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Does Duration of Deregulated Religious Markets Affect Church Attendance? Evidence from 26 Religious Markets in Europe and North America Between 1981 and 2006

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This study tests the deregulation hypothesis of religious market theory in 26 European and Northern American countries by examining differences in religious involvement between and within countries. The deregulation hypothesis, which is assumed to be universally valid, predicts that religious involvement is higher in deregulated religious markets. Moreover, countries having deregulated religious markets for a longer period of time are supposed to have higher levels of involvement. Therefore, we test the duration hypothesis. This test is important, as it also has been argued that it may take time for deregulation to have an effect on religious involvement. Multilevel analysis on the stacked European and World Value Surveys of 1981, 1990, 2000, and 2006 show that deregulation fosters church attendance, but duration of deregulation does not increase church attendance. Although the deregulation hypothesis cannot be rejected, we find that modernization corrodes church attendance to a larger extent than deregulation can stimulate church attendance.

INTRODUCTION

Since Stark and Bainbridge (1985) introduced the religious market theory over two decades ago, scholars have remained very interested in the relationship between the supply of religious goods and religious vitality (Finke and Stark 1988; Iannaccone 1991; Stark 1997; Stark and Finke 2000). Religious market theory—sometimes labeled as a new paradigm (Warner 1993)— relates religious involvement to the structure of religious markets: in more free and diverse markets, religious life is expected to be more vibrant (Stark and Finke 2000). One of the core hypotheses concerns state regulation. This hypothesis predicts that the less a state regulates its religious market, the greater individual religious involvement will be within that market (Chaves, Schraeder, and Sprindys 1994:1088; Iannaccone, Finke, and Stark 1997:351). The assumption is that strict regulation of a religious market allows religious firms to be lax, indolent, and complacent since the clergy enjoy a secure income irrespective of performance. As a result, the religious options for individuals to choose from will be limited and religious involvement will be low in countries with a strong regulation of the religious market. Religious *deregulation* is therefore regarded as a major driving force to increase religious involvement (Bruce 1999; Finke 1997; Stark and Iannaccone 1996).

The deregulation hypothesis has been tested in several ways, but we point out two important shortcomings. First, tests so far have primarily focused on the *degree* of religious deregulation,

neglecting the *duration* of religious deregulation (Barro and McCleary 2003; Chaves and Cann 1992; Norris and Inglehart 2004). Second, empirical research on religious regulation focused on differences *between* countries (Barro and McCleary 2003; Chaves and Cann 1992; Iannaccone 1991; Norris and Inglehart 2004), whereas the deregulation hypothesis is foremost a hypothesis about the religious market and trends of religious variation *within* countries.

When a state, for whatever reason, no longer supports claims of exclusive legitimacy made by the existing monopolistic religion, its religious leaders can no longer afford to be lax and take their congregations for granted (Stark and Iannaccone 1994). In this new situation, the clergy have to work harder to attract and bind their members. As a presumed consequence, this investment will raise levels of involvement. Hence, the deregulation hypothesis is about changes in the structure of the religious market *within* a country. Nevertheless, it makes sense to compare various countries as well because the structure of religious markets differs between countries. In this study, we will test the presumed positive effect of both the degree and the duration of deregulation between countries as well as within countries.

To test the deregulation hypothesis, we use the European and World Value Surveys held in 1981, 1990, 2000, and 2006. In total, 26 countries were selected for analyses. To measure state regulation, we also make use of data originating from the International Coalition for Religious Freedom archives. The main focus of this study is on the relationship between deregulation of the religious market and religious involvement. Furthermore, deregulation is split into two distinct aspects: degree of deregulation and the duration of deregulation. Accordingly, the research question reads:

> *To what extent do the degree and the duration of a deregulated religious market positively affect individual religious involvement within and between European and Northern American countries between 1981 and 2006?*

Previous Research

Empirical research testing the deregulation hypothesis shows inconclusive findings. This may be due to different sampling strategies and the use of different indicators for deregulation and religious involvement. This, of course, makes it difficult to compare the results of these studies. As Chaves and Cann (1992) have already made clear, comparing different studies is further complicated because some researchers used the degree of religious diversity as a substitute for religious deregulation in testing the impact of the market structure. Religious diversity might, indeed, be a consequence of deregulation, and one may expect that diversity fosters religious participation as well. Hence, although being different indicators of the market structure, both deregulation and religious diversity should have a positive impact on religious participation.

Iannaccone (1991) used religious concentration, expressed in the Herfindahl index, as a measure for diversity in the market structure. He showed that church attendance in 12 Protestant nations is substantially higher in more diverse markets. By contrast, Chaves and Cann (1992), also using the Herfindahl index and the same 12 Protestant nations while adding six Catholic nations, found no relationship between diversity and religious involvement. Arguing that religious concentration is not a valid measure for religious regulation, they developed a six-point scale measuring the degree of religious regulation. This scale directly refers to state interferences with religious organizations and therefore is an appropriate measurement of religious regulation. Using this more adequate measure of religious regulation, Chaves and Cann showed that state regulation negatively influences religious involvement.

Barro and McCleary (2003) came to similar conclusions using the Herfindahl index and the regulation measure developed by Chaves and Cann. They examined monthly religious attendance in 59 countries and found that a state religion (being a religious monopoly) increased involvement, whereas religious regulation lowered involvement. This is a rather odd outcome as state religion

and regulation are quite strongly positively related in their study. However, their results indicate that there might be some truth in the deregulation hypothesis.

Chaves, Schraeder, and Sprindys (1994) examined 18 Western countries to test whether religious regulation affected Muslims minorities. Their findings showed that when a religious market is more regulated, religious involvement is lower among Muslims, now expressed by the Hajj Rate for Muslims per 100,000 of the total population. Thus, using yet another measure of state regulation, the deregulation hypothesis was again confirmed.

Norris and Inglehart (2004) refined the regulation scale of Chaves and Cann by adding 14 new items. Examining 21 nations in 2004 (many of which were already in the 1992 sample of Chaves and Cann), they found no evidence to support the deregulation hypothesis. In their analysis, they used no less than four different indicators of state regulation. Norris and Inglehart concluded that religious deregulation does not significantly increase a nation's mean frequency of attendance at religious services. To conclude, the use of measures for religious regulation and measures for religious diversity provided mixed results.

Still, findings that do not support the religious deregulation hypothesis may be explained by arguing that the onset of increased religious involvement due to deregulation takes some time (Stark and Finke 2000; Stark and Iannaccone 1994:236). An obvious next step, then, is to test this "time-lag" auxiliary assumption. This can be done in two ways. First, differences in duration *between* countries might explain differences in religious involvement. Second, the duration of deregulation *within* countries might explain changes in religious involvement. Analyzing differences within nations is, of course, a more stringent test of the deregulation hypothesis than analyzing differences between nations.

In conjunction with the duration of religious deregulation, we consider the influence of the *degree* of deregulation on religious involvement. We determine if there are nonlinear effects of duration of religious deregulation and whether duration and the degree of deregulation interact with each other. Furthermore, possible confounding influences of modernization and communism are taken into account. Finally, we control for compositional effects. This is done at the end of the analyses to give the predictions of the religious market theory the best possible chance to prove their value.

Religious market theory, in general, asserts that changes in a religious economy affect the behavior of individuals. Thus, changes on a higher level—the religious market—will result in changes in the behavior of individuals (Finke 1997; Stark and Finke 2000). However, research testing the deregulation hypothesis quite often used *aggregated* data on religious involvement, assuming that all individuals within a higher level unit (such as countries or waves) have equal religious involvement (Barro and McCleary 2003; Chaves and Cann 1992; Finke, Guest, and Stark 1996; Finke and Stark 1988; Iannaccone 1991; Norris and Inglehart 2004; Stark and Iannaccone 1994, 1996). However, it is reasonable to assume that there is considerable individual variation in church attendance. Thus, by aggregating, this individual variation is lost by default. Therefore, we examine religious involvement on the individual level to investigate the relationship between religious deregulation and involvement.

HYPOTHESES ON THE DEREGULATION OF RELIGION

General Patterns in Religious Deregulation

According to religious market theory, in highly regulated religious markets, all religious preferences cannot be adequately satisfied. As a result, levels of religious involvement will be relatively low. In a completely deregulated religious economy, the market is free and open, and religious firms are invested in attracting and keeping their adherents (Finke and Stark 1988; Stark and Iannaccone 1994). Since the clergy in this more open market cannot guarantee that a large

number of clientele will always visit their church, they have to make a considerable effort to attract and bind their members. In the long run, these efforts are presumed to result in higher levels of religious involvement. Therefore, deregulated markets will have higher attendance rates than regulated markets.[1] Correspondingly, the hypothesis on the degree of religious deregulation pertaining to differences *between* countries reads:

> *Hypothesis 1: Individuals living in countries with a higher degree of deregulation of the religious market attend religious services more often than individuals living in countries with lower levels of deregulation.*

As countries deregulate, religious markets open up and, as a result, levels of religious involvement will rise (Stark and Finke 2000). We thus argue that the longer a country has had a deregulated religious market, the stronger individual religious involvement in that country will be. However, there is presumed to be a time lag between religious deregulation and the onset of increased religious involvement (Stark and Iannaccone 1994). Stability or any decline in religious involvement after religious deregulation can be temporary (Stark and Iannaccone 1994:234) since it may take time for religious firms to get used to the principles of a free-market economy, that is, it takes some time for the clergy to adapt and implement strategies to advertise their "products" (Stark and Iannaccone 1994). It is most likely that religious deregulation, therefore, does not have an instant effect. In general, once religious deregulation takes place, religious involvement within a country is presumed to increase over time (Stark and Finke 2000).

Although religious market theory does not specify the duration of this time lag, we refine the deregulation hypothesis by incorporating the influence of *duration* of religious deregulation on religious involvement. To avoid the risk of refuting the deregulation hypothesis because of a too-restricted time frame, we do not specify the exact time before deregulation takes effect. Instead, we will test the religious deregulation hypothesis assuming that the adjustment process is gradual and will allow for possible start-up processes before deregulation affects church attendance.

Duration of religious deregulation differs from country to country because deregulation was not introduced in all countries at the same time. Some countries have a record of deregulation for well over 200 years, while others have no, or a very short, history of deregulation. Following religious market theory, countries with religious markets that were deregulated many years ago should display higher levels of individual religious involvement than countries that deregulated only recently, or than countries still regulating their religious economy. Therefore, the religious market hypothesis involving the history of religious deregulation as it pertains to differences *between* countries reads:

> *Hypothesis 2a: Individuals living in countries with a longer history of religious deregulation attend religious services more often than individuals living in countries with a shorter history of deregulation.*

We already mentioned that the deregulation hypothesis is actually about the influence of religious deregulation *within* countries on individual religious involvement within those same countries. However, due to lack of data in previous research, the hypothesis on religious deregulation has often been tested on differences *between* countries (e.g., Chaves and Cann 1992; Iannaccone 1991; Norris and Inglehart 2004). To make progress in this line of research, not only individuals from different countries, but also individuals within the same country from different eras should be compared. Hence, the hypothesis about the duration of religious deregulation *within* a country reads:

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[1] In accordance with previous research, religious attendance is used to measure religious involvement. In contrast to membership, attendance is a better indicator of devotion because it is less likely to be enforced or subject to national sentiments (Martin 1978).

> *Hypothesis 2b: The longer a country has deregulated its religious market, the more individuals in this country will attend religious services.*

A More Stringent Examination: Modernity and Religion

The effects of deregulation and duration on religious involvement as stated in hypotheses 1, 2a, and 2b might be confounded by other factors. A more stringent test of religious market theory's deregulation hypothesis, therefore, is to take plausible confounding factors into account. One obvious and especially plausible confounding factor is modernity.

Modernity has profoundly changed our outlook and way of life. By means of mass education, people have come in contact with a variety of ideas, and rising levels of income have given many people more opportunities to choose among various lifestyles. These developments have given rise to countries where modes of life differ socially, culturally, and religiously. To cope with the diverse lifestyles of their inhabitants, the modern state can no longer recognize claims of exclusive legitimacy by one particular religion or faith. Hence, as countries became more modern, they have opened up their religious markets.

Not only did modernity give rise to religiously deregulated markets, modernity is also thought to be corrosive to religious life (Berger 1967; Bruce 2002; Martin 1978, 1991; Wilson 1966). The technological advances of modernity foster a sense that people can shape their own fate, independent of God. As a consequence, this increased sense of autonomy lowers religious involvement. By controlling for the degree of modernity, we take into account possible confounding effects of modernization on the relationship between religious deregulation and religious involvement.

Additionally, to some extent the influence of modernity may in turn be complicated and confounded by postcommunism since religion suffered greatly in former communist countries (Smart 1998). This communist repression results in relatively low levels of both modernity and church attendance, thereby suppressing the often-found negative association between the Human Development Index (HDI) (a measure for modernity) and religious involvement (Norris and Inglehart 2004). To properly estimate the effect of modernity on church attendance, in our analyses we therefore also controlled for a nation's (non)communist regime.

We furthermore included age and social economic status into our models to account for possible compositional influences. These individual characteristics might influence the relationship between deregulation/duration and religious involvement as well. The elderly and people with a relatively low social economic status have stronger religious involvement (e.g., Inglehart and Baker 2000). As a result, countries with a relatively large proportion of elderly and/or individuals with a low social economic status have, on average, higher church attendance rates.

Data and Operationalization

To test the religious market theory hypotheses, we constructed a repeated cross-sectional data set from the European and World Value Surveys in 1981, 1990, 2000, and 2006, covering 26 European countries and North America. These four waves include identical questions about religion. Only countries that were covered in at least two waves were selected.[2] In addition, the respondents selected were between 18 and 90 years of age. After a listwise deletion of missing data on relevant variables, we developed a combined data set of 106,710 individuals distributed

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[2] Including Islamic, Asian, and Southern hemisphere countries was not feasible. Most of them were included in one wave only. In addition, we lack statistical power to differentiate between these rather heterogeneous types of countries. Therefore, we chose to exclude these countries and focus on a more or less homogeneous group of countries, i.e., North America and Europe.

Table 1: Respondents per country and wave

	1981	1990	2000	2006	Total
Traditionally Catholic countries (n = 12)					
Austria	0	1,431	1,515	0	2,946
Belgium	1,138	2,780	1,865	0	5,783
France	1,198	993	1,606	995	4,792
Hungary	0	998	992	0	1,990
Ireland	1,211	997	980	0	3,188
Italy	1,345	1,996	1,982	1,000	6,323
Malta	447	361	994	0	1,802
Poland	0	980	1,088	992	3,060
Portugal	0	1,185	996	0	2,181
Slovakia	0	1,585	1,327	0	2,912
Slovenia	0	1,011	987	1,007	3,005
Spain	2,297	4,131	2,385	1,177	9,990
Traditionally Orthodox countries (n = 4)					
Bulgaria	0	1,017	994	986	2,997
Czech Republic	0	3,024	1,880	0	4,904
Republic of Moldova	0	0	1,008	1,043	2,051
Romania	0	1,100	1,135	1,762	3,997
Traditionally Protestant countries (n = 6)					
Canada	1,254	1,723	1,913	2,109	6,999
Denmark	1,181	1,028	1,015	0	3,224
Finland	0	584	1,009	1,008	2,601
Iceland	927	699	965	0	2,591
Latvia	0	436	981	0	1,417
Sweden	914	981	1,013	1,002	3,910
Traditionally Mixed countries (n = 4)					
Germany	1,301	3,430	2,023	2,012	8,766
Netherlands	1,198	1,012	999	942	4,151
United Kingdom of Great Britain	1,167	1,474	962	1,003	4,606
United States of America	2,310	1,820	1,198	1,196	6,524
	17,888	36,776	33,812	18,234	106,710

Source: EVS & WVS (1981, 1990, 2000, 2006).

over 26 countries in the period 1981 to 2006. The distribution of respondents over countries and waves is displayed in Table 1. Because we have hypotheses about the effect of religious market characteristics on religious involvement of individuals covering multiple time points and nations, we applied multilevel analysis (Duncan, Jones, and Moon 1996; Snijders and Bosker 1999). Three levels are distinguished. At the lowest and first level we have individuals ($n = 106{,}710$), the second level comprises all surveys within all countries ($n = 80$), and the third level is composed of countries ($n = 26$).

Measuring Religious Involvement

Religious involvement was measured by religious attendance. People were asked how often they attend religious services, apart from weddings, funerals, and festivities. Religious attendance is recoded into two categories because of its skewed distribution. The category "does not attend" is composed of people who never attend church or attend less than once a year. In total, 59 percent

of the sample falls into this category. Individuals who do attend (41 percent of the sample) vary considerably, ranging from holy days only to more than once a week; they all fall into the category "attend religious services at least once a year."

Measuring Religious Deregulation: Degree and Duration

Like Norris and Inglehart (2004), we measured religious deregulation using the degree of religious freedom because deregulation implies that "the incentives and opportunities for religious producers and viable options for religious consumers" are not confined in any sense (Finke 1997:50). In other words, deregulation is the freedom for individuals to adhere or not to adhere to whatever faith they desire, and for religious producers to have access to all possible incentives and opportunities to establish themselves in the religious market.

Our time-scale measurement of religious deregulation is the number of years religious freedom exists in a country. These data were derived from the records of the International Coalition for Religious Freedom Archives (www.religiousfreedom.com). Because constitutions are renewed every now and then, we calculated the number of years from the moment religious freedom officially came into practice. If no year was available in the Religious Freedom records, we examined the constitution or bill of rights for the necessary data. For some countries, no such written constitution or bill of rights exists—for example, in the United Kingdom. In these cases, we used as a starting point the year in which religious freedom was widely accepted because of custom, common law, or legislation.

To examine whether a longer period of religious deregulation results in differences *between* countries in levels of religious involvement, all countries between 1981 and 2000 were given an a*verage score* for length or history of religious deregulation. For example, when a country deregulated its religious market in 1890, it had experienced 91 years of deregulation by 1981 and 110 years by 2000. Hence, the average duration score for the 1981–2000 period is (91 + 110)/2 = 100.5 years. The variation in average duration between countries is quite large, varying from 0 to 205.4 years.

Like any other market, it is unlikely that the influence of duration on involvement will yield a linear course, since there may be floor effects (when the history of religious deregulation is relatively short) and/or ceiling effects (when duration covers a relatively long period). For example, it is quite likely that after 150 years of religious freedom, 50 more years will not matter that much. We took these possible nonlinear effects into account in the analyses. For reasons of convenience and interpretation, the variable history of religious deregulation is mean-centered in the analyses.

In addition to our scale, we also use the Norris and Inglehart scale to measure the degree of deregulation. In our data set, this scale ranges from 65 to 95, averaging 80.9.[3] For reasons of convenience and interpretation, the degree of religious freedom is mean-centered in the analyses.

To examine trends *within* countries between 1981 and 2006, all countries scored 0 on the variable "years of religious deregulation since 1981" and, depending on the year religious freedom came into practice, scored 0 or higher in subsequent surveys. For example, the Netherlands scored 0 in 1981 and scored 19 in 2000 because religious freedom started in 1848 and was not interrupted between 1981 and 2000. In Slovakia, however, the score in the 1990 survey was 0, since it was a communist country that banned religion. In 1993, its religious market became deregulated; therefore, in the year 2000, seven years of uninterrupted religious freedom had passed, so Slovakia

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[3] Theoretically, the scale ranges from 20 to 100, with 20 meaning no religious freedom and 100 implying complete religious freedom as explained in the Norris and Inglehart (2004) study. In our study, most countries rank relatively high due to sample selection.

scored 7. Since the difference between the first and the fourth wave of the WVS is 25 years, the variation of duration since 1981 varies from 0 to 25 years.[4]

Initially, we included separation between state and religion (that is, state-supported religion) in our analyses as well. However, this variable is strongly and positively correlated with "history of religious deregulation" (0.701). This resulted in multicollinearity problems that obscured an accurate interpretation of the actual relationships. In relation to this, the models lack statistical power to include both variables (Snijders and Bosker 1999). Therefore, we chose to omit the variable "state-supported religion." We argue that religious deregulation—measured as years of religious freedom—is more important. If religious freedom is constitutionally ensured, people are free to choose and religious bodies are free to establish themselves in the religious market. This does not necessarily imply that there is no state religion. However, with religious deregulation (measured as years of religious freedom) some sort of free religious market is able to arise regardless of whether or not a state supports/favors one religion. On a side note, a country can have no state-supported religion but have no religious freedom as well. In this situation (which is communism, and no communist nations are in our data set), people are not free to choose religious involvement and churches cannot establish themselves in the religious market. Hence, without religious freedom, a religious market where free-market principles apply cannot exist.

The Human Development Index

We chose the HDI as a measure for modernization. It indicates the level of development of a country and the amount of options and autonomy for persons in a given country. The index combines measures of life expectancy, literacy, educational attainment, and GDP per capita for countries worldwide. In our data set, the HDI ranges from .71 to .93, with an average of .88. This index was also used by Norris and Inglehart (2004) in their study. For reasons of convenience and interpretation, HDI is also mean-centered in the analyses.

Compositional Influences: Individual-Level Variables

We also take into account compositional effects of age and social economic status (SES). The latter is a standardized combination of educational attainment and income. Respondents had to have a valid score on education and/or income to determine their social economic status. Ranging from 0 to 2, the average SES is .93. The variable SES has fewer observations than the other variables, due to missing data on this variable for Sweden in 1990, and some random missing data for other countries and years. Since SES is an ordinal scale, we also included dummy indicators including a dummy for missing cases. However, this strategy did not affect the results. For reasons of parsimony, we therefore report SES as a scale. The average respondent was 44 years old. Table 2 shows the descriptives of the variables included in our analyses.

<div align="center">ANALYSIS</div>

General Patterns of Religious Deregulation

Using multilevel analysis, we first estimated a random intercept model. In this model, the intercept turned out to have significant random components, indicating that church attendance varies over both survey waves and countries. The results are displayed in Table 3. Model 1 tests

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[4] The variable "years of deregulation since 1981" is rather similar to the variable "survey sweep" but not equal (Peason's correlation coefficient = .874). We will address this issue further at the before-last paragraph of the analysis section.

Table 2: Descriptive statistics for variables in the analysis

	Range	Mean	Standard Deviation
Country-level variables:[a]			
Degree of religious deregulation	65–95	81.15	8.98
History of religious deregulation (in years)	0–205	58.83	68.29
HDI	.71–.93	.87	.06
Postcommunist	0/1	.35	.49
Country-wave level variables:[b]			
Years of religious deregulation since 1981	0–25	11.25	8.78
Individual level variables:[c]			
Religious attendance	0/1	.59	.49
Age	18–90	44.58	17.34
SES (social economic status)[d]	0–2	.93	.73

Source: EVS & WVS (1981, 1990, 2000, 2006).
[a] = Means and standard deviations are calculated averages over all 26 countries.
[b] = Means and standard deviations are calculated averages over all 80 country-wave combinations.
[c] = Averages and standard deviations are calculated over all 106,710 individuals.
[d] = Calculated over 95,290 individuals (this includes 79 country-wave combinations, missing the entire 1990 Sweden sweep, and some random missings for other country-wave combinations).

whether a higher degree of deregulation between countries results in higher levels of attendance. Like Norris and Inglehart (2004), we find no evidence that a higher degree of deregulation results in higher levels of attendance.

To test whether the duration of deregulation between countries affects levels of attendance in a positive way, the history of religious deregulation (in years) was added in Model 2. Contrary to religious market theory, findings show that in countries with a longer history of religious deregulation, people do not have a significantly higher probability to attend religious services compared to people living in countries with a shorter record of religious deregulation.

It is important to note that we also tested the rivaling secularization hypothesis (i.e., more deregulation leads to less involvement) and found the negative parameter estimate in Model 2 to be significant (one-tailed $p < .01$). In other words, as the history of religious deregulation lasts longer, the probability to attend declines, and this is clearly in line with predictions of secularization theory (Bruce 2002; Martin 1991).

As stated earlier, the process of religious deregulation may have its own setbacks, but eventually it results in higher levels of religious involvement (Stark and Iannaccone 1994). We therefore checked whether a nonlinear effect of a country's history of religious deregulation on involvement existed, but no such influence was found. This is rather striking because in some countries deregulation has been going on for decades if not centuries, and we would expect the influence of deregulation to flatten off. For now, no support for hypothesis 2a is found.

In Model 3, the duration of religious deregulation within countries is examined. If the deregulation hypothesis of religious market theory is correct, the longer a country has deregulated its religious market, the more individuals in this country will attend religious services (hypothesis 2b) This is a time-related specification of the deregulation hypothesis 2a. Findings show that "years of religious deregulation since 1981" has no significant negative relation with attendance. Hence, hypothesis 2b is not supported either. In Model 4, we checked for possible start-up costs or saturation effects for "years of religious deregulation since 1981," and again we cannot detect a significant nonlinear effect.

Models 5 and 6 include possible interaction effects. It might well be that in countries with a longer history of religious deregulation, the influence of the degree of deregulation follows

Table 3: Hierarchical logistic regression models for religious attendance

	Model 0	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Intercept	.443***	.446***	.448***	.447***	.476***	.473***	.485***	.778***	.423***	.403***
Country-level variables (between countries):										
Degree of religious deregulation		.016	.021	.020	.020	.020	.021	.030**	.030**	.030**
History of religious deregulation (in years)			−.004^	−.003	−.003	−.003	−.003	−.002	−.002	−.002
HDI								−11.709***	−11.973***	−11.956***
Postcommunist (dummy variable)								−.859**	−.898**	−.900**
Degree * History of religious deregulation						.000				
Country-wave level variables (within countries)[a]:										
Years of religious deregulation since 1981				−.004	−.004	−.004	.000	−.006	−.009^	−.009^
Years of religious deregulation since 1981 – squared					−.000	−.000	−.001			
Degree * Religious deregulation since 1981						−.000	−.000			
Degree * Rel. deregulation since 1981– squared						−.000	−.000			

(Continued)

Table 3 (*Continued*)

	Model 0	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Individual-level variables:										
Age									.014***	.014***
SES										.026**
Variance components:										
Years of religious deregulation since 1981							.000			
Degree * Rel. deregulation since 1981 – squared							.000			
Country-level variance	.508***	.499***	.495***	.482***	.476***	.470***	.476***	.365***	.377***	.381***
Country-wave level variance	.058***	.058***	.053***	.052***	.051***	.052***	.026***	.057***	.057***	.056***

Source: EVS & WVS (1981, 1990, 2000, 2006).
***p < .01; **p < .05; *p < 0.10 (all one-tailed).
[a] = time varying variables.
Models 1 through 8: $N_1 = 106,710$, $N_2 = 80$, $N_3 = 26$.
Model 9: $N_1 = 99,049$, $N_2 = 79$, $N_3 = 26$.
^*p* < .01 (one-tailed, testing the rival secularization hypothesis).

a different path than in countries that have only recently opened up their religious markets. Additionally, according to religious market theory, the positive effect of the degree of religious freedom on attendance should be stronger when religious deregulation within a country lasted longer, that is, years of religious deregulation since 1981. However, as Models 5 and 6 reveal, no evidence favoring either of these interaction hypotheses is found.

A More Stringent Test: Modernity and Postcommunism

We originally wanted to examine whether the expected relationship between deregulation and involvement is (to some extent) confounded by modernity. To do so, we included the HDI, as an indicator of modernity, into the analysis. Modernity is presumed to influence both religious regulation and involvement negatively. If so, the relationship between deregulation and involvement could weaken or even disappear. Next, it is also important to consider postcommunism as a possible suppressor effect of modernity. Religion suffered greatly in countries that were communist (Smart 1998), leading to relatively low church attendance in former communist countries despite an also relatively low HDI coefficient. This consequence might suppress the often-found negative association between HDI and religious involvement (Norris and Inglehart 2004).To take this suppressor effect into account, we included next to modernity a fixed dummy effect for postcommunism. Finally, it is highly likely that both secularization processes and market effects exist simultaneously. Therefore, the deregulation of the market might become significant if we control for modernity.

As Model 7 shows, HDI and postcommunism both have a significant, negative effect on attendance. More interesting is that the parameter estimate for the degree of religious deregulation becomes larger and significant. Note that the negative influence of HDI is much larger than the positive effect of deregulation, resulting in a net decline in church attendance.[5] Although both theories seem to apply simultaneously, modernization corrodes church attendance to a larger extent than deregulation can stimulate church attendance.

Last, in Models 8 and 9, we included the individual variables age and social status to take into account compositional effects. These models show that age and social-economic status are significantly and positively related to religious involvement.[6] Additionally, the individual characteristics do not considerably affect the effects of level-2 and level-3 variables. We even found a negative effect of years of deregulation since 1981 in Models 8 and 9, when testing the rivaling secularization hypothesis.

One might wonder what the trend in church attendance is in all countries given that degree of secularization has a positive effect while modernization has a negative effect on church attendance. Table 4 shows trends for all countries.[7] In the period 1981 to 2006, on average, church attendance

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[5] To give a concrete sense of the relative size of the effect of the degree of religious deregulation versus HDI, we computed the predicted change in the percentage of individuals who attend church at least once a year. For these computations, we took an increase from the 10th to the 90th percentile, while all other variables are mean-centered and kept constant. According to Models 7 through 9 (see Table 4), an increase from the 10th to the 90th percentile in the degree of religious deregulation (i.e., from 68.5 up to 95.0) makes the percentage of church attendees increase from 60 percent to 77 percent (change: +17). By contrast, a 10th–90th percentile increase of HDI (from .79 to .92) leads to a decrease from 85 percent to 54 percent (change: −31).

[6] Some may argue that in countries with a longer record of deregulation, the elderly are exposed to influences of deregulation for a longer period of time than youngsters, and are therefore more devout. However, no such interaction between deregulation and age was found. This means that effects of deregulation on attendance are similar for all ages in all the countries analyzed, irrespective of their record of deregulation.

[7] Since floor and ceiling effects are conceivable, we used logistic regression to estimate a trend parameter. At the individual level, we used the following logistic equation: $\log(p1/(1-p1) = a + b1*wave$. In this equation, $p1$ is the probability of scoring 1 on church attendance, and $b1$ is the trend parameter indicating whether church attendance became increased

Table 4: Percentage of people attending religious services at least once a year per country and wave, in percentages and estimated decennial, log linear trends (cf. footnote 7)

	1981	1990	2000	2006	Change	Year Religious Freedom
Traditionally Catholic countries (n = 12)						
Austria	na	67.4	68.4	na	.05	1867
Belgium	50.0	51.8	49.7	na	−.02	1831
France	34.1	40.9	33.0	32.5	−.06*	1789
Hungary	na	51.6	44.6	na	−.28***	1972
Ireland	92.8	95.2	89.2	na	−.26***	1937
Italy	73.8	79.8	83.0	83.3	.25***	1948
Malta	95.7	91.7	94.0	na	−.11	1964
Poland	na	92.6	91.1	92.4	−.03	1988
Portugal	na	59.9	66.6	na	.29***	
Slovakia	na	61.7	67.4	na	.25***	1993
Slovenia	na	63.4	62.3	63.7	.00	1991
Spain	67.4	59.7	56.5	41.4	−.34***	1978
Traditionally Orthodox countries (n = 4)						
Bulgaria	na	36.5	66.1	62.9	.74***	1949
Czech Republic	na	35.4	35.4	na	−.01	1992
Republic of Moldova	na	na	84.1	74.9	−.96***	1991
Romania	na	85.6	90.0	79.9	−.28***	1991
Traditionally Protestant countries (n = 6)						
Canada	68.2	64.6	65.0	59.3	−.13***	1982
Denmark	42.8	42.5	50.0	na	.15***	–
Finland	na	50.0	52.2	54.8	.12*	1870
Iceland	52.0	55.1	56.9	na	.10*	1944
Latvia	na	53.4	57.3	na	.16	
Sweden	45.5	33.7	41.3	33.8	−.13***	1975
Traditionally Mixed countries (n = 4)						
Germany	58.3	51.7	47.6	42.8	−.23***	1918
Netherlands	53.7	52.7	45.6	39.1	−.23***	1848
United Kingdom of Great Britain	40.6	44.3	35.6	42.7	−.02	1871
United States of America	76.5	74.2	78.4	61.1	−.21***	1789

Source: EVS & WVS (1981, 1990, 2000, 2006).
na = no data available, ***$p < .01$; **$p < .05$; *$p < .10$ (all two-tailed).

levels decreased significantly in 11 countries, increased significantly in seven countries, and remained quite stable in eight countries. Although secularization seems to dominate, one simply cannot ignore the increases in seven countries.

In sum, the general pattern is that the degree of religious deregulation has initially no significant positive influence on church attendance in European countries and North America in the 1981–2006 period. However, when the level of modernity and postcommunism is taken into account, the degree of deregulation increases from .021 to .030 and becomes significantly positive. However, its influence is completely counteracted by modernization in the Western

(positive b) or decreased (negative b) over the years. Note that the variable wave is a metric measure with four categories: 1981, 1990, 2000, and 2006.

nations analyzed here. Modernity proves to be corrosive to religious life, as thought by some secularization theorists (Berger 1967; Bruce 2002; Martin 1978, 1991; Wilson 1966). In other words, even though free religious markets in the West temper the corrosive influence of modernity somewhat, this counterbalance is not substantial enough to fully counteract the profound negative impact modernity has on religious involvement.

Furthermore, our findings do not support hypotheses 2a and 2b; duration of deregulation has no positive significant effect on involvement. Although the history of religious deregulation differs from country to country, individuals living in countries that have had a deregulated religious market for decades do not have a greater inclination to attend religious services than individuals living in countries with a shorter history of deregulation.

Moreover, not only do individuals differ in their choice to attend church *between* countries but also *within* countries. This is important because the deregulation hypothesis is foremost a hypothesis pertaining to individuals within a religious market (which is mostly confined within a country). Our findings show that within countries individual religious involvement does not increase as the period of deregulation continues in those very countries.

Conclusion

This study examined to what extent the duration and degree of religious deregulation explains differences in religious involvement of citizens in Europe and North America. Differences between countries and trends within countries were examined to test the deregulation hypothesis of religious market theory. This study revealed some findings in line with, and others contradicting, religious market theory.

For differences *between* Western European and Northern American countries, we found corroboration for the hypothesized effect of the degree of deregulation: when controlling for modernity, degree of deregulation has a significant positive effect on church attendance. Note that we also found a corroding influence of modernization on attendance for this set of Western countries, which backs a cardinal point of secularization theory (Berger 1967; Bruce 2002; Martin 1978, 1991; Wilson 1966). Furthermore, this effect is quite strong, so even when the positive effect of the degree of deregulation on involvement is working, the religious revival as predicted by religious market theory will not emerge because modernity totally counters the influences of deregulation (Stark 1997). Next, we found that the history of religious deregulation had no positive influence on individual attendance. We even found a significant negative effect in Model 2, when testing the rivaling secularization hypothesis. The absence of a significant positive influence poses a serious challenge for religious market theory, which states that individuals in countries with a longer history of religious deregulation show higher levels of attendance than individuals living in countries with a shorter history of deregulation.

The null results obtained by Norris and Inglehart (2004) and the weak positive results we found using Norris and Inglehart's scale (the degree of deregulation) are consistent with each other. In their analysis using simple Pearsons's correlation without prior controls, the effect of religious freedom has the same positive association with involvement although not significant. Furthermore, the differences in significance might be due to differing selection of nations. Norris and Inglehart selected 21 postindustrial countries whereas we selected 26 Northern American and European countries. The same applies for the strong degenerative influence of modernization (HDI) on religious involvement. Norris and Inglehart's choice to select only postindustrial countries might conceal the influence of modernization.

Within countries, we found no evidence that the duration of religious deregulation positively affects religious involvement. Instead, we even found a negative effect in Models 8 and 9 when testing the rivaling secularization hypothesis. This again is troublesome for religious market theory as the deregulation hypothesis of religious market theory primarily pertains to trends

within countries (Stark and Finke 2000). Religious market theory predicts that a revival in religious involvement would happen in Europe when the state created a free market for religion, forcing religious organizations into competition for customers (Stark and Finke 2000). From the data examined, we conclude that this does not seem to be happening today nor has it happened in the past decades.

Although it is likely that religious deregulation may take different pathways in countries with diverse religious heritages, we did not take that into account for two reasons. First, religious market theory explains religious variation on the basis of a variety of settings, across time and place (Stark and Iannaccone 1994; Stark and Finke 2000), but does not distinguish between settings with different religious traditions (e.g., Stark and Finke 2000). Our current theory is concerned with the structure of the religious market—regulation, total diversity, market shares, and competition—not the dominant religious signature of the religious market. It does not take into account whether a geographical area is predominantly Catholic, Protestant, Islamic, or some other religious tradition. The second reason is methodological. As the focus of this study is to simultaneously test *between* countries and trends *within* those countries, reliable data were available for 26 nations only. Hence, we lacked the statistical power necessary to differentiate between countries with different dominate religious heritages (Achen 2005; Snijders and Bosker 1999). Although the inclusion of more waves per nation and including more, especially non-Western, nations is favorable for more reliable trend estimates, we think the time span we considered was large enough to investigate whether religious deregulation does raise levels of individual religious involvement.

In sum, to the extent that the degree and duration of a free, deregulated religious market explains differences in religious involvement between and within various European and Northern American countries in the 1981 to 2006 period, our study found some support for the claims of religious market theory. Even so, most of our findings were troubling for religious market theory and, indeed, do not support the deregulation hypothesis. In religious markets where the clergy have to make an effort to attract and bind members, it is not evident that more individuals attend religious services. (Before we draw this conclusion, we should state that we did not test the basic assumption that clergy does, indeed, become more active in a deregulated market.) Basically, the religious picture of most European and Northern American countries that emerges from our study is that of continuous secularization somewhat tempered by the degree of deregulation.

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