

# Piety, Power, and the Purse: Religious Economies Theory and Urban Reform in the Holy Roman Empire

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*The religious economies model has been influential in the sociology of religion. Yet, propositions drawn from the model have been difficult to test in the comparative and historical study of religion, generally for lack of appropriate data. We develop a general theory of religious disestablishment and apply it to the Reformation in 16th-century Europe to explain variation in the abolition of the Catholic monopoly. We suggest three principal factors—changes in demand, entry control mechanisms, and political incentives—that explain why incumbent religious firms may lose their monopoly. We then analyze the resulting hypotheses in a systematic analysis of cities in the Holy Roman Empire. Our analysis yields mixed support for demand-side factors and entry control mechanisms, and firm support for political incentives in the institution of reform.*

**Keywords:** *theory, religious economy, political economy, disestablishment.*

## INTRODUCTION

Perspectives drawn from political economy and economics have shed new light on the comparative and historical study of religion (Froese 2008; Gill 1998; Stark and Finke 1992; Stark and Iannaccone 1994). One of the central insights of the religious economies theory is that religious groups can be analyzed as firms that compete for consumers in a market (Stark and Finke 2000). This theory has in many ways brought about a renaissance in the social-scientific study of religion (McCleary 2011; Iannaccone 2005; Stark and Finke 2000; Witham 2010). However, it has also received ample criticism on both theoretical and empirical grounds (Bruce 1993; Montgomery 2003; Voas, Crockett, and Olson 2002).

As Iannaccone (2005) observes, far too much of the literature focuses on the putative effects of American-style religious pluralism versus Old World monopolies on observed patterns of religiosity. Yet, pluralism is not the only condition under which religious firms operate and may be a less important variable affecting religious vitality than state involvement in religious markets (for a global test, see Fox and Tabory 2008). The focus on the United States as an unregulated, pluralistic market, as a foil against which to compare more regulated religious economies, obscures true monopoly conditions. Market concentration alone does not determine the price or quality of a product or whether a firm's market power can be challenged. A true religious monopoly is one in which the religious firm's dominant position is practically incontestable whatever its output.

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There is consensus among scholars that true religious monopolies do not emerge spontaneously (McCleary 2011). Yet, most of the work comparing religious pluralism and monopoly has been based on comparative studies of modern Western democracies, religious economies in which barriers to entry are relatively low and markets are contestable. Moreover, while there has been much work on the motives driving the establishment of monopolies, there has been far less research on *disestablishment*.<sup>1</sup> In this article, we contribute to the historical and comparative study of religious change by offering a simple theory of religious disestablishment and testing it using the case of the Reformation, a well-documented collapse of a long-established religious monopoly. Our results provide substantial support for a theory rooted in the religious economies model and shed light on the local factors that led to the collapse of a Western Christian monopoly.

Although the religious economies approach has classically been characterized as “supply-side,” recent work integrates supply- and demand-side factors, and seeks to explain individual behavior as well as institutional development (McBride 2008; McCleary 2011; Ekelund, Hebert, and Tollison 2006; Montgomery 2003). Such an approach offers the opportunity to bring new insight to the Reformation. In the face of a general Protestant rebellion why did the Catholic monopoly remain in place in some self-governing cities in Central Europe while being abolished in others? Why did some of the most likely candidates for the Reformation remain Catholic while seemingly inhospitable cities saw Protestants triumph? Indeed, Ekelund, Hebert, and Tollison (2006:120) suggest that most theories, including their own, overpredict the actual incidence of Catholic abolition, noting: “Despite the obvious appeal of a simple, direct, and relatively inexpensive path to salvation, Protestantism did not meet with universal success.”

Up until now, general empirical tests of theories explaining the Reformation have been few and largely unconvincing due to the lack of appropriate data (i.e., very small samples, limited case studies, failure to measure covariates, etc.) and the failure to identify both demand- and supply-side factors operating at comparable units. In this article, we analyze the variable success of the Protestant movement in institutionalizing reform in the Holy Roman Empire (hereafter HRE) during the first decades of the Reformation (1523–1545). We perform the first large-*N* analysis of the Reformation in light of the religious economies model. Our analysis is based on a unique dataset of cities in the HRE. These cities enjoyed self-rule (*Stadtrecht*) and were governed by a town council (*Rat*) that could reach binding decisions concerning civic affairs. Agitation by the Protestant movement during this period induced civic elites to decide for or against the local Catholic monopoly (te Brake 1998). Hence, our unit of analysis, cities large enough (5,000+) to have self-governing charters, is within the necessary scope conditions for a theory premised on actors responding to incentives. As the Reformation movement forced city governments to decide whether to retain or abolish the Catholic monopoly, the HRE is an excellent test case.

Our dataset includes a population of over 200 cities and measures of several covariates deemed important by the historical and theoretical literatures, providing unprecedented analytic leverage. The analysis ranges from the year of the first official abolition of the Latin-rite mass (1523), which we use as a strong indicator of the disestablishment of the Catholic monopoly, through the eve of imperial religious warfare (1545). Our study investigates the fate of the Church at the municipal level prior to the outbreak of general religious warfare and before the “confessional age” in which new churches were firmly established (Gorski 2000). After 1545, the social processes that interest us are overwhelmed by conflicts between warring states and coalitions.

<sup>1</sup>While historians (especially those of particular countries) have treated disestablishment in greater detail, social-scientific attention has been scant. Gill (2007), whose argument focuses on political incentives for disestablishment, and Finke (1990) who focuses on economic incentives, are noteworthy exceptions.

### A THEORY OF CHURCH DISESTABLISHMENT

Religious firms are social enterprises “whose primary purpose is to create, maintain, and supply religion to some set of individuals and to support and supervise their exchanges with a god or gods” (Stark and Finke 2000:279). Because religious firms depend on the contributions of their adherents, they attempt to increase their number by exchanging spiritual and material goods for member contributions (Iannaccone 1992; Stark and Finke 2000). In this way, religious firms exist in a “religious economy,” where they compete with other religious firms in order to exchange their goods with potential and current adherents.

Consequently, one strategy for increasing adherents (and thereby revenues) is to eliminate the competition by setting up a religious monopoly, which becomes the only licit source of spiritual goods. Here, we are referring to a true monopoly situation, not merely one in which a single firm enjoys market dominance. A true religious monopolist benefits from an *incontestable market* (i.e., firms and consumers cannot readily enter or exit), which protects the monopolist from rivals offering superior products or lower prices (Iannaccone 2005). Historically, such monopolies are usually established through state regulation or through intergroup violence, though in some markets a “natural” monopoly may exist where market forces are only able to support one firm. Nevertheless, a legally established religious monopoly commanding an incontestable market may have sources of vulnerability. Economic growth may inadvertently imperil the monopoly position of established religions by creating a more differentiated population with more diverse demands. As Weber ([1922] 1963: 140–41) noted, increasing material welfare tends to shift individual risk profiles such that fears of immediate deprivation and misery recede, changing the demand for religious goods. Increasing income tends to increase the opportunity costs of time spent in the service of religion and of behavioral restrictions on secular consumption. Hence, religious monopolies should be more robust in societies characterized by slow economic growth, concentrated ownership, and widespread poverty (Norris and Inglehart 2004).

Moreover, under monopoly conditions, religious firms have an incentive to take advantage of their position through rent-seeking behaviors and poor performance. Because clerics in monopoly firms are provided secure incomes and face no extra-firm competition, they have weak incentives to meet the needs of their constituents (Gill 1998; Smith [1776] 1976; Stark and Finke 2000). Over time, a combination of greed and indolence may create demand-side vulnerability. Rent seeking, clerical neglect, and corruption are thus endogenous features of monopoly religious institutions that can undercut their self-enforcing properties by undermining the credibility of beliefs. As spiritual goods are credence goods whose quality cannot be readily empirically determined, reputation matters when adherents assess the claims of religious firms.

While practices such as mendicancy, clerical sacrifice, and charity—all features of the late medieval Church—may increase credibility and thereby contribute to a self-enforcing monopoly (Hull and Bold 1989; Iannaccone 1992), the perception that the clergy are venal and lax may cause adherents to lose faith. This, in turn, creates an opening for rivals who condemn the monopoly for corrupting the “true faith” while claiming to revive the original, uncorrupted religion. This pattern is familiar from church-sect theory, wherein theologically inspired dissidents from within organized religious groups promise a higher-tension religiosity more consistent with original revelation (Johnson 1963). The entrance of new religious ideas into the marketplace may then shift religious demand to the rival firm.

Given these endogenous pressures, in order to maintain their monopoly, incumbents erect barriers to the entry of rival firms. Monopolies are especially robust where seemingly insurmountable obstacles confront potential challengers. In fact, established religions typically enjoy broad institutional power and privilege and can accumulate extensive resources (Stark and Iannaccone 1994; Stark and Finke 2000). This allows them to develop mechanisms to dominate the religious marketplace and deter rivals from entering (Miller 2002). Competition with the established monopoly may simply be legally forbidden, making all other religious groups illicit (or, at best,

tolerated so long as they do not proselytize and thereby threaten the monopolist's market share). Where heresy or apostasy is treated as a criminal offense, specific agencies can be delegated with the task of identifying offenders and enforcing required punishments (e.g., the Inquisition, Sharia courts, etc.).

Established religious organizations can also construct monumental temples and other religious edifices that express their market dominance and intimidate would-be rivals. Witham (2010:63) observes that the same motives that impel leading business firms to display their dominant position through spectacular headquarters may explain the building of monumental temples. Ekelund, Hebert, and Tollison (2006) contend that the size of temple structures serves as a signaling device used to deter rivals ("heretics") from daring to enter the licit religious market. From the perspective of the state, the greater a religious firm's capacity, the more compelling will be its incentives to help maintain a religious monopoly. Welfare and the provision of social benefits by the religious monopoly may pose another obstacle for rival firms. Religions that provide their adherents with both spiritual and material goods have a competitive advantage over those that provide only one type of good (Miller 2002). When religious firms fail to address the welfare of their adherents, they encourage rivals to enter the market and provide material in addition to spiritual goods (see, e.g., Stark 1996). If the incumbent firm provides both spiritual and material goods, then this should narrow the opportunities for rival firms.

In addition to entry control mechanisms, religious monopolies are backed by political power. From the perspective of the state, an established religion is a valuable partner because it lends ideological legitimation through its teachings. These lower the cost of rule by convincing subjects that they must obey because of divine will (North 1981). Consequently, Gill (1998) argues that relations between a state and a religious monopoly reflect the relative bargaining power of the two institutions. Where rulers are relatively weak and insecure while the religious monopoly is strong, the state may act not only to protect the position of the monopolist but also grant it privileges including subsidies, territories, tax exemptions, and commercial monopolies. Where the inverse is the case, the religious monopoly may be compelled to exempt rulers (and ruling classes) from tithes and share religious revenues. Gill (1998:63) proposes that episodes of church-state conflict occur "when the opportunity costs of cooperation for any one party exceeds the present or future benefits of cooperation." If alternative ideologies to legitimate the state become available at a lower cost, or when the religious monopoly holds coveted financial assets that can only be had by the state through expropriation, rulers may seek to depose the incumbent monopoly.

#### THE CASE:

#### THE CATHOLIC CHURCH AND THE REFORMATION IN CENTRAL EUROPE, 1517–1545

The Reformation has inspired an extensive literature, chiefly by theologians and historians, which is too great to review in detail. In explaining its coming, however, many scholars emphasize macrostructural changes that occurred prior to 1517: proto-capitalism had arisen and trade expanded; urbanism grew and an ambitious class of townsmen asserted its interests. Long-standing demands for a more personal religiosity and dissatisfaction with ecclesiastical organization became widespread among townsmen (Ozment 1975; Scribner 1986; Southern 1970; te Brake 1998). Economic historians have long thought that the abolition of monasticism, the secularization of Church holdings, and the elimination of feast days were appealing to a nascent bourgeoisie interested in increasing the supply of capital and labor (Troeltsch 1931). From the perspective of the religious economies model, these can broadly be considered demand-side explanations.

Other accounts stress the role of "magisterial" interests; reform arose because it served the purposes of rulers eager to gain greater administrative control of their territories (Brady 1998; Dixon 2000; Schubert 1996; Tracy 1986). Long before 1517, urban republics and regional princes had sought to extend their authority into ecclesiastical affairs (MacCulloch 2004). Fulbrook (1983)

and Gorski (2000) argue that Protestantism prevailed where reformers enjoyed the patronage of state-building rulers eager to enhance governmental capacity and social control. In Stark's (2003) account, the Reformation grew from an alliance of religious idealists repulsed by the Church's worldliness and modernizing princes interested in ecclesiastical assets. From the perspective of the religious economies model, this body of explanations is premised on the political incentives that regimes had in maintaining or abolishing the Catholic monopoly.

The combination of changing demand and political vulnerabilities suggests the inevitability of reform. Yet, previous attempts by rival religious groups to enter the marketplace had been violently suppressed by the Church and its allies (Stark 2003). Why, after 1517, did Protestants gain a place in what had been an incontestable market? Why was there so much variability in the (semi) voluntary abolition of the Roman Church? Recently, a new perspective has been shed on the origins of the Reformation by scholars offering economic theories that analyze the Church as an economic firm; the "monopoly provider of a pure credence good" (Ekelund et al. 1996:26). They posit that Protestants were able to gain market entry because they offered a radically different product than the Catholic Church: churches premised on a lower salvation price, cheaper ecclesiastical structures, and the reallocation of resources from the Church to urban polities (Ekelund et al. 1996; Richardson 2005).

In order to defend its position as an incumbent monopolist, the Church had two tasks: maintain its exclusive claim to the provision of salvation and prevent rivals from entering the religious marketplace (Ekelund et al. 1996). Catholicism was most secure and cost efficient where its customers were loyal and its institutions were self-enforcing. Self-enforcement relied on the Church being widely understood as having the only route to eternal salvation. Yet, economists suggest that the inherent tensions created by monopoly status undercut performance and created incentives to overexploit its consumers. As Richardson observes: "Money played a major role in late-medieval Christianity. Salvation was for sale. Prayers had prices. Priests prayed for payments. Piety had pecuniary costs. Religious doctrine required people to pay significant sums for the salvation of their souls" (2005:164). This system of redemption was rife with venality and eventually provoked a crisis in the struggle over the extension of rent-seeking innovations like the doctrines of purgatory, auricular confession, and indulgence. Popular resistance to exploitation met with evangelical objections that the Church had effectively discounted sin in the hopes of increasing its sales of absolution. Attacks on these practices put credence in the Church's exclusive claim to salvation in jeopardy. Drawing on canonical scriptures that predated these innovations, Luther, Huldrych Zwingli, and other dissident theologians attacked the Church and called for a return to an "all or nothing" conception of salvation that raised the price of sin but lowered the full cost of salvation by insisting on salvation by faith alone (*sola fide*) (Ekelund et al. 1996:157–64).

Besides these endogenous developments, macro-level economic development may have also undercut the Catholic monopoly. Economic development made it difficult for the Church to meet the changing demand of wealthier consumers. Burghers, in particular, may have been attracted to rival theological systems perceiving a chance to displace the predatory, rent-seeking clerics while winning for themselves greater liberty from traditional economic strictures. Meanwhile, the political context for an attack on the Catholic monopoly was favorable in the HRE, where the competing incentives of emperor and princes and political decentralization made it harder for the Church to coordinate protection of its monopoly (Nexon 2009).

Yet, despite what Ekelund, Hebert, and Tollison (2006) portrays as its seemingly obvious and universal economic appeal, Protestantism was not universally accepted—not even in the large cities that should have been the most receptive to the evangelical message. Indeed, theories predicated on material incentives tend to overpredict reform (Ekelund, Hebert, and Tollison 2006:120). According to the data we have collected on the large cities of the HRE, up through the end of 1545 about 60 percent of them abolished the Catholic monopoly. Moreover, the pattern of abolition does not obviously support the prevailing explanations of the Reformation.

Some economically advanced trade-intensive cities abolished the Church, while others retained it. In some regions where the princes favored reform, city governments retained Catholicism and some cities abolished it despite the prince's wishes. Urbanization, proto-capitalist development, expansion of the middle class, Protestant propaganda, etc., affected all the larger towns. In short, existing economic and political models account for some cities well and not others (see also Nexon 2009; te Brake 1998).

Based on our theory of religious disestablishment, which builds on the religious economies model, we identify demand- and supply-side factors and political incentives that explain the retention or abolition of the Catholic monopoly in the case of the HRE.

### **Demand-Side Factors**

In the case of the Reformation, historians agree that economic factors were important, particularly in the cities. The nascent urban middle classes ran up against restrictive economic norms and were the targets of the most aggressive forms of clerical rent seeking (Ekelund, Hebert, and Tollison 2006). The prominence of trade in some urban economies may have also made cities more prone to adopt Protestantism. For instance, north German merchant communities founded the Hanseatic League as a guild that would protect their trading interests at home and abroad. The league expanded widely, drawing in member cities from across the northern and central HRE and engaging in trade from the Baltic Sea to the Alps. Cities that belonged to the network tended to be highly commercially developed, with powerful mercantile interests (Dollinger 1970; Greif 2006). Their councils gained control over local clerical appointments and laymen won a say in the religious life of the city through their endowments and devotional activities (Schilling 1988). The evidence strongly suggests that commercially oriented townspeople wanted a new kind of church, one more responsive to the laity and attuned to civil government (Blickle 2000; Kümin 1996).

Economic historians regard the size of an early modern city as the most readily available and reliable indicator of economic development (Cantoni 2009; DeLong and Shleifer 1993). In an economy still dominated by agriculture, improvements in economic productivity should be reflected in larger city sizes as communities purchase foodstuffs and absorb excess labor from the surrounding countryside (Bairoch 1988; Cantoni 2009; De Vries 1984). Given the strong association between economic development and city size, we would expect that the demand for Protestant entry might have been most pronounced in the larger cities of the HRE. Moreover, the relative importance of trade in a city's economic activity, as indicated by Hanseatic membership, may have made the ruling burghers especially favorable to Protestantism.

*H1: The greater the economic and commercial development of a city, the greater the odds that it abolished the Catholic monopoly.*

The demand for Protestantism was also influenced by the spread of evangelical ideas and the success of Luther, Zwingli, and his fellow reformers in instituting new church orders that promised a new era of piety and stability (te Brake 1998). The ruling princes of electoral (Ernestine) Saxony had appointed Luther and Melancthon as professors at Wittenberg and eventually embraced the Lutheran reforms, thereby encouraging reform agitation to spread outward (Schwiebert 1996). Fanning out from Wittenberg, Luther's disciples "spread the Reformation through their preaching, by advising princes and city councils" (Grendler 2004:18–19). In the Swiss regions, another branch of the evangelical movement took shape around Zwingli and his followers (Gäbler 1986; Locher 1979). The base of the movement was at Zurich and, much like Luther's followers, Zwingli's disciples fanned out as pamphlet writers, preachers, and agitators across the German southwest.

Cities close to Wittenberg and Zurich are likely to have had stronger demand for reform, reflecting the spatial diffusion of evangelical propaganda and the outward spread of Protestant preaching and agitation (Edwards 1994; te Brake 1998). As distance increases from Wittenberg and Zurich, the abolition of Catholicism should have become less likely.

*H2: The greater the distance of a city from Wittenberg or Zurich, the lower the odds that it abolished the Catholic monopoly.*

### **Supply-Side Factors**

Previous studies typically use state regulation as a proxy for the supply of religious goods in a religious economy (Fox and Tabory 2008; see also Chaves and Gorski 2001 for a review and Voas, Crockett, and Olson 2002 for a critique). The underlying assumption being that state regulation of religion decreases religious pluralism and thereby reduces the quantity and quality of religious goods offered with the latter being due to little interfirm competition. The current study is not concerned with variation between a monopoly and a religiously pluralistic setting, but, rather, variation in the supply of goods within a religious monopoly. To capture this, we are interested in both measures of the goods offered, such as welfare provision, and measures of the firm's capacity to regulate the market through barriers to the entry of rival firms.

In general, we would expect that Catholicism would best be secured in a city if the Church was able to achieve control over the choices available to religious consumers through organizational means of monitoring and sanctioning while also making urban populations materially dependent on it (Hechter 1987). In fact, in its effort to secure its monopoly, the late medieval Church employed substantial entry control mechanisms, including orthodox ideological enforcement, the exclusive provision of social benefits, and the construction of massive temple edifices.

In the late medieval world, Catholic power was most obvious in its organizational capacity to enforce orthodoxy. In the 13th century, the Church had established a specialized monastic order, the Dominicans, to "seek those who go astray," punish heresy, and assert theological orthodoxy (Ames 2009:6). Recruited and trained at the universities, Dominican friars occupied prominent faculty positions and carried out the Inquisition (Ames 2009; Hinnenbusch 1966, 1975). Indeed, in the religious crisis of the early 16th century, Dominicans were ordered to "proclaim true Doctrine" and "take the field" against Luther (Hinnenbusch 1975:119–20). Yet, the outbreak of evangelical agitation caught the Church unprepared. Until the convocation in 1545 of the Council of Trent, which defined a coherent strategy, Catholic countermovements were poorly organized and failed to publicize a consistent set of anti-Protestant ideas. The persecution of Protestant heretics relied heavily upon the political support of local princes and urban magistrates (Bagchi 1991; Nexon 2009).

In creating the conditions that would make urban adherents dependent on the incumbent monopoly, the Church had substantial organizational advantages. Although the tax exemptions and other privileges that monasteries enjoyed were frequently the focus of anticlerical agitation (Ekelund et al. 1996; Scribner 1986), monasteries provided cities with important sources of employment and demand for consumer goods. Despite problems of corruption and venality, in many places, the late medieval Church strove to meet the needs of its flock (Cameron 1991; Duffy 1992; Scribner and Dixon 2001; Taylor 2002). In addition to spiritual succor, the Church was the principal provider of welfare services—charging the well-off high prices for salvation and redistributing a portion of the proceeds as alms and charity. Altogether, about a third of the Church's revenues were redistributed to the poor through charity and related welfare services (Ekelund, Hebert, and Tollison 2006:112; Kahl 2009:270). Monasticism was the principal institutional mechanism by which these services were provided, particularly through communities of friars who established hospitals, hospices, and kitchens to provide aid to the urban poor

(Southern 1970). So extensive were these efforts in some towns that as much as half of the population may have been dependent on Catholic assistance on the eve of the Reformation (Wuthnow 1989:42).

Church resources were also expended on the construction of monumental temples. Medieval Catholic churches are famous for their majesty, extravagance, and scale, often taking decades to complete at enormous, even ruinous cost (Mark 2006; Mitchell 1968). Because of the decentralization of the HRE, grand churches were widely built, not only in a few cathedral towns. Whatever its architectural style, a town's principal church was meant to accommodate its population (Mitchell 1968); those that were large enough to perform this function were a very visual reminder of the Church's claim to dominate the entire religious market and a testimony to the capacity of the firm.

Welfare provision and monumental buildings may strengthen the positive reputation of the monopoly, bolstering the beliefs of adherents who are awed by or benefit from these features of the establishment. When successfully deployed, supply-side mechanisms intimidate rivals and establish control over religious consumers through dependence and monitoring. They may also enhance the self-enforcing properties of religious monopolies; heresy thrives when practical choices of belief and voluntary adherence become possible. Occupying the position of being the only visible and viable religious option reinforces the belief plausibility vital to producers of credence goods. As Berger (1979) has observed, when there are no apparent alternatives to adhering to a monopoly firm, then its dominance is not a matter of frustrated or suppressed choice but is accepted as a matter of "fate."

*H3: The more extensive the Catholic Church's organizational resources committed to achieving dependence and control over religious consumers in a city, the lower its odds of abolishing the Catholic Church.*

## Political Incentives

Finally, our theory leads us to expect that some rulers may have opposed or failed to enforce the Catholic monopoly in response to changing incentives for adherence.<sup>2</sup> The HRE incorporated a region stretching across Central Europe from the Low Countries in the northwest to the Austrian possessions in the southeast. It was a "composite polity" (Nexon 2009); a very loose confederation of nascent princely states ruled by powerful dukes (*Herzöge*) and prince-electors (*Kurfürste*), ecclesiastical states controlled by bishops, city-states, and autonomous cantons, as well as the scattered territorial holdings of the Habsburg dynasty. The monarchy was elective, with a handful of the largest principalities, bishops, and imperial cities having the right to select an emperor's successor and meet in annual council (Neuhaus 1997). Sovereignty was effectively fragmented and delegated to principalities and sovereign towns, limiting the emperor's power outside his own domains (Kohler 1990; Neuhaus 1997; Schubert 1996).

Historians have long observed a correlation between different political regimes and the Reformation. Moeller (1972) argued that "free" and "imperial" city-states (*Reichs- und Freistädte*) favored the Reformation as a means by which to enhance their autonomy, better manage civic resources, and free up economic resources. Swanson (1967) proposed that relatively open and responsive political regimes favored the Reformation because they were the most susceptible to popular pressure, while hierarchical and authoritarian ones tended to oppose it. In particular, both

<sup>2</sup>Because the outcome of interest is either remaining with the Catholic religious monopoly or establishing a new one (i.e., a Protestant monopoly), the political factors do not directly equate to state regulation and, therefore, are not merely a proxy for supply-side factors. Instead, they capture the varying political incentives rulers had to maintain the religious establishment or to replace it with another one.



the city-states and the Swiss cantons (which had won their autonomy from the Habsburgs by force of arms) were prone to institute the Reformation.

Outside of the free cities and cantons, the disposition of regional rulers toward the Church should have influenced the political opportunities civic elites perceived when facing calls to overturn the Catholic monopoly. Although cities with charters (*Stadtrechte*) enjoyed powers of self-government, they were still situated within the structure of the HRE. As the enforcement capacities of the Church and the imperial government were weak, the territorial rulers were major political actors. While the princes only played a “small part” in the governance of the cities (Schubert 1996:74), their declaration of support for, or opposition to, the Catholic monopoly could be important. Generally, the secular princes preferred a weak imperial government and little Roman meddling in their affairs (Nexon 2009). Many came to favor the Reformation as a way of deepening their influence over their territories and thwarting centralization (Kohler 1990; Neuhaus 1997).

By contrast, cities located in ecclesiastical states would have strongly favored the Catholic monopoly because of the local clout of prince-bishops. Many of them had acquired their offices at considerable expense and, as both prelates and princes, had coercive means of enforcement. Still, the religious monopoly in such territories may not have relied only on force: in the ecclesiastical administrative centers, the population was economically dependent on the Church (Schilling 1988). While strong ecclesiastical authority could have provoked anticlerical sentiment, generally the barriers facing Protestant rivals must have been high. As te Brake (1998:34) notes of some of the most robust bastions of the Roman order: “Not surprisingly, the Catholic Church was most successful in fending of the reformation process in those urban political spaces where it claimed both temporal and ecclesiastical authority.”

A similar set of constraints confronted reformist forces in Habsburg territories. The emperor was obliged to defend orthodoxy under his mantle of protector of the Roman Church, a responsibility that Charles V took seriously (Neuhaus 1997). The Habsburg dynasty maintained a favorable alliance with the Church and, whatever the sympathies of the burghers in their territories, they risked intervention or invasion by imperial forces if they threatened the Catholic establishment (Nexon 2009). Even if the urban elites were confronted with local pressure for reform and increasing costs of maintaining the Catholic monopoly, imperial power handily suppressed reform in many Habsburg cities (Fühner 2004).

These set of reflections lead to the following hypothesis:

*H4: The greater its independence from imperial and ecclesiastical influence, as indicated by regime type, the greater the odds of a city’s abolishing the Catholic Church.*

## DATA AND METHODS

In order to test our hypotheses, we examine the propensity of cities and towns of the 16th-century HRE to institute reforms in the period 1523–1545.<sup>3</sup> Most of the towns and cities of the HRE were very small (Scott and Scribner 1996). In order to protect the reliability of our estimates and because information is more complete for cities, we have limited our analysis to cities with an estimated population of 5,000 or more ca. 1520. These cities also enjoyed urban privileges (*Stadtrecht*), a necessary condition for our analysis. Our final dataset consists of a population of 218 cities. The variables employed in our analysis are listed in Table 1 and

<sup>3</sup>The first official abolition of the mass in a town was in 1523. After 1545, a Lutheran bloc of principalities and cities went to war with a Catholic bloc led by Charles V and the fate of the Reformation was decided by opposing confessional blocs. Because our analysis does not focus on military competition or dynastic rivalries, 1545 is the cutoff point of our analysis.

Table 1: Descriptive statistics

Variable	Definition	<i>N</i>	Mean	<i>SD</i>	Min	Max	Expectation
Abolition of the mass	1 = abolished mass; 0 = otherwise	218	.60	.49	.00	1.00	N/A
LogPopulation	Logged population size in thousands	218	3.95	.21	3.70	4.64	+
Hanseatic League	1 = belonged to Hanseatic League; 0 = otherwise	218	.26	.44	.00	1.00	+
LogWittenberg \ Zurich	Distance from Wittenberg/Zurich in kilometers	218	5.44	1.40	-6.91	9.30	-
Monasteries	Number of monasteries	218	2.99	3.23	.00	22.00	-
LogChurch height	Logged height of the nave in meters	218	1.33	.18	.91	2.39	-
Dominican order	1 = Dominican priory is present; 0 = otherwise	218	.33	.47	.00	1.00	-
Free cities/cantons	1 = free or imperial city or located in a canton; 0 = otherwise	218	.30	.46	.00	1.00	+
Habsburg dominion	1 = located in a Habsburg dominion; 0 = otherwise	218	.24	.43	.00	1.00	-
Princely states	1 = located in a princely state; 0 = otherwise	218	.26	.44	.00	1.00	+
Ecclesiastical state	1 = located in an ecclesiastical state; 0 = otherwise	218	.20	.40	.00	1.00	-

Table 2: Correlation matrix for variables predicting abolition of the Catholic mass

	1	2	3	4	5	6	7	8	9	10
(1) Abolition of the mass										
(2) LogPopulation	-.085									
(3) Hanseatic League	.200	.170								
(4) LogWittenberg/Zurich distance	-.261	.010	.072							
(5) Monasteries	-.126	.443	.061	-.054						
(6) LogChurch height	-.107	.312	.082	-.001	.331					
(7) Dominican order	.147	.188	.196	-.086	.365	.175				
(8) Free cities/cantons	.211	.087	.001	-.067	.180	.061	.181			
(9) Habsburg dominion	-.346	.175	-.226	.230	.012	-.009	-.136	-.345		
(10) Princely states	.321	-.160	.193	-.089	-.188	-.063	-.064	-.374	-.337	
(11) Ecclesiastical states	-.232	-.115	.052	.046	-.005	.021	.025	-.326	-.277	-.299

their Pearson's correlation coefficients reported in Table 2. The correlations of the independent variables are all low—under .500.

### Dependent Variable: Abolition of the Mass

The object of analysis is the abolition of Catholicism. As an indicator, we focus on whether the Roman mass was officially abolished (“reformed”) in a city in the period from 1523 through 1545. The mass, based on the doctrine of transubstantiation, which elevates the role of the priesthood, is the central rite of the Catholic religion. Eliminating the mass meant eliminating the priesthood and the sacramental relationship between Church and laity. As such, it was usually the first target of evangelical agitation. “It is not surprising that the Eucharist became the central object of popular belief and devotion, as well as a major point of dispute between the church and the reformers. In the Eucharist was embodied the entire essence of the sacramental and magical world, as well the church's claims to be able to control it” (Scribner 1986:12). For our

purposes, the abolition of the mass unambiguously signifies the disestablishment of Catholicism and the local victory of reformers. Fortunately, reform is a well-documented phenomenon and the variable is coded from secondary sources (e.g., Brady 1999; Cameron 1991; Köbler 1989; Moeller 1972). It is coded 1 if the mass was officially abolished during the period 1523–1545, but coded 0 if it was not. Sixty percent of the cities in our population abolished the mass.

## **Independent Variables**

### ***Population***

Historical demographers have developed standard techniques to estimate urban population; nevertheless, reported estimates sometimes vary. In coding these estimates, we took the average value of two estimates of town size gathered from studies that estimate populations from 1450 to 1600 (Bardet and Dupaquier 1997; Brady 1999; Dollinger 1970; Köbler 1989; Nicholas 2003; Russell 1972; Scott and Scribner 1996). Because population was stable or grew very slowly in agrarian Central Europe, we took available estimates from up to a century before or after 1520 as an estimate. Population size is measured in thousands of persons, which is logarithmically transformed.

### ***Hanseatic League***

Because membership in the Hanseatic League is associated both with the volume of trade in a city and the prominence of merchant guilds (Greif 2006), we include it as a proxy for economic development. A city is coded 1 if it belonged to the Hanseatic League in 1520 and 0 if it was not a member (Dollinger 1970).<sup>4</sup> Twenty-six percent of the cities belonged to the league in 1520.

### ***Distance to Wittenberg or Zurich***

Becker and Woessmann (2009) employ the greater circle distance (i.e., the shortest distance between two points on a sphere) to Wittenberg in kilometers as a measure of Protestant influence. While distance from Wittenberg may be a good proxy for demand in central and northern Germany, it might underestimate demand for reform in the Swiss lands and southwest Germany, which were heavily influenced by Zwingli. In order to capture the spread of demand for both the Lutheran and Zwinglian branches of the Reformation, we calculate the greater circle distance of each city to both Wittenberg and Zurich, compare the two distances, and use the shortest distance as a measure of demand for reform. Distance to Wittenberg or Zurich is measured in kilometers and was logarithmically transformed. Since distance to Wittenberg and Zurich is 0, a small amount (.001) was added to all values to allow logarithmic transformation. This variable was calculated by using the R function “*rdist.earth*” in the R statistical package “*fields*.”

### ***Monasteries and Mendicant Orders***

Drawing on a comprehensive list of the location of all monastic establishments in the HRE around the year 1500 (Jürgensmeier and Schwerdtfeger 2005–2008), we calculate the number of monasteries, convents, and priories (less the Dominicans) present in a city.<sup>5</sup> The approximate mean number of monastic and mendicant orders (less Dominicans) in a city was three.

<sup>4</sup>We also investigated trade links as an alternative measure of economic development. To assess the effect of intercity trade on reform, we measured the number of trade routes that intersected in a city, including local, regional, and long-distance (Fernhandelstrassen) routes. This variable was coded based on historical atlases (Berthold 1976; Magoosi 2002). However, this variable did not yield different results than our Hanseatic League measure and did not improve the fit of the models, so it was excluded from them.

<sup>5</sup>Since population size is included in all of the models, we use the sheer number of monasteries, convents, and priories (less the Dominicans) present in a city, rather than a measure of the number of monasteries per 1,000 people. Thus, the effect of this variable should be interpreted as net of population size.

### ***Dominican Order***

We use the presence of a Dominican priory in a city as a measure of the Church's capacity to enforce orthodoxy. It is coded as 1 if there is a Dominican priory in the city and 0 otherwise. The data are assembled from Boockmann (1987:50), supplemented by Hinnenbusch (1966, 1975). Approximately a third of the cities had a Dominican priory.

### ***Church Size***

Because large church structures may serve as a signal of market dominance, following Ekelund, Hebert, and Tollison (2006), we use the height of the nave (or dome if the largest church was a basilica) as a proxy for the size and capacity of a church. The use of the measurement of the nave or dome is the best way to capture the size of both Gothic and Romanesque structures because their height is the most important factor determining the volume of the sanctuary. The data are assembled from sources including figures supplied by historians (Mark 2006; Mitchell 1968) and by the churches themselves. The height in meters is log-transformed.

### ***Political Regimes***

By reference to established political geography, we code different political regime types, which are exclusive and exhaustive (Köbler 1989; Schindling and Ziegler 1989–1997; Spruner von Merz 1880).<sup>6</sup> If a town was chartered as a *free or imperial city* (city state) or was located in an *independent canton* in 1520, it is coded 1. But if a town did not enjoy this status and was located in a *Habsburg dominion*, it is coded 1, if it was located in one of 21 *princely states* independent of the Habsburgs, it is coded 1. Bishops or archbishops ruled *ecclesiastical states*. As they were both inhospitable to reform and belonged to the same anti-Reformation camp in imperial politics (Nexon 2009), we hypothesize that towns located in ecclesiastical states and Habsburg dominions should be unfavorable to reform. *Ecclesiastical states* and *Habsburg dominion* combined serve as the reference group. Approximately 30 percent of the cities were free or imperial cities or were located in an independent canton, 26 percent were located in princely states, 24 percent were located in a Habsburg dominion, and 20 percent were located in ecclesiastical states.

<sup>6</sup>We also investigated patronage as an alternative measure of political influence. At the local level political patronage may have determined the odds of Catholic abolition. Regional princes had varying postures toward the evangelical movement; some opposed reform, others supported it, while yet others maintained noninterventionist or neutral positions. The disposition of territorial rulers is coded based on historical accounts detailing a ruler's support or opposition to evangelical inroads in his territory, including membership in the Protestant party at imperial diets, hostility or alliance with the Habsburg emperor, and signatory status to the Augsburg Confession, as well as efforts to support or prevent the introduction of reforms in their territories (Dixon 2000; Köbler 1989; Neuhaus 1997; Schubert 1996). Our cities were located in the largest princely territories, the Habsburg domains, ecclesiastical territories, free cities, and the Swiss territories. In order to capture the political dynamics caused by rulers shifting their patronage, if a city was located in a territory whose ruler changed policies, we used the ruler's posture immediately proceeding the year that a city abolished the mass. This coding rule avoids the problem of reverse causality. Some cities enjoyed their charter from the emperor, rather than from local princes or bishops, making them fully independent. Accordingly, we estimated models using three indicator variables to measure the range of aristocratic patronage in the HRE: Neutral Patronage, which is coded 1 if a city was located in territories and cantons whose regional rulers positioned themselves as neutral or outside of the religious conflict; Pro-Reform Patronage, which is coded 1 if a city was located in territories whose regional rulers favored the evangelicals; and Free/Imperial Cities, which is coded 1 if a city was granted as an "imperial" or "free" city. The omitted category of anti-reform patronage (which includes the Catholic princely states, the ecclesiastical states, and Habsburg dominions) is the reference group against which these three indicators are evaluated. Because these indicator variables did not perform differently than our regime type variables and did not improve the fit of the models, we used the regime-type variables instead.

## RESULTS

In order to assess our hypotheses, we estimate a binary logistic regression model on the abolition of the mass, a categorical variable (Long 1997). Since our hypotheses predict the direction of the relationships, we use one-tailed significance tests in all models. Given that most economic theories of the Reformation focus on large cities and because larger cities may have been more sociologically complex, religious contention may have been driven by different dynamics in the smaller and larger cities (see Scott and Scribner 1996). In order to provide the best test of our theory, we estimate three separate logistic regression models. Using the median city size (7,700 people) as a cutoff point, the first model restricts the sample to small cities (cities with a population size less than 7,700 people); the second model restricts the sample to large cities (cities with a population size greater than or equal to 7,700 people); and the third model includes the entire population.<sup>7</sup> Table 3 presents the results of these models.

To test our demand-side hypotheses (H1 and H2), we use a city's logged population, membership in the Hanseatic League, and logged distance from Wittenberg/Zurich. While logged population size significantly increases the log odds of a city abolishing the Catholic mass in small and large cities (models 1 and 2), this effect does not reach statistical significance for the full population (model 3). Membership in the Hanseatic League, a proxy for extensive involvement in long-distance trade, significantly increases the log odds of a city's abolishing the Catholic mass, but only in large cities and for the full population. The greater a city's distance from Wittenberg/Zurich, the lower its log odds of abolishing the Catholic mass across all models. These results provide support for our demand-side hypotheses, particularly for larger cities.

We test our supply-side hypothesis (H3) using the number of monasteries in a city, the presence of a Dominican priory, and the logged height of the nave of a city's principal church. In assessing the effects of monasticism, we find that the number of monasteries in a city significantly decreases the log odds of a city's abolishing the mass in large cities and for the entire population (models 2 and 3), but not in small cities. This supports our proposition that welfare service provision decreased the log odds of Protestant reform in cities by increasing the city's dependence on the Church, though welfare service provision appears to have been particularly important in larger cities. Although the negative beta coefficient for church height is in the predicted direction across all models, it only reaches statistical significance for larger cities. Contrary to our expectations, the coefficient for the Dominican variable is positive. The results of these three variables thus yield mixed support for our supply-side hypothesis premised on dependence and control.

We test our hypothesis concerning political incentives (H4) with regime-type variables. Compared with the reference category of cities located in ecclesiastical states and Habsburg dominions, cities located in free states and cantons and cities located in princely states were significantly and substantially more likely to abolish the Catholic mass across all models. These results provide strong support for existing accounts that focus on magisterial interests and political contention to explain supply-side Catholic disestablishment. As predicted by our theory drawn from the religious economics model, demand- and supply-side factors and political incentives all contribute to understanding the abolition of Catholicism in larger cities. In small cities, however, the model is less supported and supply-side factors do not significantly affect the log odds of Catholic abolition. As such, our models account for a smaller amount of variance for small

<sup>7</sup>Although we separated the sample into small and large cities, we are still interested in the effect of logged population size, and therefore include it in all models. While including logged population size makes the intercept difficult to interpret, it does not substantially affect the results. We estimated additional models (not shown) excluding logged population as well as models substituting logged population with absolute population size and the direction of the effects and whether they reach statistical significance remained the same.

Table 3: Logistic unstandardized regression coefficients predicting abolition of the Catholic mass in the HRE 1523–1545

	Model		
	Small cities	Large cities	All cities
<b>Demand:</b>			
LogPopulation	4.795 (3.652)	2.796† (1.592)	.325 (.940)
Hanseatic League	.739 (.734)	1.426* (.624)	.997* (.447)
LogWittenberg/Zurich distance	−.971* (.383)	−1.279* (.518)	−1.152*** (.298)
<b>Supply:</b>			
Dominican order	.057 (.624)	1.780* (.699)	.874* (.431)
Monasteries	.094 (.164)	−.212* (.089)	−.151* (.067)
LogChurch height	−1.271 (1.341)	−3.199† (1.900)	−1.318 (1.057)
<b>Legal-regulatory:</b>			
Free city/canton	1.269* (.622)	1.590* (.635)	1.570*** (.417)
Princely states	1.750** (.619)	3.099*** (.890)	2.171*** (.482)
Constant	−11.510 (13.611)	−1.215 (6.178)	6.309 (3.937)
<i>N</i>	108	110	218
Null deviance	138.83	151.58	293.27
Residual deviance	105.51	84.57	202.69
Nagelkerke $R^2$	.37	.61	.46

One-tailed significance tests: † $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

cities compared to large cities (Nagelkerke  $R^2$  values of .37 for small cities and .61 for large cities).

## DISCUSSION AND CONCLUSION

Our theory of church disestablishment predicts that demand- and supply-side factors and political incentives should increase the likelihood of disestablishing a monopoly. The test that we have conducted has the limitations common to historical analysis. Although quite large for a historical study, our number of cases is modest. As in most historical studies, variables can be difficult to measure and the analysis often depends on proxies rather than more direct (but unavailable) measures. For example, the measurement of economic variables for early modern cities is difficult, as most indicators, such as economic growth or gross product, are not available.<sup>8</sup>

Nevertheless, we have found reliable estimates of a number of variables in the rich trove of existing empirical literature—historical monographs and atlases, published source materials, and

<sup>8</sup>For a review of the methodological issues raised by historical research in the social sciences, see Kiser and Pfaff (2010).

comprehensive lists. And while the historiography of the Reformation is too extensive for us to have treated adequately, our social-scientific approach has its advantages. While historians have provided a host of detailed case studies of the Reformation, the general factors that account for Protestant success have remained elusive. Scribner (1986) noted that research on the Reformation tends to be unsystematic and biased toward a few noteworthy cases. He called for more systematic studies based on a diverse sample that included both free cities and cities under territorial rule. Our study attempts to answer his call while testing a synthetic model of religious disestablishment.

Weber (1963) posited an elective affinity between socioeconomic status and religious beliefs. As we elaborated in H1, sociodemographic changes in a society may bring with them shifts in religious preferences. Our findings render partial support for this proposition. City size as a proxy for the differentiation of religious demand is not consistently associated with increased odds of abolishing Catholicism; however, we do observe a marginal effect when we divide our population into samples of smaller and larger cities. Likewise, we find that membership in the Hanseatic League as a proxy for mercantile development increased the odds of reform in the sample of large cities and in our greater population of cities. It does appear that highly commercialized trading centers favored Protestantism net of other variables. It is true that our population only includes cities of substantial size (those of 5,000+ populations) and not smaller towns. If we had a more diverse population including smaller cities, the effect of population size may have been more pronounced. It may also be that despite its widespread use in economic history, population size is too coarse a proxy of socioeconomic development.

Our theory also predicts that demand for the abolition of Catholicism will be lower the greater a city's distance from Wittenberg or Zurich. The results provide strong support for H2 across all estimations of the model. Because developments in Wittenberg and Zurich were the vanguards of the Reformation, cities closest to Wittenberg and Zurich were more likely to receive information of all kinds regarding Protestantism as a new religious option. This afforded them the opportunity to change their preferences in favor of Protestant reform. Importantly, the diffusion of evangelicalism reduced the log odds of abolishing Catholicism *net* of level of economic development, and therefore Protestantism must have gained support even in cities with fewer economic incentives for reform. Thus, our findings do not support a narrow economic explanation of the Reformation and suggest that Ekelund and his colleagues may overestimate the power of the purse in motivating the overthrow of the Catholic monopoly.

Indeed, most existing studies based on a religious economies model tend to emphasize supply-side factors, generally assuming a more or less universal demand for reform. However, the negative effect of distance from Wittenberg/Zurich and the positive effect of membership in the Hanseatic League suggest the relevance of the demand-side variables we included in our analysis. Individuals' religious preferences are largely shaped by the social experiences they have and the "feasible options" available to them (Sherkat 1997). As more religious options enter a monopolistic market, individual preferences may change. Once religion comes to be perceived as a matter of choice rather than a matter of fate, the proliferation of "heresies" becomes difficult for incumbent monopolists to suppress (Berger 1979). Modeling sociodemographic changes and the market entrance of new religious ideas (see, e.g., Montgomery 1996) is therefore an important frontier for the religious economies approach.

Since the appearance of new religious options may undermine a religion's monopoly status, it may seek to restrict or deter market entry. Our third hypothesis postulated that monopolists will rely on organizational mechanisms that establish dependence and control among adherents. One strategy for doing so is to create monumental churches that serve as signaling devices of market dominance (Ekelund, Hebert, and Tollison 2006). We find some support for this as church height decreases the log odds of abolishing the Catholic mass in large cities, although it does not have a significant effect in small cities or for the entire population of cities. Another strategy for deterring the market entry of rival sects is orthodox enforcement. Yet, the positive beta coefficient of having a Dominican priory in a city, a measure of orthodox enforcement, is

contrary to H3.<sup>9</sup> Although it was intended as the sword and shield of the Church, the Dominican order in a city may have its unexpected impact during our period of study because it was saddled with duties detestable to broad sections of the urban population. These included staffing the Inquisition, serving as censors, collecting monetary levies, and selling indulgences. In their efforts to increase sales, the Dominicans were frequently accused of abusing theology and misleading the public (by Luther, famously, among others). By making themselves the most visible agents of the most objectionable practices of the Church, the Dominicans became the focal point of the early evangelical rebellion.<sup>10</sup> This highlights how rent seeking and corruption within monopoly religious institutions can endogenously undermine the credibility of their belief system, thereby making themselves vulnerable to rival sects who then use this as a rallying call to buttress their opposition. The history of the poorly coordinated and disorganized reaction of orthodox Catholic forces to the Reformation movement prior to Trent certainly reinforces this interpretation (Bagchi 1991; Nexon 2009).

While orthodox enforcement and resources spent on monumental churches may alienate adherents, welfare provision services are an unlikely target of popular opposition. The entry of rivals may effectively be obstructed by increasing the dependence of adherents on the monopoly firm. We find support for this proposition in the effect of welfare-enhancing service provision of the Church. In our population of cities and among the sample of large cities, larger numbers of monasteries are associated with lower log odds of abolishing Catholicism, which may be attributed to the monasteries serving as distributors of welfare goods. Although Wuthnow (1989) concluded that the greater the extent of charity undertaken by the Roman Church, the greater the demand among burghers that its resources be taken over by the urban polity, our results indicate otherwise. While there were cities in which the organizational resources of the Church proved tempting targets for Protestant seizure, this was not their general effect. In larger cities, by increasing the dependence of the urban population on its charities and other services, the Church's monastic apparatus apparently reinforced the Catholic monopoly.

Religious organizations that offer diverse products have a competitive advantage because they are able to satisfy a larger array of consumer preferences (Miller 2002). One method by which religious organizations do so is by offering material goods as well as spiritual ones. Gill and Lundsgaarde (2004) find a negative association between government welfare spending and religious participation, suggesting that some individuals adhere to religious firms for welfare benefits. Indeed, sects may arise to satisfy demand for unmet social and welfare services (Iannaccone and Berman 2006) and garner committed members by doing so (Stark and Bainbridge 1980; Stark and Finke 2000). "Club goods" such as welfare services that are selectively available to loyal adherents may be one of the most potent mechanisms by which religious organizations control their members (Berman 2009). Yet, the implications of this for the persistence of religious monopolies have been underexplored. The size, resources, and organizational infrastructure of religious monopolies may give them a distinct advantage over rival firms when it comes to large-scale distribution of welfare service provisions. Our results suggest that the maintenance of a religious monopoly partly depends on it ensuring that the social and welfare needs of its adherents are being met—at least to a degree that rival firms cannot match. Analyzing

<sup>9</sup>We acknowledge that the unexpected direction of the coefficient for the Dominicans could also indicate a degree of causal endogeneity. As the ideological bulwark against heresy, Dominican priories may have been established in towns where criticism of the Church was flourishing, where the population was prone to disloyalty, or where organized threats were already perceived. Our measurement of this variable, which measures the presence of these organizations prior to the onset of the Reformation, helps to mitigate this, as does the fact that Dominican priories had usually been established in the cities for many decades or even centuries prior to 1517.

<sup>10</sup>For instance, in 1509 Dominicans in Bern staged false apparitions of the Virgin so as to increase indulgence sales at a Marian shrine. As a result of this very public scandal, four Dominican friars were convicted of heresy and executed. In the years to come, Lutheran polemics savagely attacked the Dominicans as agents of corruption and exploitation.



how different types of entry control mechanisms may protect or undermine market dominance may prove a fruitful avenue for future research.

Our theory of church disestablishment considers the importance of elite political interests for the maintenance or abolition of a religious monopoly. H4 predicted that cities with the greatest independence from Roman ecclesiastical and from Habsburg imperial authorities would be the most likely to abolish Catholicism. The findings provide substantial support for this hypothesis. Compared with cities located in ecclesiastical territories ruled by prince-bishops or Habsburg dominions, cities in the highly autonomous free states and cantons were significantly more likely to abolish the Catholic mass. As has been emphasized by the historical literature, the politically assertive leaders of city-states may have eagerly embraced the Reformation as a way to assert civic interests, appropriate foundations, and endowments, and reduce outside influence on their internal affairs (Blickle 1992; Brady 1998; Moeller 1972). Moreover, the relatively open and responsive form of government that obtained in free states and cantons may have made it easier for popular demand to affect institutional change (Swanson 1967; te Brake 1998).

Cities located in princely states also had higher log odds of abolishing the Catholic mass compared to cities located in ecclesiastical states and Habsburg dominions. This finding is not only consistent with the historiography of the Reformation but also with the logic of political incentives as offered by Stark (2003) and Gill (1998). It seems clear that where princes either favored the Reformation or did nothing to obstruct its entry, Protestants enjoyed enormous advantages. In some instances, the princely patronage of reformers facilitated an attack on the Catholic establishment; in others, pressure from a territorial ruler influenced the disposition of urban elites fearful of openly defying their prince's political preferences. Protestant propaganda and agitation appear to have devalued existing church-states arrangements for many of the princes and urban elites. At the same time, disestablishment tempted princely elites with appealing incentives, including secularizing religious endowments and instituting less expensive models of ecclesiastical organization. Consistent with Gill's (1998) opportunity-cost theory of church-state conflict, by providing economic incentives for church disestablishment, rival religious firms increase the opportunity costs of cooperating with the religious monopoly and may thereby entice rulers to support their cause. Thus, future studies of church disestablishment should consider how the opportunity costs of supporting the incumbent monopoly change with the entrance of rival religious firms.

The importance of political regimes that is confirmed by our analysis is consistent with a growing recognition in the historical sociology of religion that states have played a vital role in shaping and creating religious economies through the regulation of supply and the direct provision of religious goods (McCleary 2011; Froese and Pfaff 2005). More than religious pluralism, state regulation may be the critical factor in determining the performance of religious firms (Fox and Tabory 2008). In exploring the factors that lead to institutional change, our study suggests that church-state relations and, in particular, the interests of rulers, may be just as important as firm-level factors for understanding the collapse of monopolies and the flourishing of rival firms.

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