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Are Religions for Sale? Evidence from the Swedish Church Revolt over Same-Sex Marriage^{*}

Niklas Bengtsson[†]

March 10, 2017

Abstract

Religious leaders sometimes condemn progressive social norms. In this paper, I revisit David Hume's hypothesis that secular states can "bribe" churches into adopting less strict religious doctrines. The hypothesis is difficult to test due to reverse causality: more liberal theologies may attract more political support in the first place. To circumvent this problem, I focus on a theological conflict over same-sex marriage within the Church of Sweden and take advantage of political regulations that effectively make some parishes shareholders of the church's state-protected property. The shares used for statistical identification are tied to property rights assigned more than 300 years ago, and they cannot be sold, traded or amended by the individual parishes. I find that priests in shareholding parishes are less likely to publicly oppose same-sex marriage. The effect is stronger in parishes with more conservative members. The combined results are consistent with a model of clerical opportunism, in which access to political rents increases the clergy's loyalty to the political sponsors relative to the local community.

Keywords: religious orthodoxy, same-sex marriage, subsidies, rent-seeking, religious market hypothesis

JEL: H2, H3, Z12

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1 Introduction

Religious leaders sometimes condemn activities that most people find acceptable. This paper studies religious strictness from an economic perspective. More specifically, I revisit David Hume's hypothesis that political protection, such as church subsidies and rents from state-protected property, will make religious organizations more mainstream.

As discussed in Adam Smith's *The Wealth of Nations*, David Hume remarked that priests often resorted to "folly, delusion and superstition" in order to "remain sacred in the eyes of their retainers". As a remedy, Hume suggested that the magistrate should "bribe their indolence" by protecting the clergy's incomes or supporting their church in some other way (Smith 1887). Modern contributions on the topic have argued that the doctrines of state-protected churches often conform to secular norms (Stark and Iannaccone 1994). Direct tests of Hume's hypothesis are rare, however. A first empirical challenge is the direction of causality. While political protection may affect the theological positions of the clergy, as Hume suggested, a less strict theology may also attract political support in the first place. A second challenge is the measurement of religious strictness. It is not possible to rank religions by their anti-secular doctrines when they interact with different secular societies. For this reason, the quantitative empirical literature is constrained by a limited number of comparable observations.

A theological conflict in the Church of Sweden provides an opportunity to address these challenges. In 2005, the Church of Sweden's National Assembly, consisting primarily of political representatives, endorsed same-sex marriage. The endorsement was an attempt to pave the way for a more liberal marriage legislation. Although the bishops supported the endorsement, more than 800 parish priests (out of approximately 3,500) publicly declared their refusal to conduct same-sex marriage ceremonies. To study how political subsidies affected the decision to revolt against same-sex marriage, I take advantage of regulations that effectively make some parishes shareholders of the church's protected property. During the medieval era, parish priests were given plots of land to sustain themselves. Today, the parishes own shares of the church's total property, and the number of shares owned by each parish corresponds to its land and property ownership at the end of the 18th century. Shareholding parishes benefit more from external revenue – such as subsidies targeting church buildings and dividends from the church's accumulated capital – relative to other parishes. I use the parish-level variation in property shares to identify the effect of political protection on opposition to same-sex marriage.

Two institutional features are particularly helpful when employing the empirical strategy. The first is that the parishes cannot sell, trade or change their property shares. As part of the separation deal in 2000, dioceses in the Church of Sweden were given the right to manage their property while the parishes were given the right to independently spend the dividends.¹ This means that access to church subsidies and land rents within

 $^{^{1}}$ There are four administrative levels of the church: the national level, the diocese level, the pastorate level and the parish level. See the Appendix for details.

each diocese is tied to property rights assigned over 300 years ago, which limits the threat of reverse causality (for example, that conservative parishes might be less interested in pursuing financial support from politicians, or less successful in acquiring it).

The second feature is high-quality data on member characteristics. The rigid system of territorial parishes allows me to match both administrative registers and church election results to the dataset. These data are virtually void of measurement error and response bias. I use these data to control for member sorting across parishes and to analyze the association between subsidized property and the religious demands of the local members. Parish-level variation in members' support for the conservative nomination group *Frimodig Kyrka* is particularly informative. *Frimodig Kyrka* entered the church elections prior to the 2005 clergy revolt, based primarily on a platform that opposed same-sex marriage. The local vote share received by *Frimodig Kyrka* arguably captures the members' demand for strict religious attitudes.



Figure 1: Opposition to same-sex marriage in the Church of Sweden. The scatter plot is obtained by ranking parishes by their external revenue (subsidies and dividends from landed property), creating bins of equal sample size (n=30) across this ranking, and then calculating the average opposition rates and subsidies for each bin. Subsidies and dividends from landed property are defined according to equation (5). The vertical axis measures opposition to same-sex marriage among the clergy (blue circles) and the members (red triangles). Clergy opposition is defined as the share of priests in the parish who signed the petition against same-sex marriage in December 2005. Member opposition is defined as the parish vote share received by the conservative nomination group *Frimodig Kyrka* in the September 2009 election. The lines are obtained by fitting quadratic regression models to the plotted data. There are 788 observations in total (pastorates).

The main dataset comprises 1,477 parishes. Consistent with Hume's hypothesis, I find that priests serving in parishes with a high degree of state-protected revenue are less likely to publicly oppose same-sex marriage. The data do not support demand-side interpretations, for example that parishes with more historical property attract more

liberal followers. A snapshot of the main results is given in Figure 1. The figure illustrates that while the clergy's opposition to same-sex marriage is negatively associated with the presence of subsidized property, member opposition is not negatively associated with the presence of subsidized property. In the body of the paper, I show that the plots in Figure 1 are robust to potential confounders at the parish level – including the presence of arable land, the age and number of historical church buildings, and the socioeconomic characteristics of the local residents. The results are also robust to alternative data sources and definitions of the variables used in the analysis.

The results suggest that subsidies can influence the official theology of religions in more secular directions, which is consistent with Hume's hypothesis. In the conceptual framework of the paper, suggest that access to political rents reduces the clergy's loyalty to their local religious communities. This framework takes the incongruence between local parishes and secular society as a given, and thus sidesteps the problem of defining "religious strictness" on theological grounds. In the model, a representative priest faces a loyalty dilemma between the political sponsors and the local community. The model formalizes the intuition that if subsidies reduce opportune religious pandering, they should be more relevant in parishes where members are more conservative. Consistent with the model, I find that the effect of subsidies is strongest in conservative dioceses, where the members' attitudes towards same-sex marriage are less congruent with Sweden's political demands. The data are less supportive of psychological interpretations, for example that access to wealth or exposure to culturally important buildings increase the priests' "taste" for a more progressive theology.

This paper relates to several branches in the literature. The political influence in the Church of Sweden is discussed in Rydenfelt (1985), Gustafsson (1990), Stark and Iannaccone (1994), and Iannaccone et al. (1997). A first branch of related empirical economic research focuses on the so-called "religious market hypothesis". Iannaccone (1991) shows that people living in countries with one dominant religion are less religiously active. McCleary and Barro (2006) revisit this results using a country panel, and find that the political regulation of the religious market is associated with lower religious activity (although the effect of adopting a state religion is insignificant). Hamberg and Pettersson (1994) study religious attendance in Sweden and find that it his higher in parishes with more competing denominations. A second branch studies the complementaries of government spending and church spending. Gruber and Hungerman (2007) find that giving political subsidies to sectors that have traditionally been in the church's domain reduces charitable giving through churches. A third branch of research analyzes churches as large, rent-seeking corporations (Ekelund et al. 1996). This work shows that churches sometimes use theological innovations to protect their financial interests (a striking result is that the medieval Church appears to have enforced usury laws during the times it needed external funds; Ekelund et al. 1989). A fourth set of papers uses club models to analyze the impact of subsidies on religious strictness. Iannaccone (1992) suggest that external funds may reduce the strictness of churches, if they are used to attract easygoing participants. However, Berman (2000) finds that the liberalizing effects of subsidies depend on how the clergy reacts to the inflow of free-riders.² Finally, recent work using signaling theory suggests that bans on conservative expressions of worship (like the Muslim veil) may be counterproductive if the goal is to integrate religious communities in secular societies (Carvalho 2013).

The paper is structured as follows: The next section provides a brief background on the same-sex marriage revolt in the Church of Sweden and a short overview of the distribution of subsidized property within the Church of Sweden. Section 3 presents the conceptual framework and the empirical strategy. Section 4 presents the results and robustness checks, and Section 5 concludes.

2 The Church of Sweden

2.1 The Same-Sex Marriage Revolt

The Evangelical-Lutheran Church of Sweden is one of the world's largest Christian congregations, with more than 6.2 million members (the Swedish population is approximately 10 million). It was the state church of Sweden until 2000. Although the church and the state of Sweden are now separated, they are still intertwined through regulations, management practices and special laws. Political parties still run for office in the church, and political issues have continued to influence the church since the separation. The church has maintained a number of privileges since the separation as well. Landed property, which was partly owned by the state and the municipalities before the separation, was transferred to the church, and a church subsidy, targeting church buildings with cultural heritage status, was introduced in 2000 (Svensk författningssamling 1998).

This paper focuses on the clergy's opposition to the National Assembly's decision in 2005 to endorse same-sex marriage. The National Assembly consists primarily of representatives from political parties. Although all 14 bishops of the Church, including the archbishop, supported the endorsement, the local clergy was divided. Approximately one-third of the active priests responded that they were unwilling to conduct same-sex marriage ceremonies, according to (undocumented) internal surveys from 2003.

In December 2005, 864 priests signed a public declaration criticizing the Church's official endorsement, vowing never to conduct same-sex marriage ceremonies.³ At the time, the Church of Sweden had approximately 3,500 active priests. The list of names became known as the "Kalin list", after Yngve Kalin, who took the initiative to create the declaration. The declaration in full was:

"The Church of Sweden has endorsed a new procedure for the blessing of registered partnerships and written this into the Church Order. We, the clergy of this Church who have signed this declaration, believe that this

 $^{^{2}}$ More specifically, Berman (2000) finds that subsidies that increased easygoing participation spurred Ultra-Orthodox Jewish groups in Israel to update their behavioral restrictions.

 $^{^{3}}$ The major Swedish newspapers covered the internal conflict, and the theological polarization in the church has been the subject of much media scrutiny. Reuterswärd et al. (2014) is a recent documentary.

decision conflicts with the system of cohabitation and marriage that God by his word revealed to us, and which is defined as a relationship between a man and a woman. God's Word does not allow us to bless any other kind of relationship. We as priests are bound by our vows of fidelity to the Sacred Scripture and the confession that we gave at our ordination, and we therefore oppose the approved scheme and would thus make it publicly known." (my translation from Swedish)

It was initially unclear whether priests could refuse to conduct same-sex marriages without violating their employment contract. The Church's National Assembly has no employer responsibility over the priests hired by the parishes. The diocese chapter may, however, exclude priests from the Church if they violate their vows. A ruling in 2009 concluded that individual priests can refuse to perform same-sex marriage ceremonies for personal reasons, but that parishes, as juridical entities of the church, are required to offer wedding ceremonies to same-sex couples.

The public broadcasting of the opposition is thus noteworthy. Given the decentralized model of authority, reluctant priests could easily have avoided same-sex ceremonies and continued to spread orthodox interpretations of the Bible without risking any official penalties. The likelihood of ever being confronted with the task of conducting a marriage ceremony for two members of the same sex must have been perceived as slim, as the ratio of registered same-sex partnerships to conventional partnerships is about one to 1,000 (SCB 2015). However, the opposition was coordinated and made public using a petition that included the priests' parish affiliations.

I propose that the public opposition was a way to signal religious commitment to the local religious community. The 13 dioceses of the Church of Sweden are not homogeneous. As shown in Figure 2, the number of priests opposing same-sex marriage is correlated with the share of votes in the diocese for *Frimodig Kyrka* (across pastorates, the correlation between the vote share of *Frimodig Kyrka* and the share of priests opposing same-sex marriage is $\hat{\rho} = 0.69$). *Frimodig Kyrka* is a conservative nomination group in the church that had its breakthrough in the 2005 election. Their primary agenda is opposition to same-sex marriage and female ordination.⁴ If one interprets the vote share received by *Frimodig Kyrka* as a proxy for local member demand for religious strictness, Figure 2 tells a logical story of spatial heterogeneity: priests publicly condemn the National Assembly's endorsement of same-sex marriage in parishes where such condemnations are expected to have more support among the followers.⁵

 $^{^{4}}$ Female ordination has been allowed in the Church of Sweden since the 1970s, and while *Frimodig Kyrka* does not seek to revoke women's right to become priests, it claims to represent the rights of priests who are critical of female ordination.

⁵That Gothenburg, Skara, Luleå and Växjo represents the more conservative dioceses is not a novel finding. Priests in these dioceses are more likely to make formal interpretations of the Bible, and more likely to agree with the statement "I believe that Jesus through his death forever defeated the evils of the world". By contrast, priests in Stockholm and Västerås are more likely to agree with the statement "The story of Jesus' death and resurrection should not be taken literally". See Willander and Blåder (2016).

2.2 Political Protection in the Church of Sweden

The distribution of property in the Church dates back to the medieval era (the oldest churches in Sweden are about 1000 years old). Medieval priests were expected to sustain themselves by cultivating land plots (called "glebes"). In Sweden, the Catholic Church employed such a system until the Protestant reformation in 1527. During the reformation, the crown confiscated most of the church's assets. Later kings were more supportive, and estates were returned to the church during the 18th century, beginning with a decree by Karl XI in 1696 (Normann 1956; Schalling 1920). The glebe system was utilized until a reform in 1910 turned priests into state employees. The church's current ownership of land approximates its land holdings at the end of the 18th century (Växjö Stift 2013).

The regulations governing church property were last revised in 1997, in preparation for the separation of church and state. The dioceses became formal owners of the landed property and retained the right to manage the land. The parishes were given shares proportionate to the value of the land they had historically possessed within each diocese. Today, the parishes receive annual dividends on their shares, but more shares do not translate to more influence on the diocese boards. Parishes cannot sell, trade, or amend their shares. When two parishes merge, or when several parishes form a so-called joint church community, the new share is simply the sum of the individual parishes' shares (since 2014, joint parishes are called "pastorates"; see the Appendix for further details). The details of the regulations are documented in Svensk författningssamling (1998) and SOU (1997).

The dividends are not earmarked, other than that they should "support the Church of Sweden's enunciation". However, the final paragraph of the law says that the property management must be "acceptable," without further elaboration, and gives the secular government the right to supervise the system. Since 2000, the Swedish government has never exercised this right, although it has amended a few regulations that indirectly affect the church's assets at the national level. For example, capital returns on church property were tax-exempt until 2010.

According to the annual reports of the Church of Sweden, the total market value of the landed property is about \$10 billion, and dividends from the landed property amount to approximately 3% of the total revenue of the church. The tax-funded church subsidies, which are meant to support the restoration of church buildings with cultural heritagestatus, amount to 12% of the church's total revenue. While the church subsidies are not part of the dividends system, the spatial distribution of buildings eligible for subsidies is strongly correlated with the property shares (Figure 4). This is unsurprising because the glebes were established in direct coordination with the construction of the church building itself (Gräslund Berg 2004).

While the subsidies and land rents represent a small share of the Church's total revenue, they represent significant sources of external revenue in some parishes. Figure 3 displays the spatial variation in rents (church subsidies and dividends) relative to members' fee payments in the parish. The spread of rents *within* each diocese is given by each box in the plot. It is instructive to compare Stockholm and Visby in Figure 3. Stockholm is the most recently established diocese, founded in 1942 (the medieval capital of Sweden was not Stockholm, but Uppsala). The Stockholm diocese possesses relatively little land and relatively few church buildings with cultural-heritage status. By contrast, the Visby diocese is home to the largest number of medieval churches in Sweden due to its prominence as a trade hub in the 12th century, and the Visby diocese is one of the biggest recipients of church subsidies and a relatively large owner of land. The parishes in the Visby diocese.

3 Conceptual framework

This paper's main hypothesis is that states can influence the theological orientation of religious organizations by protecting their revenue. This idea entails an assumption of clerical opportunism, which goes back to at least David Hume and Adam Smith. Although Hume and Smith had different views on the benefits of church subsidies, both appear to have maintained that the clergy are opportunistic. Hume wrote that if clergy members' incomes were protected, they would no longer find it "necessary" to satisfy the tastes of their more orthodox members. According to Smith, reputation concerns would make priests less radical. More specifically, Smith suggested that a priest of "rank and fortune" would naturally adopt less antisocial religious doctrines, as "his authority and consideration depend very much upon the respect which this society bears to him" (quotes from Smith 1887; see also the discussion in Anderson 1988). The hypothesis that politicians can "bribe the indolence" of churches is a recurrent theme in the economic study of religion. Under the headline "The socialized Church of Sweden", Stark and Iannaccone (1994) concludes that "the Church appears to have purchased continued support from [the Social Democrats] by subjugating religious concerns to political demands." Gustafsson (1990) offers a similar interpretation.

The competing hypothesis is that certain theological doctrines, like reformed Christianity, promote a certain set of public goods that liberal states are more willing to support.⁶ I address the threat of reverse causality by exploiting the specific rent-sharing arrangement in the Church of Sweden, which implies that the value of political protection varies across parishes in a way that is exogenous to the present-day economic and theological management of the church.

To conceptualize this approach, I begin by modeling a parish priest's trade-off between rent-seeking and remaining loyal to his or her community. I assume that there is a continuum of theological positions ordered on the unit interval, where 0 is the most strict position and 1 is the most politically servile position. The church's official position on the interval is $z \in (0, 1)$, and the personal conviction of a representative priest

 $^{^{6}}$ This hypothesis is closely associated with the work of Max Weber (Weber 2002)

operating in parish *i* is $z_i \in (0, 1)$. If the highest office of the church endorses a more mainstream religious doctrine, politicians are more likely to reward the church with income protection (subsidies, protected property, and other privileges). The value of such political protection is given by the rent-function g(z), which is increasing in z. The parish's share of the rents is equal to α_i , which means that the parish's access to rents is $\alpha_i g(z)$.

The analytical separability of α_i and g(z) is the critical part of this structure. It says that while the overall access to rents in the church depend on the adoption of more liberal doctrines, the parish's access to those rents is given by an exogenos parameter α_i .

The parish priest's utility from serving in the church depends on (1) the degree of theological dissonance between the parish and the official doctrines of the church, and (2) the local availability of rents. Suppose the priest's utility function is

$$u = \lambda \alpha g(z) - (1 - \lambda) \frac{1}{2} (z - z_i)^2,$$
(1)

where the term $\frac{1}{2}(z-z_i)^2$ captures the priest's intrinsic aversion to theological dissonance. The parameter λ measures the opportunistic nature of the clergy. A higher λ implies that the clergy cares more about rents than about being theologically consistent.

The utility response from a change in the official church doctrine is given by

$$\frac{\partial u}{\partial z} = \lambda g'(z) - (1 - \lambda)(z - z_i).$$
⁽²⁾

In the Swedish case, the National Assembly proposes z, and the priest decides whether to oppose or endorse this decision. Suppose the rent function is linear, so $g(z) = \gamma z$. The priest will endorse a more secular doctrine if the utility change is positive; that is, if:

$$z_i + \frac{\lambda}{1 - \lambda} \gamma \alpha_i > z. \tag{3}$$

An increase in the rent share α_i increases the parish priests probability of endorsing same-sex marriage under two assumptions: (1) they are opportunistic ($\lambda > 0$) and (2) they expect the political protection of the church to be dependent on the church's endorsement of a more secular doctrine ($\gamma > 0$). Priests who already agree with the regime change (priests with $z_i > z$) will always endorse same-sex marriage.

The empirical counterpart of α_i is the parish's property share, which varies across parishes but is pegged to the parish's relative ownership of land during the glebe-system. Although the present-day state of Sweden can influence the availability of church rents at the national level, it is prevented from appropriating individual parish land or altering α_i (for the same reason that it is prevented from appropriating any other private property in Sweden). Conversely, parishes are not able to change, sell or alter their shares without the diocese's approval.

This implies that the within-diocese variation in landed property is exogenous to the

within-diocese variation in the clergy's theological positions. Denoting dioceses j and parishes i, I estimate the following linear regression model:

$$opposition_{ij} = \beta \log(protection_{ij}) + c_j + \delta q_{ij} + u_i, \tag{4}$$

where $opposition_{ij}$ measures clerical opposition to same-sex marriage in parish *i* in diocese *j*, equal to the number of petition names in the parish (I explore other definitions, including the share of opposing priests, in a robustness section); c_j captures a set of diocese dummy variables, and q_{ij} is a vector of control variables. The effect of interest is β .

The variable $protection_{ij}$ is defined as follows:

$$protection_{ij} = shares_{ij} \times (dividends_j + subsidies_j) \tag{5}$$

where $shares_{ij}$ equals the parish's shares in the diocese's landed property, conceptually the same as α_i in equation 3. The terms $dividends_j$ and $subsidies_j$ are the annual averages of all dividends and subsidies channeled through the diocese between 2000 and 2010. Given the diocese fixed effects, the identifying variation in the regression analysis comes solely from the logarithm of the land shares. The graphical evidence exploits the full variation in *protection_{ij}*, however.

A critical issue is that the presence of landed property may be associated with certain geographic characteristics that relate to the demand for more orthodox priests. This problem is partly alleviated by the rigid system of territorial parishes, which limits direct member sorting. While both members and nonmembers may attend any sermon in any church, specific services (e.g., confirmations, weddings, and funerals) are primarily available to members only in their parish of residence. However, residential decisions may be related to the presence of landed property through some other factor (e.g., the historical availability of farmland). This problem is resolved in two ways. First, to guard against residential selection, I make use of a rich set of administrative register data on the parish residents' socioeconomic backgrounds. The Swedish tax authority (Skatteverket) is responsible for collecting church membership fees and local funeral taxes, which means that individual tax records and other administrative data can be matched to the dataset. Second, I use the local vote share of the conservative nomination group Frimodig Kyrka as a dependent variable in auxiliary regressions in order to directly estimate the impact of subsidized property on the local demand for strict religious doctrines. These results, reported in Section 4, suggest that the presence of landed property is not related the members' "taste" for conservative theology.

The Church of Sweden has several administrative levels: the national level, the diocese level, the pastorate level, and the parish level. Table 6 in the Appendix provides a schematic overview of the responsibilities at the different levels. The outcome variable *opposition*_{ij} varies at the parish level, as do most of the control variables. However, the main explanatory variable *protection*_{ij} varies at the pastorate level. The pastorate is

an administrative unit between the parish and the diocese. The distinction is irrelevant for pastorates with only one parish (approximately one third of the sample). In the regression analysis, the parish is the unit of observation, but the standard errors are clustered at the pastorate level.

Table 1 displays the descriptive statistics of the variables used in the analysis. The share of opposing priests per parish is markedly higher than the vote share of *Frimodig Kyrka*. While this does not prove that members are more liberal than priests, it is consistent with the church's internal surveys, which indicate that, compared with priests, the church's members are more supportive of same-sex marriages. Another striking feature in the data is that the distribution of property shares is uneven, ranging from 0 to 0.223, with a mean of 0.0225. With 788 pastoral units, the average rent share would have been 0.0013 had the distribution been uniform. The uneven distribution of rent shares motivates the use of a lin-log specification.

4 Results

4.1 Income protection and opposition to same-sex marriage: Graphical evidence

The relationship between income protection and clerical opposition to same-sex marriage is negative, as shown in Figure 1. The scatter plot is obtained by first ranking parishes by their external revenue (definition [5]) and then creating bins of equal sample size across this ranking. The markers represent the average values for each bin. A geographic representation of the same bivariate relationship is given in Figure 5. Opposing priests are primarily serving in parishes that rely more on member revenue than on rents; that is, parishes in the southwest (the Gothenburg diocese) and in the northeast (the Luelå diocese). These dioceses are also the home of less property-abundant parishes.

Figure 6 displays how rents and orthodoxy vary with the age of the parish. To facilitate comparison, the smoothed time-series in Figure 6 depict the residual variation in *opposition_{ij}* and *shares_{ij}*, obtained after regressing the variables on a number of indicator controls for the size of the parish. Parishes established during the heyday of the Catholic expansion (around the 14th century) and during the Protestant expansion (around the 18-19th centuries) own relatively more shares of the Church's landed property. The time-series are negatively correlated. Both exhibit marked kinks around 1910, which is the final year of the glebe-system. Parishes expanding after the glebe-system are less likely to be shareholders in the Church's landed property, and they are also less likely to support the Church's endorsement of same-sex marriage.

4.2 Income protection and same-sex marriage: Regression evidence

Table 2 displays the results from regressing $opposition_{ij}$ on $log(protection_{ij})$. All regression models include diocese dummies and dummy variables for the number of parishes within each pastorate. The analysis proceeds by adding control variables stepwise. More specifically, Column 2 controls for the number of church buildings prior to Karl XI's landed estate reform in 1696. Column 3 controls for population, land area and arable land, and Column 4 includes a full set of socioeconomic controls for potential residential selection. The main effect is robust to these controls. The effect of rents on opposition to same-sex marriage is negative. A doubling of revenue from landed property implies a decrease in opposition by 0.14 priests per parish (the average number of opposing priests is 0.504).

I interpret the results in Table 2 as evidence of clerical opportunism. There are at least three alternative interpretations (not necessarily incommensurable). The first is that the religious symbolism of church property has a direct effect on the theological positions of the local priests. The property shares are higher in parishes that expanded during the glebe system, which means that landed parishes have more churches per capita. Because the architecture of church buildings are themselves artifacts of power, one can speculate that the presence of more historical church buildings in the parish influences the clergy's attitudes towards a unified Church. It is possible to partly test this hypothesis. Because the property shares are not linear with the age of the parish's churches, it is possible to include controls for the age of the parish churches without losing statistical degrees of freedom. I include controls for the number of medieval churches, built before Karl XI's reform, as well as linear controls for the age of the controls, suggesting that the main effect does not run through the architecture of old churches per se.

An alternative mechanism is that the external revenue is used to attract more liberal members. This is the key mechanism in club models of religious strictness (Iannaccone 1990). Table 3 displays the results from regressing the parish vote share of *Frimodig Kyrka* on the property shares. This variable arguably captures the members' demand for strict religious teachings (see the discussion in Section 2). Unlike the clergy's opposition to same-sex marriage, the members' demand for strict religious doctrines is invariant to the property shares. Thus, while political subsidies seem to affect the clergy's tendency to accept politically motivated doctrines, they seem to be less effective in changing the private beliefs held by the members.⁷ These estimates are inconsistent with the hypothesis that demand-side mechanisms are driving the results.

⁷Note that these regressions only use the variation in property shares within dioceses. Not reported are results showing that there is a negative correlation between property protection and member opposition to same-sex marriage when the diocese dummies are dropped. As illustrated in Figure 2, the spatial correlation between the vote share of *Frimodig Kyrka* and priests opposing same-sex marriage is also positively correlated.

Finally, one can hypothesize that the clergy's theological positions are directly affected by the presence of wealth, independently of the source (e.g., that strict doctrines are "inferior goods"). If the main results capture a pure income effect, the effect sizes should be equal across more and less conservative dioceses. By contrast, if subsidies serve as compensation for adopting a dissonant theological doctrine, the effect should be zero in dioceses that already agree with the endorsement of same-sex marriage (i.e., the dioceses in the lower-left corner in Figure 2). Table 4 displays the results from interacting *protection*_{ij} with the diocese-level support for the conservative nomination group *Frimodig Kyrka*.⁸ The table shows that the presence of political rents affects the theological positions of the parish clergy only in more conservative dioceses.

Consistent with the conceptual framework in Section 3, the combined evidence suggests that access to political rents reduces the clergy's loyalty to their local members relative to their political sponsors. Figure 7 provides a summarizing snapshot of this mechanism. In liberal parishes, where the members' support to the conservative nomination group is low, clerical opposition to same-sex marriage is always low. The logic is that priests face no loyalty trade-off in these parishes, hence the source of revenue becomes irrelevant. In conservative parishes however, the clergy silently endorses same-sex marriage only if their parish benefits from the political subsidies.

4.3 Measurement and reliability of the dependent variable

The estimates in Table 2 use the number of signatures per parish as the outcome variable. One might ask how sensitive the results are to defining the outcome variable in some other way. In Table 5, I consider three other outcome definitions: a measure equal to the number of signatures per church in the parish; a binary measure equal to 1 if at least one priest signed the petition, 0 otherwise; and a measure equal to the number of opposing priests divided by the total number of parish priests (i.e., the share of opposing priests). The results are qualitatively similar to the baseline estimates.

A second issue concerns the reliability of the dependent variable. The main analysis uses the most up-to-date list available – the "final list," posted by the initiative-taker on November 10, 2005. This list is not an official publication and is no longer publicly available. As a validation check, I use the parishes represented on a shorter list published by the Swedish newspaper *Aftonbladet* on November 5, 2005 (the "published list"). Although this list is incomplete, using it as the dependent variable renders estimates that are qualitatively similar to the main analysis.

5 Conclusion

This paper adopts an economic perspective on the formation of modern religious theology, with a special focus on the opposition to same-sex marriage. I find that priests

 $^{^8\}mathrm{By}$ using the diocese-level support, the diocese dummies net out the direct effect of serving in a conservative diocese.

serving in income-protected parishes – drawing revenue from state-sponsored property rather than member payments – are less likely to publicly oppose same-sex marriage. By contrast, I find no evidence that the private beliefs held by the local members adjust to political subsidies. I interpret this as evidence of the opportunistic nature of the religious pledges made by the clergy.

Relative to the existing literature, this paper's contribution lies in its exogenous measure of political protection, which, combined with an anti-liberal revolt within the Church of Sweden and the availability of high-quality register data, allow me to rule out some threats to the causal interpretation of the estimates. Simultaneity – that the result arises because conservative parishes are less successful in pursuing political rents – can be ruled out *a priori*, since the property shares used for statistical identification are regulated by national law and cannot be amended by the local parish or even the church itself. In addition, the regression analysis indicates that the subsidy-effect is robust to control variables measuring the presence of medieval church investments, the presence of arable land, and the demographic and socioeconomic characteristics of the residents in the parish. That income protection reduces opposition to same-sex marriage by increasing the opportunity cost of religious pandering is not the only interpretation of the results, but it is the one that is able to consistently explain the overall picture.

The analysis does not determine whether subsidies are justified as policy instruments. In translating these findings into policy advice, a critical question is how important churches are in promoting public goods and to what extent political favoritism leads to religious break-outs and the formation of new religious organizations. The analysis is also silent on whether certain theological doctrines are more beneficial for society than others.

The evidence presented in this paper appears relevant to other contemporary religious conflicts and debates, such as the opposition to female ordination, divorce, abortion, and perhaps even vaccinations. These are wedge issues that often clash with the political agendas of Western states. A relevant question beyond the scope of this paper concerns when internal religious conflicts lead to breakouts. In a few notable cases, seemingly fringe anti-establishment religious doctrines have been placed at the very center of new religions. This appears to be an under-explored area of economic research.

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Figures



Figure 2: The figure illustrates the link between clerical opposition to the endorsement of same-sex marriage in the Church of Sweden (December 2005) and the results from the preceding church election (September 2005). The "conservative nomination group" is the share of votes in the diocese cast on *Frimodig Kyrka*. The vertical axis measures the total number of petition signatures against same-sex marriage in 2005, per diocese. The size of the round markers depicts the dioceses' relative sizes in terms of hired priests (in 2000).



Figure 3: The figure displays the shares of exogenous income across dioceses and pastorates in the Church of Sweden. The shares are calculated by dividing the rents from state-protected property and church subsidies, given by definition (5), by total pastoral revenues. Total pastoral revenues also include member fees.



Figure 4: Churches with cultural heritage-status (eligible for subsidies) and the landed property shares. The figure displays the link between a parish's prominence during the glebe-system and the current availability of political subsidies.



Figure 5: Spatial distribution of opposition to same-sex marriage (left map) and dependence on member revenue (right map) in the Church of Sweden. In the right map, a darker shade of blue indicates that the parish relies less on subsidies and dividends from state-protected property, given by definition (5). In the left map, the darker shade of blue indicates that more priests oppose same-sex marriage.



Figure 6: Landed property and opposition to same-sex marriage across year of parish establishment. The year of parish establishment is equal to the median construction year of the churches in the parish. The two lines are moving averages of the residual values of $opposition_{ij}$ and $shares_{ij}$, using the exponential smoothing parameter that minimizes the forecast error. The residual values of the two variables are obtained by regressing $opposition_{ij}$ and $shares_{ij}$ on the size of the parish (land area and population in 2010), the number of churches in the parish and the size of the pastorate in which the parish operates. The vertical line on the right-hand side of the figure marks the year 1910, the year the glebe system was finally reformed.



Figure 7: Political protection and the clergy's loyalty to conservative members. The figure illustrates the link between property subsidies and clerical opposition to the endorsement of same-sex marriage in the Church of Sweden (December 2005). The upper connected line represents the relationship in conservative parishes (defined as parishes with above-median member support for the conservative nomination group *Frimodig Kyrka* in the 2005 election). Conversely, the lower connected line represents the relationship in liberal parishes (below-median member support). Subsidies and dividends from state-protected property are defined according to (5). The vertical axis measures the average share of petition signatures against same-sex marriage in 2005 per subsidy decile.

Tables

			(1)		
	mean	sd	min	max	count
Opposition priests	.504	1.05	0	11	1477
Shares in diocese's property	.0225	.0235	0	.223	1477
Protection (log)	13.6	1.18	6.76	16	1427
Total priests (pastorate)	7.68	16.3	0	106	1477
Total priests (per parish)	2.19	2.17	0	14	1477
Parish vote share Frimodig Kyrka 2009	5.97	6.72	0	63.6	1477
Parish vote share Frimodig Kyrka 2005	3.69	5.45	0	57	1268
Land area (log)	9.12	1.39	3.61	14.4	1470
Arable land (share)	.167	.196	0	1.53	1470
Medieval churches	.863	1.22	0	9	1477
Vasa churches	.116	.396	0	5	1477
No of churches in 2010	2.85	2.47	1	29	1421
Median age of churches	378	311	18	1017	1421
Population (log)	4.64	1.3	.693	8.04	1472
Average earnings (log)	12	.224	10	12.7	1472
Swedish-born population (share)	.861	.0829	.333	1	1472
Women (share)	.43	.0985	0	1	1472
Average age	40.5	4.52	16.1	71.5	1472
University graduates (share)	.328	.1	0	.8	1472

Table	1:	Summary	statistics.
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Note: Protection (log) is defined according to definition (5). Population, Average earnings, Swedishborn population, Women, Average age and University graduates are based on a 3.35 % sample of the Swedish population.

	(1)	(2)	(3)	(4)
Protection (log)	-0.142***	-0.152***	-0.129***	-0.130***
	(0.0395)	(0.0411)	(0.0434)	(0.0436)
		0.0554	0.0607	0.0610
vasa cnurcnes		-0.0554	-0.0607	-0.0610
		(0.0030)	(0.0599)	(0.0598)
Medieval churches		0.105***	0.0283	0.0278
		(0.0391)	(0.0361)	(0.0365)
Madian are of abunches		0 000602***	0 000200**	0 000909**
Median age of churches		-0.000093	-0.000289°	(0.000293)
		(0.000143)	(0.000121)	(0.000128)
Population (log)			0.282***	0.277***
			(0.0293)	(0.0294)
Land area (lag)			0.00114	0.00002
Land area (log)			(0.00114)	(0.00902)
			(0.0510)	(0.0528)
Arable land (share)			0.0810	0.0430
			(0.172)	(0.171)
Average earnings (log)				0.0187
Average earnings (log)				(0.0187)
				(0.0000)
Swedish-born population (share)				0.0791
				(0.345)
Womon (sharo)				0.0265
Women (share)				(0.194)
				(0.101)
Average age				-0.00676
				(0.00638)
University graduates (share)				0.109
Surversity Statutates (Share)				(0.266)
Observations	1427	1379	1379	1379
Adjusted R^2	0.111	0.134	0.212	0.210

Table 2: Property protection and clerical opposition to same-sex marriage.

Notes: Each column represents the results from a separate regression. All regressions include dummies for dioceses and indicators for the number of parishes in each pastorate. Standard errors in parenthesis, clustered at the pastorate level (738 clusters).

	(1)	(2)	(3)	(4)
Protection (log)	-0.227	-0.187	-0.125	-0.112
	(0.163)	(0.179)	(0.200)	(0.202)
1 7 1 1		0.250	0.000	0 104
Vasa churches		0.350	(0.208)	(0.184)
		(0.341)	(0.350)	(0.349)
Medieval churches		-0.0115	0.246^{*}	0.250^{*}
		(0.147)	(0.136)	(0.138)
		()	()	()
Median age of churches		-0.000980	-0.000865	-0.000980
		(0.000753)	(0.000770)	(0.000770)
Domulation (lag)			0.927	0 1 9 0
Population (log)			-0.237	-0.189
			(0.192)	(0.200)
Land area (log)			-0.180	-0.212
			(0.202)	(0.233)
			· · ·	· · ·
Arable land (share)			-4.700***	-5.214^{***}
			(1.446)	(1.566)
Average corrings (log)				0 103
Average earnings (log)				(1.054)
				(1.004)
Swedish-born population (share)				4.437
				(3.186)
Women (share)				0.0539
				(1.761)
Average age				-0.0580
Inverage age				(0.0546)
				(0.0010)
University graduates (share)				-0.898
				(2.965)
Observations	1427	1379	1379	1379
Adjusted R^2	0.188	0.185	0.195	0.195

 Table 3: Property protection and the vote share of conservative nomination group

 Frimodig Kyrka

Notes: Each column represents a separate regression. All regressions include dummies for dioceses and indicators for the number of parishes in each pastorate. Standard errors in parenthesis, clustered at the pastorate level (738 clusters).

	(1)	(2)	(3)	(4)
Protection \times Frimodig	-0.399***	-0.378***	-0.358***	-0.355***
	(0.138)	(0.133)	(0.129)	(0.130)
Protection (log)	0.0358	0.0181	0.0374	0.0349
	(0.0571)	(0.0589)	(0.0624)	(0.0629)
Vasa churches		-0.0418	-0.0470	-0.0471
vasa ondronos		(0.0625)	(0.0591)	(0.0591)
		(0.0020)	(0.0001)	(0.0001)
Medieval churches		0.102^{***}	0.0296	0.0286
		(0.0392)	(0.0362)	(0.0366)
Madian and fahamahaa		0.000700***	0.000211**	0 000919**
Median age of churches		-0.000708^{+++}	-0.000311	-0.000313
		(0.000144)	(0.000129)	(0.000129)
Population (log)			0.278***	0.273***
1 (0)			(0.0289)	(0.0288)
			· · · ·	· · · ·
Land area (log)			-0.0123	-0.00374
			(0.0319)	(0.0333)
Arable land (share)			0.0456	0.0168
Arable faild (share)			(0.174)	(0.172)
			(0.174)	(0.112)
Average earnings (log)				0.00725
				(0.0964)
Swedish-born population (share)				0.0341
				(0.344)
Women (share)				0.0264
(ondro)				(0.190)
				(01200)
Average age				-0.00538
				(0.00637)
University and ustage (share)				0 1 47
Oniversity graduates (snare)				(0.14)
Observations	1427	1379	1379	1379
Adjusted R^2	0.124	0.147	0.223	0.221
	0.1=1	0.11.	0.220	÷.==±

Table 4: Interaction analysis. The impact of property protection in dioceses with more conservative boards.

Notes: Each column represents a separate regression. All regressions include dummies for dioceses and indicators for the number of parishes in each pastorate. The interaction term *Frimodig* is observed on the diocese-level, which means that direct impact of having a more conservative diocese board is captured by the diocese dummies. The interaction term *Frimodig* is scaled such that its maximum value equals unity. A unit change in the interaction term thus equals a percentage point reduction in income protection in the most conservative diocese. A unit change in *Protection* represents the impact in the (hypothetical) diocese without any conservative members. Standard errors in parenthesis, clustered at the pastorate level (738 clusters).

Table 5: Political rents and religious opposition to same-sex marriage. Alternative definitions of the outcome variable

	(1)	(2)	(3)	(4)	(5)
	Final list	Published list	Final list	Final list	Published list
			per church	Extensive margin	share of
					total priests
Protection (log)	-0.142***	-0.0636***	-0.0504***	-0.0494***	-0.0574***
	(0.0395)	(0.0231)	(0.0125)	(0.0131)	(0.0169)
Observations	1427	1427	1379	1427	1406
Adjusted R^2	0.111	0.102	0.136	0.143	0.099

Notes: Each column represents a separate regression. All regressions include dummies for dioceses and indicators for the number of parishes in each pastorate. Standard errors in parenthesis, clustered at the pastorate level (738 clusters).

Appendix: The Church Hierarchy and Data Sources

Level	Responsibility	Variables observed at
		this level
1. National	Official doctrines, interna-	
	tional aid, foreign visitors,	
	etc.	
2. Diocese (13 units)	Priest admittance and	Subsidies, dividends from
	training, theological	landed property.
	monitoring through the	
	chapters, management of	
	landed property, approval	
	of church subsidies.	
3. Pastorate (788 units)	Parishes sometimes form	Shares in the church's
	joint church communities,	landed property, total
	with one single economic	number of priests.
	administration. Since	
	2014, the joint communi-	
	ties have been called pas-	
	torates.	
4. Parish (1477 units)	Sermons, baptisms, con-	Age and number of
	firmations, funerals, dia-	churches, socioeconomic
	conal work. Parishes also	indicators, opposition
	set the local church fee.	<i>priests</i> , vote shares.

Table 6: The administrative levels of the Church of Sweden and the unit of observation for the variables used in the analysis.

Notes: The identifying variable and the main outcome variable are italicized.

There are five original data sources used in this paper: (1) church election data, (2) same-sex marriage opposition data, (3) landed property data, (4) church buildings data and (5) the administrative registers used to construct parish resident characteristics. All parish-level data files, including the do-files used to create the final dataset, are available from the author on request. The raw data sources, with the exception of the administrative registers, are publicly available.

Parishes sometimes merge or split. To match the different datasets to each other, it was necessary to establish a common parish code. The paper uses the parish codes from 2010. A total of 1,477 territorial parishes are used in the analysis.

Below is a short summary of each data source:

 The election data consist of the parish vote shares of all nomination groups in the national election. The data are published by the Church of Sweden (https: //www.svenskakyrkan.se/tidigare-valresultat).

All adult members (18 years and over) are eligible to vote for a nomination group (often called a "church party") at three levels: the parish/pastorate level, the diocese level and the national level. The Church of Sweden consists of 13 dioceses, and in 2010, these dioceses consisted of 1,477 territorial parishes (some of the

parishes form joint administrative units, called pastorates). Elections are held every fourth year.

This means that the elected boards are not necessarily composed of devoted Christians. The nomination groups can be divided into two classes. The *political nomination groups* are the same as the political parties in Sweden, albeit under slightly different names. The second class is the *theological nomination groups*. They typically advocate a certain position on specific theological issues (such as female ordination or same-sex marriage). Some of the theological nomination groups have a progressive agenda (e.g., *Öppen Kyrka*: "open church"), whereas others are conservative (such as *Frimodig Kyrka*: "brave church"). The political nomination groups are in the majority in the National Assembly.

- 2. The opposition data come from two sources: the publicly available protest list published on November 5, 2005, in Swedish newspapers (e.g., Svärdkrona 2005; http://www.aftonbladet.se/nyheter/article10696805.ab) and the more comprehensive list published by the initiative-taker on his website on November 10, 2005. The working data used in this project were gathered from the online sources using a simple algorithm that counted the number of occurrences of each parish on the protest lists. Thus, the individual priest names are not part of the compiled data.
- 3. The landed property dataset was created manually from the dioceses' annual reports. Dividends at the diocese level are taken from Svenska Kyrkans Utredningar (2007) for the years 2000-2005; for later years, the annual reports are used. Data on subsidies targeting historical church property are taken from Svenska Kyrkan (2013). Landed properties are reported at an administrative unit called "joint church communities" (*Kyrklig samfällighet*), known as the pastorate from 2014.
- 4. Data on church buildings are publicly provided by the Swedish National Heritage Board (*Riksantikvarieämbetet*). Exportable data tables of protected church buildings are available through the construction registry (*Bebyggelseregistret*; http://www.bebyggelseregistret.raa.se/bbr2/dataexport/dataexport.raa). A total list of 4,043 church buildings (including chapels, clock towers, and other auxiliary buildings) was used in the analysis. These were matched to 1,402 parishes through manual matching of church names. The registry provides two construction years, one indicating the start year of the construction of the church and one indicating its completion year. The start year is used in the analysis.
- 5. The data on individual church membership and socioeconomic background are provided by Statistics Sweden (SCB) through the database LINDA (Longitudinal INdividual DAtabase). It consists of a 3.35 percent representative sample of the Swedish population. The parish-level control variables are based on this sample. See Edin and Fredrikson (2000).

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^{*} A list of papers in this series from earlier years will be sent on request by the department.

Are Religions for Sale? Evidence from the Swedish Church Revolt over Same-Sex Marriage^{*}

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Abstract

Religious leaders sometimes condemn progressive social norms. In this paper, I revisit David Hume's hypothesis that secular states can "bribe" churches into adopting less strict religious doctrines. The hypothesis is difficult to test due to reverse causality: more liberal theologies may attract more political support in the first place. To circumvent this problem, I focus on a theological conflict over same-sex marriage within the Church of Sweden and take advantage of political regulations that effectively make some parishes shareholders of the church's state-protected property. The shares used for statistical identification are tied to property rights assigned more than 300 years ago, and they cannot be sold, traded or amended by the individual parishes. I find that priests in shareholding parishes are less likely to publicly oppose same-sex marriage. The effect is stronger in parishes with more conservative members. The combined results are consistent with a model of clerical opportunism, in which access to political rents increases the clergy's loyalty to the political sponsors relative to the local community.

Keywords: religious orthodoxy, same-sex marriage, subsidies, rent-seeking, religious market hypothesis

JEL: H2, H3, Z12

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1 Introduction

Religious leaders sometimes condemn activities that most people find acceptable. This paper studies religious strictness from an economic perspective. More specifically, I revisit David Hume's hypothesis that political protection, such as church subsidies and rents from state-protected property, will make religious organizations more mainstream.

As discussed in Adam Smith's *The Wealth of Nations*, David Hume remarked that priests often resorted to "folly, delusion and superstition" in order to "remain sacred in the eyes of their retainers". As a remedy, Hume suggested that the magistrate should "bribe their indolence" by protecting the clergy's incomes or supporting their church in some other way (Smith 1887). Modern contributions on the topic have argued that the doctrines of state-protected churches often conform to secular norms (Stark and Iannaccone 1994). Direct tests of Hume's hypothesis are rare, however. A first empirical challenge is the direction of causality. While political protection may affect the theological positions of the clergy, as Hume suggested, a less strict theology may also attract political support in the first place. A second challenge is the measurement of religious strictness. It is not possible to rank religions by their anti-secular doctrines when they interact with different secular societies. For this reason, the quantitative empirical literature is constrained by a limited number of comparable observations.

A theological conflict in the Church of Sweden provides an opportunity to address these challenges. In 2005, the Church of Sweden's National Assembly, consisting primarily of political representatives, endorsed same-sex marriage. The endorsement was an attempt to pave the way for a more liberal marriage legislation. Although the bishops supported the endorsement, more than 800 parish priests (out of approximately 3,500) publicly declared their refusal to conduct same-sex marriage ceremonies. To study how political subsidies affected the decision to revolt against same-sex marriage, I take advantage of regulations that effectively make some parishes shareholders of the church's protected property. During the medieval era, parish priests were given plots of land to sustain themselves. Today, the parishes own shares of the church's total property, and the number of shares owned by each parish corresponds to its land and property ownership at the end of the 18th century. Shareholding parishes benefit more from external revenue – such as subsidies targeting church buildings and dividends from the church's accumulated capital – relative to other parishes. I use the parish-level variation in property shares to identify the effect of political protection on opposition to same-sex marriage.

Two institutional features are particularly helpful when employing the empirical strategy. The first is that the parishes cannot sell, trade or change their property shares. As part of the separation deal in 2000, dioceses in the Church of Sweden were given the right to manage their property while the parishes were given the right to independently spend the dividends.¹ This means that access to church subsidies and land rents within

 $^{^{1}}$ There are four administrative levels of the church: the national level, the diocese level, the pastorate level and the parish level. See the Appendix for details.

each diocese is tied to property rights assigned over 300 years ago, which limits the threat of reverse causality (for example, that conservative parishes might be less interested in pursuing financial support from politicians, or less successful in acquiring it).

The second feature is high-quality data on member characteristics. The rigid system of territorial parishes allows me to match both administrative registers and church election results to the dataset. These data are virtually void of measurement error and response bias. I use these data to control for member sorting across parishes and to analyze the association between subsidized property and the religious demands of the local members. Parish-level variation in members' support for the conservative nomination group *Frimodig Kyrka* is particularly informative. *Frimodig Kyrka* entered the church elections prior to the 2005 clergy revolt, based primarily on a platform that opposed same-sex marriage. The local vote share received by *Frimodig Kyrka* arguably captures the members' demand for strict religious attitudes.



Figure 1: Opposition to same-sex marriage in the Church of Sweden. The scatter plot is obtained by ranking parishes by their external revenue (subsidies and dividends from landed property), creating bins of equal sample size (n=30) across this ranking, and then calculating the average opposition rates and subsidies for each bin. Subsidies and dividends from landed property are defined according to equation (5). The vertical axis measures opposition to same-sex marriage among the clergy (blue circles) and the members (red triangles). Clergy opposition is defined as the share of priests in the parish who signed the petition against same-sex marriage in December 2005. Member opposition is defined as the parish vote share received by the conservative nomination group *Frimodig Kyrka* in the September 2009 election. The lines are obtained by fitting quadratic regression models to the plotted data. There are 788 observations in total (pastorates).

The main dataset comprises 1,477 parishes. Consistent with Hume's hypothesis, I find that priests serving in parishes with a high degree of state-protected revenue are less likely to publicly oppose same-sex marriage. The data do not support demand-side interpretations, for example that parishes with more historical property attract more

liberal followers. A snapshot of the main results is given in Figure 1. The figure illustrates that while the clergy's opposition to same-sex marriage is negatively associated with the presence of subsidized property, member opposition is not negatively associated with the presence of subsidized property. In the body of the paper, I show that the plots in Figure 1 are robust to potential confounders at the parish level – including the presence of arable land, the age and number of historical church buildings, and the socioeconomic characteristics of the local residents. The results are also robust to alternative data sources and definitions of the variables used in the analysis.

The results suggest that subsidies can influence the official theology of religions in more secular directions, which is consistent with Hume's hypothesis. In the conceptual framework of the paper, suggest that access to political rents reduces the clergy's loyalty to their local religious communities. This framework takes the incongruence between local parishes and secular society as a given, and thus sidesteps the problem of defining "religious strictness" on theological grounds. In the model, a representative priest faces a loyalty dilemma between the political sponsors and the local community. The model formalizes the intuition that if subsidies reduce opportune religious pandering, they should be more relevant in parishes where members are more conservative. Consistent with the model, I find that the effect of subsidies is strongest in conservative dioceses, where the members' attitudes towards same-sex marriage are less congruent with Sweden's political demands. The data are less supportive of psychological interpretations, for example that access to wealth or exposure to culturally important buildings increase the priests' "taste" for a more progressive theology.

This paper relates to several branches in the literature. The political influence in the Church of Sweden is discussed in Rydenfelt (1985), Gustafsson (1990), Stark and Iannaccone (1994), and Iannaccone et al. (1997). A first branch of related empirical economic research focuses on the so-called "religious market hypothesis". Iannaccone (1991) shows that people living in countries with one dominant religion are less religiously active. McCleary and Barro (2006) revisit this results using a country panel, and find that the political regulation of the religious market is associated with lower religious activity (although the effect of adopting a state religion is insignificant). Hamberg and Pettersson (1994) study religious attendance in Sweden and find that it his higher in parishes with more competing denominations. A second branch studies the complementaries of government spending and church spending. Gruber and Hungerman (2007) find that giving political subsidies to sectors that have traditionally been in the church's domain reduces charitable giving through churches. A third branch of research analyzes churches as large, rent-seeking corporations (Ekelund et al. 1996). This work shows that churches sometimes use theological innovations to protect their financial interests (a striking result is that the medieval Church appears to have enforced usury laws during the times it needed external funds; Ekelund et al. 1989). A fourth set of papers uses club models to analyze the impact of subsidies on religious strictness. Iannaccone (1992) suggest that external funds may reduce the strictness of churches, if they are used to attract easygoing participants. However, Berman (2000) finds that the liberalizing effects of subsidies depend on how the clergy reacts to the inflow of free-riders.² Finally, recent work using signaling theory suggests that bans on conservative expressions of worship (like the Muslim veil) may be counterproductive if the goal is to integrate religious communities in secular societies (Carvalho 2013).

The paper is structured as follows: The next section provides a brief background on the same-sex marriage revolt in the Church of Sweden and a short overview of the distribution of subsidized property within the Church of Sweden. Section 3 presents the conceptual framework and the empirical strategy. Section 4 presents the results and robustness checks, and Section 5 concludes.

2 The Church of Sweden

2.1 The Same-Sex Marriage Revolt

The Evangelical-Lutheran Church of Sweden is one of the world's largest Christian congregations, with more than 6.2 million members (the Swedish population is approximately 10 million). It was the state church of Sweden until 2000. Although the church and the state of Sweden are now separated, they are still intertwined through regulations, management practices and special laws. Political parties still run for office in the church, and political issues have continued to influence the church since the separation. The church has maintained a number of privileges since the separation as well. Landed property, which was partly owned by the state and the municipalities before the separation, was transferred to the church, and a church subsidy, targeting church buildings with cultural heritage status, was introduced in 2000 (Svensk författningssamling 1998).

This paper focuses on the clergy's opposition to the National Assembly's decision in 2005 to endorse same-sex marriage. The National Assembly consists primarily of representatives from political parties. Although all 14 bishops of the Church, including the archbishop, supported the endorsement, the local clergy was divided. Approximately one-third of the active priests responded that they were unwilling to conduct same-sex marriage ceremonies, according to (undocumented) internal surveys from 2003.

In December 2005, 864 priests signed a public declaration criticizing the Church's official endorsement, vowing never to conduct same-sex marriage ceremonies.³ At the time, the Church of Sweden had approximately 3,500 active priests. The list of names became known as the "Kalin list", after Yngve Kalin, who took the initiative to create the declaration. The declaration in full was:

"The Church of Sweden has endorsed a new procedure for the blessing of registered partnerships and written this into the Church Order. We, the clergy of this Church who have signed this declaration, believe that this

 $^{^{2}}$ More specifically, Berman (2000) finds that subsidies that increased easygoing participation spurred Ultra-Orthodox Jewish groups in Israel to update their behavioral restrictions.

 $^{^{3}}$ The major Swedish newspapers covered the internal conflict, and the theological polarization in the church has been the subject of much media scrutiny. Reuterswärd et al. (2014) is a recent documentary.

decision conflicts with the system of cohabitation and marriage that God by his word revealed to us, and which is defined as a relationship between a man and a woman. God's Word does not allow us to bless any other kind of relationship. We as priests are bound by our vows of fidelity to the Sacred Scripture and the confession that we gave at our ordination, and we therefore oppose the approved scheme and would thus make it publicly known." (my translation from Swedish)

It was initially unclear whether priests could refuse to conduct same-sex marriages without violating their employment contract. The Church's National Assembly has no employer responsibility over the priests hired by the parishes. The diocese chapter may, however, exclude priests from the Church if they violate their vows. A ruling in 2009 concluded that individual priests can refuse to perform same-sex marriage ceremonies for personal reasons, but that parishes, as juridical entities of the church, are required to offer wedding ceremonies to same-sex couples.

The public broadcasting of the opposition is thus noteworthy. Given the decentralized model of authority, reluctant priests could easily have avoided same-sex ceremonies and continued to spread orthodox interpretations of the Bible without risking any official penalties. The likelihood of ever being confronted with the task of conducting a marriage ceremony for two members of the same sex must have been perceived as slim, as the ratio of registered same-sex partnerships to conventional partnerships is about one to 1,000 (SCB 2015). However, the opposition was coordinated and made public using a petition that included the priests' parish affiliations.

I propose that the public opposition was a way to signal religious commitment to the local religious community. The 13 dioceses of the Church of Sweden are not homogeneous. As shown in Figure 2, the number of priests opposing same-sex marriage is correlated with the share of votes in the diocese for *Frimodig Kyrka* (across pastorates, the correlation between the vote share of *Frimodig Kyrka* and the share of priests opposing same-sex marriage is $\hat{\rho} = 0.69$). *Frimodig Kyrka* is a conservative nomination group in the church that had its breakthrough in the 2005 election. Their primary agenda is opposition to same-sex marriage and female ordination.⁴ If one interprets the vote share received by *Frimodig Kyrka* as a proxy for local member demand for religious strictness, Figure 2 tells a logical story of spatial heterogeneity: priests publicly condemn the National Assembly's endorsement of same-sex marriage in parishes where such condemnations are expected to have more support among the followers.⁵

 $^{^{4}}$ Female ordination has been allowed in the Church of Sweden since the 1970s, and while *Frimodig Kyrka* does not seek to revoke women's right to become priests, it claims to represent the rights of priests who are critical of female ordination.

⁵That Gothenburg, Skara, Luleå and Växjo represents the more conservative dioceses is not a novel finding. Priests in these dioceses are more likely to make formal interpretations of the Bible, and more likely to agree with the statement "I believe that Jesus through his death forever defeated the evils of the world". By contrast, priests in Stockholm and Västerås are more likely to agree with the statement "The story of Jesus' death and resurrection should not be taken literally". See Willander and Blåder (2016).

2.2 Political Protection in the Church of Sweden

The distribution of property in the Church dates back to the medieval era (the oldest churches in Sweden are about 1000 years old). Medieval priests were expected to sustain themselves by cultivating land plots (called "glebes"). In Sweden, the Catholic Church employed such a system until the Protestant reformation in 1527. During the reformation, the crown confiscated most of the church's assets. Later kings were more supportive, and estates were returned to the church during the 18th century, beginning with a decree by Karl XI in 1696 (Normann 1956; Schalling 1920). The glebe system was utilized until a reform in 1910 turned priests into state employees. The church's current ownership of land approximates its land holdings at the end of the 18th century (Växjö Stift 2013).

The regulations governing church property were last revised in 1997, in preparation for the separation of church and state. The dioceses became formal owners of the landed property and retained the right to manage the land. The parishes were given shares proportionate to the value of the land they had historically possessed within each diocese. Today, the parishes receive annual dividends on their shares, but more shares do not translate to more influence on the diocese boards. Parishes cannot sell, trade, or amend their shares. When two parishes merge, or when several parishes form a so-called joint church community, the new share is simply the sum of the individual parishes' shares (since 2014, joint parishes are called "pastorates"; see the Appendix for further details). The details of the regulations are documented in Svensk författningssamling (1998) and SOU (1997).

The dividends are not earmarked, other than that they should "support the Church of Sweden's enunciation". However, the final paragraph of the law says that the property management must be "acceptable," without further elaboration, and gives the secular government the right to supervise the system. Since 2000, the Swedish government has never exercised this right, although it has amended a few regulations that indirectly affect the church's assets at the national level. For example, capital returns on church property were tax-exempt until 2010.

According to the annual reports of the Church of Sweden, the total market value of the landed property is about \$10 billion, and dividends from the landed property amount to approximately 3% of the total revenue of the church. The tax-funded church subsidies, which are meant to support the restoration of church buildings with cultural heritagestatus, amount to 12% of the church's total revenue. While the church subsidies are not part of the dividends system, the spatial distribution of buildings eligible for subsidies is strongly correlated with the property shares (Figure 4). This is unsurprising because the glebes were established in direct coordination with the construction of the church building itself (Gräslund Berg 2004).

While the subsidies and land rents represent a small share of the Church's total revenue, they represent significant sources of external revenue in some parishes. Figure 3 displays the spatial variation in rents (church subsidies and dividends) relative to members' fee payments in the parish. The spread of rents *within* each diocese is given by each box in the plot. It is instructive to compare Stockholm and Visby in Figure 3. Stockholm is the most recently established diocese, founded in 1942 (the medieval capital of Sweden was not Stockholm, but Uppsala). The Stockholm diocese possesses relatively little land and relatively few church buildings with cultural-heritage status. By contrast, the Visby diocese is home to the largest number of medieval churches in Sweden due to its prominence as a trade hub in the 12th century, and the Visby diocese is one of the biggest recipients of church subsidies and a relatively large owner of land. The parishes in the Visby diocese.

3 Conceptual framework

This paper's main hypothesis is that states can influence the theological orientation of religious organizations by protecting their revenue. This idea entails an assumption of clerical opportunism, which goes back to at least David Hume and Adam Smith. Although Hume and Smith had different views on the benefits of church subsidies, both appear to have maintained that the clergy are opportunistic. Hume wrote that if clergy members' incomes were protected, they would no longer find it "necessary" to satisfy the tastes of their more orthodox members. According to Smith, reputation concerns would make priests less radical. More specifically, Smith suggested that a priest of "rank and fortune" would naturally adopt less antisocial religious doctrines, as "his authority and consideration depend very much upon the respect which this society bears to him" (quotes from Smith 1887; see also the discussion in Anderson 1988). The hypothesis that politicians can "bribe the indolence" of churches is a recurrent theme in the economic study of religion. Under the headline "The socialized Church of Sweden", Stark and Iannaccone (1994) concludes that "the Church appears to have purchased continued support from [the Social Democrats] by subjugating religious concerns to political demands." Gustafsson (1990) offers a similar interpretation.

The competing hypothesis is that certain theological doctrines, like reformed Christianity, promote a certain set of public goods that liberal states are more willing to support.⁶ I address the threat of reverse causality by exploiting the specific rent-sharing arrangement in the Church of Sweden, which implies that the value of political protection varies across parishes in a way that is exogenous to the present-day economic and theological management of the church.

To conceptualize this approach, I begin by modeling a parish priest's trade-off between rent-seeking and remaining loyal to his or her community. I assume that there is a continuum of theological positions ordered on the unit interval, where 0 is the most strict position and 1 is the most politically servile position. The church's official position on the interval is $z \in (0, 1)$, and the personal conviction of a representative priest

 $^{^{6}}$ This hypothesis is closely associated with the work of Max Weber (Weber 2002)

operating in parish *i* is $z_i \in (0, 1)$. If the highest office of the church endorses a more mainstream religious doctrine, politicians are more likely to reward the church with income protection (subsidies, protected property, and other privileges). The value of such political protection is given by the rent-function g(z), which is increasing in z. The parish's share of the rents is equal to α_i , which means that the parish's access to rents is $\alpha_i g(z)$.

The analytical separability of α_i and g(z) is the critical part of this structure. It says that while the overall access to rents in the church depend on the adoption of more liberal doctrines, the parish's access to those rents is given by an exogenos parameter α_i .

The parish priest's utility from serving in the church depends on (1) the degree of theological dissonance between the parish and the official doctrines of the church, and (2) the local availability of rents. Suppose the priest's utility function is

$$u = \lambda \alpha g(z) - (1 - \lambda) \frac{1}{2} (z - z_i)^2,$$
(1)

where the term $\frac{1}{2}(z-z_i)^2$ captures the priest's intrinsic aversion to theological dissonance. The parameter λ measures the opportunistic nature of the clergy. A higher λ implies that the clergy cares more about rents than about being theologically consistent.

The utility response from a change in the official church doctrine is given by

$$\frac{\partial u}{\partial z} = \lambda g'(z) - (1 - \lambda)(z - z_i).$$
⁽²⁾

In the Swedish case, the National Assembly proposes z, and the priest decides whether to oppose or endorse this decision. Suppose the rent function is linear, so $g(z) = \gamma z$. The priest will endorse a more secular doctrine if the utility change is positive; that is, if:

$$z_i + \frac{\lambda}{1 - \lambda} \gamma \alpha_i > z. \tag{3}$$

An increase in the rent share α_i increases the parish priests probability of endorsing same-sex marriage under two assumptions: (1) they are opportunistic ($\lambda > 0$) and (2) they expect the political protection of the church to be dependent on the church's endorsement of a more secular doctrine ($\gamma > 0$). Priests who already agree with the regime change (priests with $z_i > z$) will always endorse same-sex marriage.

The empirical counterpart of α_i is the parish's property share, which varies across parishes but is pegged to the parish's relative ownership of land during the glebe-system. Although the present-day state of Sweden can influence the availability of church rents at the national level, it is prevented from appropriating individual parish land or altering α_i (for the same reason that it is prevented from appropriating any other private property in Sweden). Conversely, parishes are not able to change, sell or alter their shares without the diocese's approval.

This implies that the within-diocese variation in landed property is exogenous to the

within-diocese variation in the clergy's theological positions. Denoting dioceses j and parishes i, I estimate the following linear regression model:

$$opposition_{ij} = \beta \log(protection_{ij}) + c_j + \delta q_{ij} + u_i, \tag{4}$$

where $opposition_{ij}$ measures clerical opposition to same-sex marriage in parish *i* in diocese *j*, equal to the number of petition names in the parish (I explore other definitions, including the share of opposing priests, in a robustness section); c_j captures a set of diocese dummy variables, and q_{ij} is a vector of control variables. The effect of interest is β .

The variable $protection_{ij}$ is defined as follows:

$$protection_{ij} = shares_{ij} \times (dividends_j + subsidies_j) \tag{5}$$

where $shares_{ij}$ equals the parish's shares in the diocese's landed property, conceptually the same as α_i in equation 3. The terms $dividends_j$ and $subsidies_j$ are the annual averages of all dividends and subsidies channeled through the diocese between 2000 and 2010. Given the diocese fixed effects, the identifying variation in the regression analysis comes solely from the logarithm of the land shares. The graphical evidence exploits the full variation in *protection_{ij}*, however.

A critical issue is that the presence of landed property may be associated with certain geographic characteristics that relate to the demand for more orthodox priests. This problem is partly alleviated by the rigid system of territorial parishes, which limits direct member sorting. While both members and nonmembers may attend any sermon in any church, specific services (e.g., confirmations, weddings, and funerals) are primarily available to members only in their parish of residence. However, residential decisions may be related to the presence of landed property through some other factor (e.g., the historical availability of farmland). This problem is resolved in two ways. First, to guard against residential selection, I make use of a rich set of administrative register data on the parish residents' socioeconomic backgrounds. The Swedish tax authority (Skatteverket) is responsible for collecting church membership fees and local funeral taxes, which means that individual tax records and other administrative data can be matched to the dataset. Second, I use the local vote share of the conservative nomination group Frimodig Kyrka as a dependent variable in auxiliary regressions in order to directly estimate the impact of subsidized property on the local demand for strict religious doctrines. These results, reported in Section 4, suggest that the presence of landed property is not related the members' "taste" for conservative theology.

The Church of Sweden has several administrative levels: the national level, the diocese level, the pastorate level, and the parish level. Table 6 in the Appendix provides a schematic overview of the responsibilities at the different levels. The outcome variable *opposition*_{ij} varies at the parish level, as do most of the control variables. However, the main explanatory variable *protection*_{ij} varies at the pastorate level. The pastorate is

an administrative unit between the parish and the diocese. The distinction is irrelevant for pastorates with only one parish (approximately one third of the sample). In the regression analysis, the parish is the unit of observation, but the standard errors are clustered at the pastorate level.

Table 1 displays the descriptive statistics of the variables used in the analysis. The share of opposing priests per parish is markedly higher than the vote share of *Frimodig Kyrka*. While this does not prove that members are more liberal than priests, it is consistent with the church's internal surveys, which indicate that, compared with priests, the church's members are more supportive of same-sex marriages. Another striking feature in the data is that the distribution of property shares is uneven, ranging from 0 to 0.223, with a mean of 0.0225. With 788 pastoral units, the average rent share would have been 0.0013 had the distribution been uniform. The uneven distribution of rent shares motivates the use of a lin-log specification.

4 Results

4.1 Income protection and opposition to same-sex marriage: Graphical evidence

The relationship between income protection and clerical opposition to same-sex marriage is negative, as shown in Figure 1. The scatter plot is obtained by first ranking parishes by their external revenue (definition [5]) and then creating bins of equal sample size across this ranking. The markers represent the average values for each bin. A geographic representation of the same bivariate relationship is given in Figure 5. Opposing priests are primarily serving in parishes that rely more on member revenue than on rents; that is, parishes in the southwest (the Gothenburg diocese) and in the northeast (the Luelå diocese). These dioceses are also the home of less property-abundant parishes.

Figure 6 displays how rents and orthodoxy vary with the age of the parish. To facilitate comparison, the smoothed time-series in Figure 6 depict the residual variation in *opposition_{ij}* and *shares_{ij}*, obtained after regressing the variables on a number of indicator controls for the size of the parish. Parishes established during the heyday of the Catholic expansion (around the 14th century) and during the Protestant expansion (around the 18-19th centuries) own relatively more shares of the Church's landed property. The time-series are negatively correlated. Both exhibit marked kinks around 1910, which is the final year of the glebe-system. Parishes expanding after the glebe-system are less likely to be shareholders in the Church's landed property, and they are also less likely to support the Church's endorsement of same-sex marriage.

4.2 Income protection and same-sex marriage: Regression evidence

Table 2 displays the results from regressing $opposition_{ij}$ on $log(protection_{ij})$. All regression models include diocese dummies and dummy variables for the number of parishes within each pastorate. The analysis proceeds by adding control variables stepwise. More specifically, Column 2 controls for the number of church buildings prior to Karl XI's landed estate reform in 1696. Column 3 controls for population, land area and arable land, and Column 4 includes a full set of socioeconomic controls for potential residential selection. The main effect is robust to these controls. The effect of rents on opposition to same-sex marriage is negative. A doubling of revenue from landed property implies a decrease in opposition by 0.14 priests per parish (the average number of opposing priests is 0.504).

I interpret the results in Table 2 as evidence of clerical opportunism. There are at least three alternative interpretations (not necessarily incommensurable). The first is that the religious symbolism of church property has a direct effect on the theological positions of the local priests. The property shares are higher in parishes that expanded during the glebe system, which means that landed parishes have more churches per capita. Because the architecture of church buildings are themselves artifacts of power, one can speculate that the presence of more historical church buildings in the parish influences the clergy's attitudes towards a unified Church. It is possible to partly test this hypothesis. Because the property shares are not linear with the age of the parish's churches, it is possible to include controls for the age of the parish churches without losing statistical degrees of freedom. I include controls for the number of medieval churches, built before Karl XI's reform, as well as linear controls for the age of the controls, suggesting that the main effect does not run through the architecture of old churches per se.

An alternative mechanism is that the external revenue is used to attract more liberal members. This is the key mechanism in club models of religious strictness (Iannaccone 1990). Table 3 displays the results from regressing the parish vote share of *Frimodig Kyrka* on the property shares. This variable arguably captures the members' demand for strict religious teachings (see the discussion in Section 2). Unlike the clergy's opposition to same-sex marriage, the members' demand for strict religious doctrines is invariant to the property shares. Thus, while political subsidies seem to affect the clergy's tendency to accept politically motivated doctrines, they seem to be less effective in changing the private beliefs held by the members.⁷ These estimates are inconsistent with the hypothesis that demand-side mechanisms are driving the results.

⁷Note that these regressions only use the variation in property shares within dioceses. Not reported are results showing that there is a negative correlation between property protection and member opposition to same-sex marriage when the diocese dummies are dropped. As illustrated in Figure 2, the spatial correlation between the vote share of *Frimodig Kyrka* and priests opposing same-sex marriage is also positively correlated.

Finally, one can hypothesize that the clergy's theological positions are directly affected by the presence of wealth, independently of the source (e.g., that strict doctrines are "inferior goods"). If the main results capture a pure income effect, the effect sizes should be equal across more and less conservative dioceses. By contrast, if subsidies serve as compensation for adopting a dissonant theological doctrine, the effect should be zero in dioceses that already agree with the endorsement of same-sex marriage (i.e., the dioceses in the lower-left corner in Figure 2). Table 4 displays the results from interacting *protection*_{ij} with the diocese-level support for the conservative nomination group *Frimodig Kyrka*.⁸ The table shows that the presence of political rents affects the theological positions of the parish clergy only in more conservative dioceses.

Consistent with the conceptual framework in Section 3, the combined evidence suggests that access to political rents reduces the clergy's loyalty to their local members relative to their political sponsors. Figure 7 provides a summarizing snapshot of this mechanism. In liberal parishes, where the members' support to the conservative nomination group is low, clerical opposition to same-sex marriage is always low. The logic is that priests face no loyalty trade-off in these parishes, hence the source of revenue becomes irrelevant. In conservative parishes however, the clergy silently endorses same-sex marriage only if their parish benefits from the political subsidies.

4.3 Measurement and reliability of the dependent variable

The estimates in Table 2 use the number of signatures per parish as the outcome variable. One might ask how sensitive the results are to defining the outcome variable in some other way. In Table 5, I consider three other outcome definitions: a measure equal to the number of signatures per church in the parish; a binary measure equal to 1 if at least one priest signed the petition, 0 otherwise; and a measure equal to the number of opposing priests divided by the total number of parish priests (i.e., the share of opposing priests). The results are qualitatively similar to the baseline estimates.

A second issue concerns the reliability of the dependent variable. The main analysis uses the most up-to-date list available – the "final list," posted by the initiative-taker on November 10, 2005. This list is not an official publication and is no longer publicly available. As a validation check, I use the parishes represented on a shorter list published by the Swedish newspaper *Aftonbladet* on November 5, 2005 (the "published list"). Although this list is incomplete, using it as the dependent variable renders estimates that are qualitatively similar to the main analysis.

5 Conclusion

This paper adopts an economic perspective on the formation of modern religious theology, with a special focus on the opposition to same-sex marriage. I find that priests

 $^{^8\}mathrm{By}$ using the diocese-level support, the diocese dummies net out the direct effect of serving in a conservative diocese.

serving in income-protected parishes – drawing revenue from state-sponsored property rather than member payments – are less likely to publicly oppose same-sex marriage. By contrast, I find no evidence that the private beliefs held by the local members adjust to political subsidies. I interpret this as evidence of the opportunistic nature of the religious pledges made by the clergy.

Relative to the existing literature, this paper's contribution lies in its exogenous measure of political protection, which, combined with an anti-liberal revolt within the Church of Sweden and the availability of high-quality register data, allow me to rule out some threats to the causal interpretation of the estimates. Simultaneity – that the result arises because conservative parishes are less successful in pursuing political rents – can be ruled out *a priori*, since the property shares used for statistical identification are regulated by national law and cannot be amended by the local parish or even the church itself. In addition, the regression analysis indicates that the subsidy-effect is robust to control variables measuring the presence of medieval church investments, the presence of arable land, and the demographic and socioeconomic characteristics of the residents in the parish. That income protection reduces opposition to same-sex marriage by increasing the opportunity cost of religious pandering is not the only interpretation of the results, but it is the one that is able to consistently explain the overall picture.

The analysis does not determine whether subsidies are justified as policy instruments. In translating these findings into policy advice, a critical question is how important churches are in promoting public goods and to what extent political favoritism leads to religious break-outs and the formation of new religious organizations. The analysis is also silent on whether certain theological doctrines are more beneficial for society than others.

The evidence presented in this paper appears relevant to other contemporary religious conflicts and debates, such as the opposition to female ordination, divorce, abortion, and perhaps even vaccinations. These are wedge issues that often clash with the political agendas of Western states. A relevant question beyond the scope of this paper concerns when internal religious conflicts lead to breakouts. In a few notable cases, seemingly fringe anti-establishment religious doctrines have been placed at the very center of new religions. This appears to be an under-explored area of economic research.

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Figures



Figure 2: The figure illustrates the link between clerical opposition to the endorsement of same-sex marriage in the Church of Sweden (December 2005) and the results from the preceding church election (September 2005). The "conservative nomination group" is the share of votes in the diocese cast on *Frimodig Kyrka*. The vertical axis measures the total number of petition signatures against same-sex marriage in 2005, per diocese. The size of the round markers depicts the dioceses' relative sizes in terms of hired priests (in 2000).



Figure 3: The figure displays the shares of exogenous income across dioceses and pastorates in the Church of Sweden. The shares are calculated by dividing the rents from state-protected property and church subsidies, given by definition (5), by total pastoral revenues. Total pastoral revenues also include member fees.



Figure 4: Churches with cultural heritage-status (eligible for subsidies) and the landed property shares. The figure displays the link between a parish's prominence during the glebe-system and the current availability of political subsidies.



Figure 5: Spatial distribution of opposition to same-sex marriage (left map) and dependence on member revenue (right map) in the Church of Sweden. In the right map, a darker shade of blue indicates that the parish relies less on subsidies and dividends from state-protected property, given by definition (5). In the left map, the darker shade of blue indicates that more priests oppose same-sex marriage.



Figure 6: Landed property and opposition to same-sex marriage across year of parish establishment. The year of parish establishment is equal to the median construction year of the churches in the parish. The two lines are moving averages of the residual values of $opposition_{ij}$ and $shares_{ij}$, using the exponential smoothing parameter that minimizes the forecast error. The residual values of the two variables are obtained by regressing $opposition_{ij}$ and $shares_{ij}$ on the size of the parish (land area and population in 2010), the number of churches in the parish and the size of the pastorate in which the parish operates. The vertical line on the right-hand side of the figure marks the year 1910, the year the glebe system was finally reformed.



Figure 7: Political protection and the clergy's loyalty to conservative members. The figure illustrates the link between property subsidies and clerical opposition to the endorsement of same-sex marriage in the Church of Sweden (December 2005). The upper connected line represents the relationship in conservative parishes (defined as parishes with above-median member support for the conservative nomination group *Frimodig Kyrka* in the 2005 election). Conversely, the lower connected line represents the relationship in liberal parishes (below-median member support). Subsidies and dividends from state-protected property are defined according to (5). The vertical axis measures the average share of petition signatures against same-sex marriage in 2005 per subsidy decile.

Tables

			(1)		
	mean	sd	min	max	count
Opposition priests	.504	1.05	0	11	1477
Shares in diocese's property	.0225	.0235	0	.223	1477
Protection (log)	13.6	1.18	6.76	16	1427
Total priests (pastorate)	7.68	16.3	0	106	1477
Total priests (per parish)	2.19	2.17	0	14	1477
Parish vote share Frimodig Kyrka 2009	5.97	6.72	0	63.6	1477
Parish vote share Frimodig Kyrka 2005	3.69	5.45	0	57	1268
Land area (log)	9.12	1.39	3.61	14.4	1470
Arable land (share)	.167	.196	0	1.53	1470
Medieval churches	.863	1.22	0	9	1477
Vasa churches	.116	.396	0	5	1477
No of churches in 2010	2.85	2.47	1	29	1421
Median age of churches	378	311	18	1017	1421
Population (log)	4.64	1.3	.693	8.04	1472
Average earnings (log)	12	.224	10	12.7	1472
Swedish-born population (share)	.861	.0829	.333	1	1472
Women (share)	.43	.0985	0	1	1472
Average age	40.5	4.52	16.1	71.5	1472
University graduates (share)	.328	.1	0	.8	1472

Table	1:	Summary	statistics.
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Note: Protection (log) is defined according to definition (5). Population, Average earnings, Swedishborn population, Women, Average age and University graduates are based on a 3.35 % sample of the Swedish population.

	(1)	(2)	(3)	(4)
Protection (log)	-0.142***	-0.152***	-0.129***	-0.130***
	(0.0395)	(0.0411)	(0.0434)	(0.0436)
		0.0554	0.0607	0.0610
vasa cnurcnes		-0.0554	-0.0607	-0.0610
		(0.0030)	(0.0599)	(0.0598)
Medieval churches		0.105***	0.0283	0.0278
		(0.0391)	(0.0361)	(0.0365)
Madian are of abunches		0 000602***	0 000300**	0 000909**
Median age of churches		-0.000093	-0.000289°	(0.000293)
		(0.000143)	(0.000121)	(0.000128)
Population (log)			0.282***	0.277***
			(0.0293)	(0.0294)
Land area (lag)			0.00114	0.00002
Land area (log)			(0.00114)	(0.00902)
			(0.0510)	(0.0528)
Arable land (share)			0.0810	0.0430
			(0.172)	(0.171)
Average earnings (log)				0.0187
Average earnings (log)				(0.0187)
				(0.0000)
Swedish-born population (share)				0.0791
				(0.345)
Womon (sharo)				0.0265
Women (share)				(0.194)
				(0.101)
Average age				-0.00676
				(0.00638)
University graduates (share)				0.109
Surversity Statutatos (Sharo)				(0.266)
Observations	1427	1379	1379	1379
Adjusted R^2	0.111	0.134	0.212	0.210

Table 2: Property protection and clerical opposition to same-sex marriage.

Notes: Each column represents the results from a separate regression. All regressions include dummies for dioceses and indicators for the number of parishes in each pastorate. Standard errors in parenthesis, clustered at the pastorate level (738 clusters).

	(1)	(2)	(3)	(4)
Protection (log)	-0.227	-0.187	-0.125	-0.112
	(0.163)	(0.179)	(0.200)	(0.202)
1 7 1 1		0.250	0.000	0 104
Vasa churches		0.350	(0.208)	(0.184)
		(0.341)	(0.350)	(0.349)
Medieval churches		-0.0115	0.246^{*}	0.250^{*}
		(0.147)	(0.136)	(0.138)
		()	()	()
Median age of churches		-0.000980	-0.000865	-0.000980
		(0.000753)	(0.000770)	(0.000770)
Domulation (lag)			0.927	0 1 9 0
Population (log)			-0.237	-0.189
			(0.192)	(0.200)
Land area (log)			-0.180	-0.212
			(0.202)	(0.233)
			· · ·	· · ·
Arable land (share)			-4.700***	-5.214^{***}
			(1.446)	(1.566)
Average corrings (log)				0 103
Average earnings (log)				(1.054)
				(1.004)
Swedish-born population (share)				4.437
				(3.186)
Women (share)				0.0539
				(1.761)
Average age				-0.0580
Inverage age				(0.0546)
				(0.0010)
University graduates (share)				-0.898
				(2.965)
Observations	1427	1379	1379	1379
Adjusted R^2	0.188	0.185	0.195	0.195

 Table 3: Property protection and the vote share of conservative nomination group

 Frimodig Kyrka

Notes: Each column represents a separate regression. All regressions include dummies for dioceses and indicators for the number of parishes in each pastorate. Standard errors in parenthesis, clustered at the pastorate level (738 clusters).

	(1)	(2)	(3)	(4)
Protection \times Frimodig	-0.399***	-0.378***	-0.358***	-0.355***
	(0.138)	(0.133)	(0.129)	(0.130)
Protection (log)	0.0358	0.0181	0.0374	0.0349
	(0.0571)	(0.0589)	(0.0624)	(0.0629)
Vasa churches		-0.0418	-0.0470	-0.0471
vasa onaronos		(0.0625)	(0.0591)	(0.0591)
		(0.0020)	(0.0001)	(0.0001)
Medieval churches		0.102^{***}	0.0296	0.0286
		(0.0392)	(0.0362)	(0.0366)
Madian and fahamahaa		0.000700***	0.000211**	0 000919**
Median age of churches		-0.000708^{+++}	-0.000311	-0.000313
		(0.000144)	(0.000129)	(0.000129)
Population (log)			0.278***	0.273***
1 (0)			(0.0289)	(0.0288)
			· · · ·	· · · ·
Land area (log)			-0.0123	-0.00374
			(0.0319)	(0.0333)
Arable land (share)			0.0456	0.0168
Arable faild (share)			(0.174)	(0.172)
			(0.174)	(0.112)
Average earnings (log)				0.00725
				(0.0964)
Swedish-born population (share)				0.0341
				(0.344)
Women (share)				0.0264
(ondro)				(0.190)
				(01200)
Average age				-0.00538
				(0.00637)
University and ustage (share)				0 1 47
Oniversity graduates (snare)				(0.14)
Observations	1427	1379	1379	1379
Adjusted R^2	0.124	0.147	0.223	0.221
	0.1=1	0.111	0.220	÷.==±

Table 4: Interaction analysis. The impact of property protection in dioceses with more conservative boards.

Notes: Each column represents a separate regression. All regressions include dummies for dioceses and indicators for the number of parishes in each pastorate. The interaction term *Frimodig* is observed on the diocese-level, which means that direct impact of having a more conservative diocese board is captured by the diocese dummies. The interaction term *Frimodig* is scaled such that its maximum value equals unity. A unit change in the interaction term thus equals a percentage point reduction in income protection in the most conservative diocese. A unit change in *Protection* represents the impact in the (hypothetical) diocese without any conservative members. Standard errors in parenthesis, clustered at the pastorate level (738 clusters).

Table 5: Political rents and religious opposition to same-sex marriage. Alternative definitions of the outcome variable

	(1)	(2)	(3)	(4)	(5)
	Final list	Published list	Final list	Final list	Published list
			per church	Extensive margin	share of
					total priests
Protection (log)	-0.142***	-0.0636***	-0.0504***	-0.0494***	-0.0574***
	(0.0395)	(0.0231)	(0.0125)	(0.0131)	(0.0169)
Observations	1427	1427	1379	1427	1406
Adjusted R^2	0.111	0.102	0.136	0.143	0.099

Notes: Each column represents a separate regression. All regressions include dummies for dioceses and indicators for the number of parishes in each pastorate. Standard errors in parenthesis, clustered at the pastorate level (738 clusters).

Appendix: The Church Hierarchy and Data Sources

Level	Responsibility	Variables observed at	
		this level	
1. National	Official doctrines, interna-		
	tional aid, foreign visitors,		
	etc.		
2. Diocese (13 units)	Priest admittance and	Subsidies, dividends from	
	training, theological	landed property.	
	monitoring through the		
	chapters, management of		
	landed property, approval		
	of church subsidies.		
3. Pastorate (788 units)	Parishes sometimes form	Shares in the church's	
	joint church communities,	landed property, total	
	with one single economic	number of priests.	
	administration. Since		
	2014, the joint communi-		
	ties have been called pas-		
	torates.		
4. Parish (1477 units)	Sermons, baptisms, con-	Age and number of	
	firmations, funerals, dia-	churches, socioeconomic	
	conal work. Parishes also	indicators, opposition	
	set the local church fee.	<i>priests</i> , vote shares.	

Table 6: The administrative levels of the Church of Sweden and the unit of observation for the variables used in the analysis.

Notes: The identifying variable and the main outcome variable are italicized.

There are five original data sources used in this paper: (1) church election data, (2) same-sex marriage opposition data, (3) landed property data, (4) church buildings data and (5) the administrative registers used to construct parish resident characteristics. All parish-level data files, including the do-files used to create the final dataset, are available from the author on request. The raw data sources, with the exception of the administrative registers, are publicly available.

Parishes sometimes merge or split. To match the different datasets to each other, it was necessary to establish a common parish code. The paper uses the parish codes from 2010. A total of 1,477 territorial parishes are used in the analysis.

Below is a short summary of each data source:

 The election data consist of the parish vote shares of all nomination groups in the national election. The data are published by the Church of Sweden (https: //www.svenskakyrkan.se/tidigare-valresultat).

All adult members (18 years and over) are eligible to vote for a nomination group (often called a "church party") at three levels: the parish/pastorate level, the diocese level and the national level. The Church of Sweden consists of 13 dioceses, and in 2010, these dioceses consisted of 1,477 territorial parishes (some of the

parishes form joint administrative units, called pastorates). Elections are held every fourth year.

This means that the elected boards are not necessarily composed of devoted Christians. The nomination groups can be divided into two classes. The *political nomination groups* are the same as the political parties in Sweden, albeit under slightly different names. The second class is the *theological nomination groups*. They typically advocate a certain position on specific theological issues (such as female ordination or same-sex marriage). Some of the theological nomination groups have a progressive agenda (e.g., *Öppen Kyrka*: "open church"), whereas others are conservative (such as *Frimodig Kyrka*: "brave church"). The political nomination groups are in the majority in the National Assembly.

- 2. The opposition data come from two sources: the publicly available protest list published on November 5, 2005, in Swedish newspapers (e.g., Svärdkrona 2005; http://www.aftonbladet.se/nyheter/article10696805.ab) and the more comprehensive list published by the initiative-taker on his website on November 10, 2005. The working data used in this project were gathered from the online sources using a simple algorithm that counted the number of occurrences of each parish on the protest lists. Thus, the individual priest names are not part of the compiled data.
- 3. The landed property dataset was created manually from the dioceses' annual reports. Dividends at the diocese level are taken from Svenska Kyrkans Utredningar (2007) for the years 2000-2005; for later years, the annual reports are used. Data on subsidies targeting historical church property are taken from Svenska Kyrkan (2013). Landed properties are reported at an administrative unit called "joint church communities" (*Kyrklig samfällighet*), known as the pastorate from 2014.
- 4. Data on church buildings are publicly provided by the Swedish National Heritage Board (*Riksantikvarieämbetet*). Exportable data tables of protected church buildings are available through the construction registry (*Bebyggelseregistret*; http://www.bebyggelseregistret.raa.se/bbr2/dataexport/dataexport.raa). A total list of 4,043 church buildings (including chapels, clock towers, and other auxiliary buildings) was used in the analysis. These were matched to 1,402 parishes through manual matching of church names. The registry provides two construction years, one indicating the start year of the construction of the church and one indicating its completion year. The start year is used in the analysis.
- 5. The data on individual church membership and socioeconomic background are provided by Statistics Sweden (SCB) through the database LINDA (Longitudinal INdividual DAtabase). It consists of a 3.35 percent representative sample of the Swedish population. The parish-level control variables are based on this sample. See Edin and Fredrikson (2000).

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