) cites myriad cases throughout the mediaeval period where ijtihād was employed. In a study of rulings by the seventeenth-century Palestinian mufti Khayr al-Din al-Ramli, Gerber notes that numerous disagreements which remained unresolved in the classical and post-classical periods arose in al-Ramli’s time, necessitating a relaxation of devotion to the ancient masters. Likewise, Hallaq (1984, 2001) notes in great historical detail that the gate of ijtihād did not close in theory or in practice, although its practice became increasingly rare in the mediaeval period.

If the gate of ijtihād was not closed, independent reasoning was less frequently practiced after the tenth and eleventh centuries. Indeed, Gerber (1999, p. 138) acknowledges that ijtihād was not freely permitted in every field but only in those in which the law remained open. In this light, I propose an alternative metaphor: the ‘gate of ijtihād’ may have been closed but the gate was not locked. All that was necessary for the gate to be opened was for political authorities, merchants and other interested parties to attempt to push it open. But, due to the incentives supported by the prevailing institutions, few had incentive to ‘push the gate open’ and observed behaviour led to the appearance that the gate was closed and locked. The analysis in this article suggests that there was not necessarily a preference-based inherent ‘resistance to change’ that facilitated conservative outcomes but, instead, these results emanated from the incentives put in place by the institutional structure. Indeed, if the gate were not really locked, we might expect to see ijtihād in aspects of law which

fostered better economic outcomes, such as those studied by Gerber and Hallaq. However, the overwhelming cost of pushing the gate open when such pressures did not exist was the reason that the gate seemed locked. And once such equilibria emerged in the tenth century, beliefs in the gate’s closure were supported, further reinforcing the relationship between Islamic religious and political authorities. This insight allows us to view Islamic legal and economic history through a different lens by looking beyond the scope of observed actions to understand the institutions, behaviours and incentives underlying them.

6. Conclusion

This article analyses the role that religious, political and legal institutions played in sustaining and undermining economically inhibitive religious laws in medieval Islam and Christianity. I suggest that a salient difference between the two religions’ institutional structures is the greater degree to which political authorities were dependent on the dictates of the religious authorities for legitimacy in early Islam. To shed light on the consequences of this difference, I identify the salient players involved in the reinterpretation of religious doctrine (religious and political authorities) and construct a model to identify their interactions under varying institutional conditions. I show that when the initial level of dependence is small, political authorities have an incentive to relax regulations on productivity-enhancing actions (such as lending at interest), providing greater incentive for religious authorities to reinterpret ‘eternal’ doctrine – even though such reinterpretation endogenously diminishes their ability to bestow legitimacy. The opposite is true when the initial level of dependence is large, and the institutions supporting regulations on productivity-enhancing actions are self-enforcing.

The logic underlying these interactions and outcomes helps to account for the salient features of Islamic and Christian interest histories. Moreover, it potentially sheds new light on a variety of historical phenomena in which the interactions between religious institutions and other institutions (political, economic, legal and social) affected economic outcomes, such as the differing paths of Islamic and Christian laws concerning printing, slavery, insurance, the economic role of women and education. While significant in their own right, especially given the role that unintended consequences can play in institutional and economic development, studying such cases within the framework presented in this article provides insight into a much broader economic reality. Contrary to the predilections of many previous scholars, this framework turns purely cultural explanations (based on the ‘conservative nature’ of Islam) of the divergence between Western European and Middle Eastern economies on their head. That is, while we certainly see conservative, slowly changing outcomes in the Islamic world, these phenomena can be understood as a result of the institutional structures and not as a cause of economic stagnation.

California State University, Fullerton

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