

# Religious Institutions and Economic Wellbeing

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*Daniel Hungerman*

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## Summary

Religious institutions can provide spiritual guidance and hope, a sense of belonging, and material support during periods of hardship. Daniel Hungerman reviews the evidence on the roles that religious institutions play in individuals' lives and how engagement with those institutions shapes individuals' economic wellbeing.

First, he describes patterns and trends in religious social service provision, and in religiosity, across places and over time. The United States features prominently in this discussion, although he includes work in other countries as well. Next, he provides an overview of key aspects of the large interdisciplinary body of research that associates religious participation with other outcomes and channels by which religious groups affect outcomes, giving special attention to the empirical challenges facing work of this nature.

Overall, he writes, religious groups are an important and understudied source of social services and wellbeing. Despite the challenges of studying the effects of religion, many rigorous studies on the topic confirm that religion has important causal beneficial effects on wellbeing. Together, these results raise important policy questions concerning how to provide social services to the disadvantaged.

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**R**eligious groups, both in the United States and elsewhere, pose particular challenges for quantitative social scientists. Religion can be difficult to define, and I won't define it here—other studies have taken on that task.<sup>1</sup> Many aspects of religiosity may appear so abstract or intangible that they defy easy quantitative study. Furthermore, since religious activities are often voluntary in nature, they may not involve any formal records or oversight and thus may leave no lasting data for study. This problem is exacerbated in the United States, where religious groups don't participate in any official census and aren't usually required to provide the government any information at all.

Social scientists are often interested in separating correlation from causation, and here again the voluntary nature of religious groups poses certain challenges. For example, if some individuals who engage in a religious community have different outcomes than others, are these differences caused by engagement in the religious community, or by something else? It could be that those who choose to engage in religious activities are simply different from other people, and so they could have different outcomes even if religious participation has no causal effect.

Despite these challenges, this article provides evidence that religious groups play a major role in providing social services and other benefits to their own members and to the broader community as well. The United States features prominently in this discussion, but I also include some work in other countries. And I discuss how US religiosity, and religious groups' social service efforts, have changed in recent years. Religious groups are extremely important in the United

States, but we'll see that organized religion is in decline. I go on to show that throughout the world, religious participation is strongly associated with a range of beneficial outcomes, and I describe evidence that these relationships are causal in nature. Together, these results raise important policy questions concerning how to provide social services to the disadvantaged.

## **Patterns and Trends in US Religiosity**

Religious participation is an important aspect of life for millions of Americans and billions of adherents around the world. The vast majority of people in sub-Saharan Africa, South Asia, and the Middle East consider themselves religious.<sup>2</sup> Most Americans identify with a religious tradition and believe in God, and a large portion frequently attend religious services. Religious giving makes up the largest source of all US charitable giving. It's no trivial task to count the number of US congregations, but scholars estimate that there are more than 380,000—an increase over 1998.<sup>3</sup>

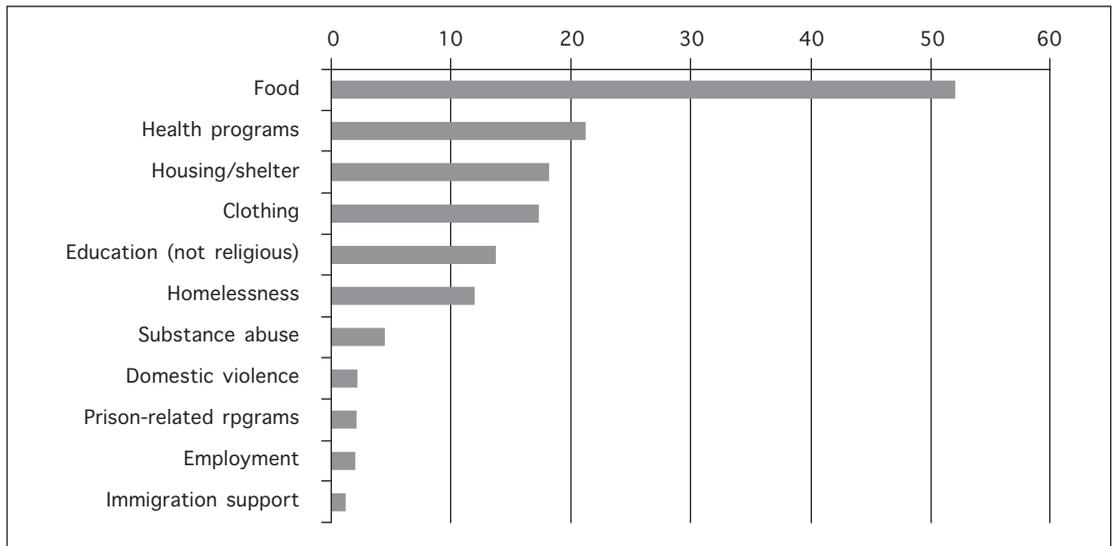
These congregations can affect community wellbeing in a variety of ways. First, congregations often provide social services to help people in their community, including both members and nonmembers. Table 1 shows congregational social service provision in the United States using the most recent wave (2012) of the National Congregations Study (NCS), a nationally representative survey. These results were reported in a study by the social scientists Mark Chaves and Alison Eagle.<sup>4</sup> The first row shows that most congregations—more than 80 percent, or almost 320,000—report that they provide social services. These actions often involve considerable volunteer time and effort. But paid staff and direct monetary support are

**Table 1.** Number of Congregations Involved in Social Service Provision

|  | Responses of Congregations<br>in NCS | Estimated Total for All<br>Congregations in US |
|--|--------------------------------------|--|
| Participated in social service activities<br>in past 12 months   | 83.1%                                | 319,000  |
| One or more paid staff member spent<br>over 25% of time on social service projects                           | 14%                                  | 54,000   |
| Started a separate nonprofit organization<br>for human services or projects or outreach<br>in past two years | 8.9%                                 | 34,000   |
| Social service spending in past 12 months  | \$27,000 (mean)                      | \$10,368,000,000                               |

*Notes:* The first three rows of the lefthand column are taken from a study by the social scientists Mark Chaves and Alison Eagle (see text) and are based on the 2012 National Congregations Study. The lefthand column shows the fraction of respondents who answered yes to either of the following questions: (a) “Has your congregation participated in or supported social service, community development, or neighborhood organizing projects of any sort within the past 12 months? Please don’t include projects that use or rent space in your building but have no other connection to your congregation”; or (b) “Within the past 12 months, has your congregation engaged in any human service projects, outreach ministries, or other activities intended to help people who are not members of your congregation?” The righthand column adjusts the numbers in the first column by the estimated number of congregations in the United States (384,000). The last row is the author’s calculations from NCS 2012 data using answers to the question, “How much money, overall, did your congregation directly spend on all of these projects or programs within the past 12 months? Here, I’m asking about direct cash donations from your congregation, not counting staff time or volunteer time.”

**Figure 1.** Percent of Total Congregations Naming Social Services in Different Areas



Source: Chaves and Eagle (see endnote 4), from the NCS 2012 Survey.

also fairly common: row two shows that about one congregation in seven (or 54,000 total) reports having a paid staff member

devote a significant amount of time to social service projects, and that nearly one in 10 congregations has started a separate

nonprofit in recent years to provide social services.

The NCS also asked congregations how much money they directly contributed to social service provision. As the table shows, congregations appear to have spent more than \$10 billion on such support. But that number doesn't include in-kind donations; volunteer work; social-service support that congregations undertook indirectly (say, by giving money to a national religious organization that itself does social work); noncongregational religious organizations (such as schools, which I'll discuss); or social service activities undertaken by individuals as a result of their religiosity but not as part of formal congregational activities. All five of these excluded types of support are potentially quite large, so the \$10 billion figure is assuredly too low. A study by economist Jeff Biddle attempts to capture some of the support related to these other categories; he estimates total congregational philanthropic activity at about \$43 billion in 2018 dollars.<sup>5</sup> That's quite a bit more than what is spent by several well-known government programs, such as Temporary Assistance for Needy Families.<sup>6</sup>

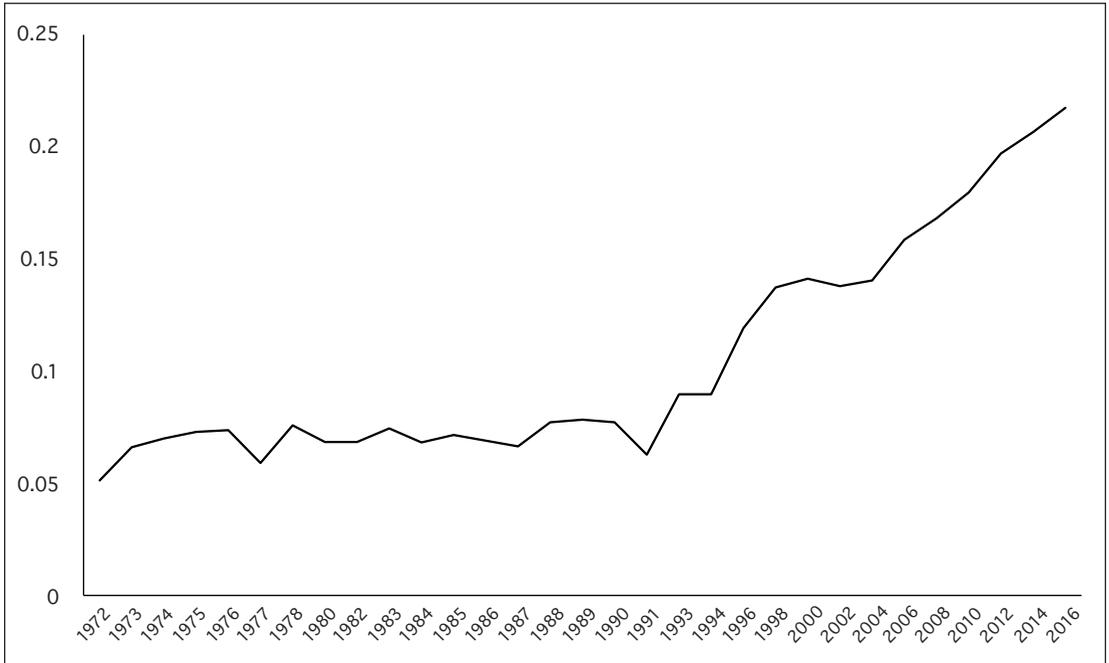
What types of services do congregations support? The 2012 NCS allowed congregations to name up to four types of supported services; figure 1 shows the fractions of all congregations in the NCS that report providing a particular type of service. The largest is clearly food-related activities, such as a food pantry, but a number of other types of activities are also provided.

Taking table 1 and figure 1 together, two observations are in order. First, faith-based work in US communities is understudied; the types of activities described in the table and figure receive little attention from scholars

interested in programs related to social service provision. In particular, this sort of religiously founded work is often ignored by my fellow economists. But table 1 and figure 1 show that religious groups are a widespread and important source of community social services. Second, US religious groups in general aren't subject to government regulation, whereas social service provision often is, so these activities can potentially be influenced by government policy.<sup>7</sup> I discuss this further below.

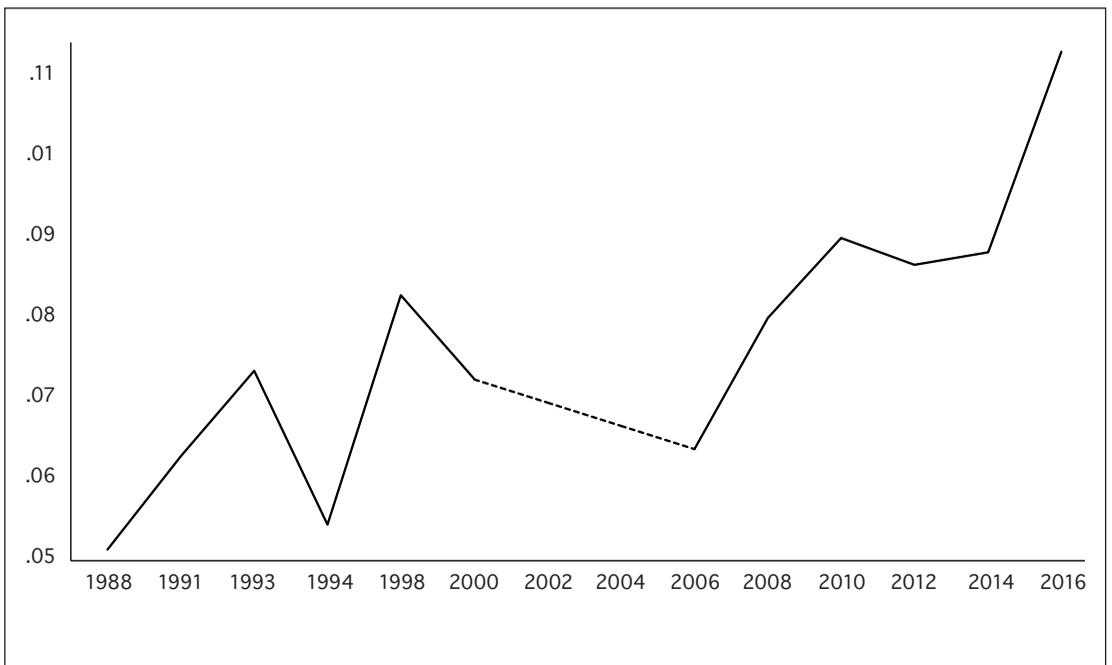
Beyond the formal congregational work described in table 1 and figure 1, religious groups are critical to their communities in at least two ways. First, congregations play a large role in education—an area of special consequence for children's development and wellbeing. The Private School Survey shows that Catholic schools are by far the most popular type of private school in the United States, as measured either by number of schools or by number of students. In 2015–16, almost two million students attended a Catholic school, nearly twice as many as attended all nonsectarian private schools combined. As Kevin Rinz, Jay Frymark, and I note, most Catholic schools are run by Catholic churches.<sup>8</sup> But the many types of non-Catholic religious private schools are quite popular as well, with total attendance again nearly doubling nonsectarian attendance. A large body of research attests to the benefits of Catholic education.<sup>9</sup> But recent work on the benefits of private education using vouchers has often found only modest academic benefits.<sup>10</sup> I don't know whether these results can be reconciled; this question touches on the benefits of various religious activities and the challenges in measuring them, which I take up in the next section.

**Figure 2.** Fraction of GSS Respondents with No Religious Affiliation



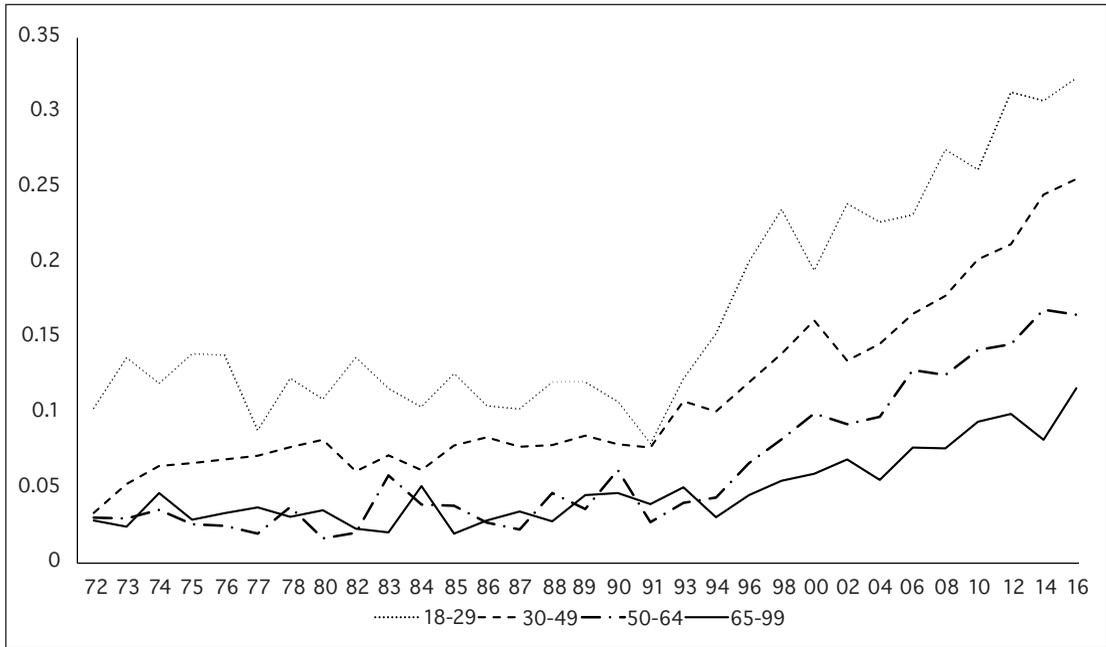
Note: The figure shows, for each year of the General Social Survey (GSS), the fraction of respondents who report no religious affiliation.

**Figure 3.** Fraction of GSS Respondents Who Don't Believe in God or a Way to Find Out about God



Note: The figure shows, for each year available year, the fraction of respondents whose belief in God is best expressed by "I don't believe in God" or "I don't know whether there is a God and I don't believe there is any way to find out." The question wasn't asked of respondents in 2002 and 2004.

**Figure 4.** Fraction Unaffiliated, by Age



Note: The figure shows, for different age groups of respondents in the General Social Survey (GSS), the fraction of respondents in an age group who report no religious affiliation.

Religious organizations also provide important community services through community organizing, though these are harder to quantify. In an in-depth study from 2015, sociologists Richard Wood and Brad Fulton write that religious groups play a critical role in community organization, and that this work is often far more heterogeneous and complex than the standard depiction of (in their words) the “blanket religious conservatism” often portrayed in the media.<sup>11</sup> Wood and Fulton also note that this type of activity has changed in recent years, becoming more national in focus (although much of it is still local in character). They also note that mainstream Protestant traditions and urban, historically African-American churches have undergone hardship in recent years, such as declining membership and worsening finances, and that this has also affected the

overall landscape of religious community engagement.

In fact, the importance of religious decline extends beyond these two groups, though this isn’t fully recognized. In figure 2, I plot the fraction of respondents in the General Social Survey (GSS) who report that they have no religious affiliation at all. (A long-running, nationally representative survey, the GSS includes a variety of questions about faith and religious life.) Starting in the early 1990s, we see a sharp and large increase, with roughly a quarter of respondents in recent years stating that they have no affiliation. This “rise of the nones” (so called because it’s a rise in the fraction of individuals who, when asked about their religious affiliation, answer “none”) was first discussed in 2002 in an influential article by sociologists Michael Hout and Claude Fischer.<sup>12</sup>

**Figure 5.** Percent of Giving That Goes to Religion

Source: *Giving USA 2018*.

Note: The figure shows the fraction of total donations going to religious organizations each year.

As I noted above, religious practice can take different forms and be measured in different ways, and the rise of the nones has sometimes been described as reflecting a drop in stated affiliation by otherwise nonreligious individuals. Even if this were true, the phenomenon might still be socially important, as some scholars have argued that formal religious participation appears to matter more than personal faith in promoting certain types of voluntarism and social service provision.<sup>13</sup>

But in fact, the rise of the nones appears to reflect a broader change in religious faith and practice in recent years. Figure 3 depicts the fraction of GSS respondents who reported that they don't believe in God or don't believe in a way to find out about God. While this percentage is still

relatively small, it has also increased, more than doubling in the past 30 years. And these trends may grow even more in the coming years: figure 4 shows these results by age group, indicating that while all groups have become less religious, this is especially true for those in younger age groups, who are much less religious than in the past.

Figure 5 presents another example of this phenomenon using a nonstandard measure of religion: the fraction of donations given to religious causes over time, based on data taken from *Giving USA*, an annual report on philanthropy in the United States. Even as total giving has grown, the amount given to religious causes has grown relatively little, so that the fraction of donations going to religious causes has dropped considerably—from half to about a third of total giving—in

just a couple of decades. Thus the decline in religiosity is large, recent, and pertains to real religious activity.

What's causing this decline? Incomes often trend up over time, so one might wonder whether the decline in religiosity is driven by growing material wealth. There's not much evidence to support this idea. First, many studies have shown that income is a weak predictor of religious activity.<sup>14</sup> Several recent studies have taken on this topic by using *natural experiments*; that is, by cleverly exploiting some feature of a public policy (or some other special circumstance) that creates, for a certain group of individuals, a variation in income that's close to random, facilitating a study akin to a randomized experiment. These studies have produced mixed results.<sup>15</sup> Nor has this work fully explained the mystery that income at the individual level is weakly associated with religion, but in the aggregate (that is, looking at trends in national religiosity over time) religion often appears to be countercyclical: people become more religious during recessions, and less religious when the economy is doing well. This could be evidence for an *omitted variable*—something unobserved by researchers that affects both income and religiosity at the same time. Or it simply could be that people respond to a negative economic shock across their community differently than they do to an idiosyncratic shock to their own income. We need more evidence on how income affects religiosity.

The time period considered here includes several scandals involving religious authority, perhaps most notably the sex abuse scandal that first rocked the Catholic Church in the early 2000s.<sup>16</sup> My own work has shown that in the short run, this scandal lowered Catholic

participation and may have caused modest substitution to other faiths, but that in the long run it likely lowered overall religiosity.<sup>17</sup> Other work has found evidence of lower overall social service provision and social capital in communities with parishes affected by the scandal.<sup>18</sup> But the declines in figures 2, 4, and 5 began before this scandal, and it appears unlikely that the magnitude of the decline can be explained by scandals.

Education levels have also increased in recent years. Could this explain the decline? Compared to work on religion and income, the recent evidence on religion and education is more uniform: several studies have exploited natural experiments to show that increases in education tend to lower religiosity, all else being equal.<sup>19</sup> Again, it's doubtful that the magnitude of this relationship can explain most of the decline in religion, but it appears that gains in education do matter.

Much of the work on the rise of the nones has concluded that it's been driven in part by the US political landscape. Hout and Fisher discuss this argument in the seminal work mentioned earlier.<sup>20</sup> The argument is that the initial growth in nonaffiliation may be partly a response to the rise of the religious right. More recent noteworthy work in this area includes research by the political scientists David Campbell and Robert Putnam and by economists Daniel Chen and Jo Thori Lind, among others.<sup>21</sup> This work has shown that religion is much more politically polarizing now than it was in the early 1990s, before this decline began. Some of the evidence here could fit with the work of Émile Durkheim, who contemplated how the communal aspects of worship represented an elemental connection between religion and other social events.<sup>22</sup> I'm not aware of

much recent research that contemplates this potential connection. A recent study by me and three coauthors uses church bulletins to show that political campaign stops have a significant effect on congregational revenues; in that paper we discuss how our findings and other recent studies on religion and politics mesh with Durkheim's theories on the communal aspects of religion and other social behaviors.<sup>23</sup>

A final possible explanation of the decline involves demographics. Recently, sociologists David Voas and Mark Chaves presented evidence that the decline in religiosity has grown successively larger for age cohorts in the United States in a way that resembles the decline seen in other countries.<sup>24</sup> (The authors take this argument to the larger discussion of *secularization*, the idea that modernization tends to undermine religious activity; readers interested in learning more about secularization could start by consulting Voas and Chaves's paper.) It's also likely true that immigration (and the potentially high levels of religiosity among certain immigrant groups) could influence national religious trends in the years to come.

Overall, then, while religion remains important to many people in the United States, it has undergone a period of change and, at the national level, a decline in a number of measures. The causes of this decline appear to include responses to politics, but changes in education and demography may also be important components of religious trends in the future. Beyond the causes, we might note that understanding the consequences of this decline could be especially important if the decline is observed in vulnerable communities where strong and socially beneficial institutions are needed, as some

observers have suggested.<sup>25</sup> This raises two questions: What are the consequences of religious activities? And how can changes in religious activity affect individual and community wellbeing?

## Consequences of Religious Participation

The consequences of religious activity represent an enormous area of scholarship; hundreds or even thousands of papers across many disciplines have taken on this topic. I won't survey these studies, or even survey the surveys of these studies.<sup>26</sup> With such a large body of work, we can find a variety of results, including, of course, "surprising" results that run counter to the conclusions of most other studies. But in general, a large number of studies find that highly religious individuals report better outcomes among a wide range of observable factors. Religious individuals appear healthier along a large number of measures: they are happier, less likely to commit crimes, less likely to use drugs, more likely to vote, and more likely to give to charity—even to purely secular causes. Research has also found important benefits of religious practice at the community level. In one well-known study, the economists Raj Chetty, Nathaniel Hendren, Patrick Kline and Emmanuel Saez explored economic mobility across different communities in the United States.<sup>27</sup> They found that Salt Lake City, a city with high religious participation, had high levels of mobility—specifically, children of low-income parents had a relatively high chance of improving their economic standing as adults. Moreover, the researchers also found that community religiosity was a strong predictor of high mobility across communities. A key takeaway from many studies, or at least my reading of them, is that the beneficial effects of

religiosity can be extensive. Religiosity is often the most important predictor of outcomes related to social engagement, for example. These positive results aren't specific to any particular religious tradition.

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But are these results causal? That's the question that has kept a certain tribe of social scientists (including me) up at night. When we ask it, the amount of relevant research shrinks. As noted above, religiosity is voluntary, and those who choose to participate in it or be helped by it may differ from others. That makes it challenging to compare outcomes between the voluntary participants and nonparticipants.

Two early efforts to take this challenge seriously were conducted by economists: Rajeev Dehejia, Thomas DeLeire, and Erzo Luttmer in one case, and Jonathan Gruber in the other.<sup>28</sup> Dehejia, DeLeire, and Luttmer examine whether religious individuals' consumption and self-reported wellbeing appear to be relatively less sensitive to income shocks—that is, whether religion helps “insure” people against negative shocks. The authors have no silver-bullet natural experiment, and they discuss concerns such as measurement error and reverse causality (such as the idea that being well-insured against shocks might make it easier for you to go to church consistently, rather than the other way around). To allay these concerns,

the authors use a variety of methods, such as applying a procedure that matches each religious person in a sample to an observationally similar nonreligious person, so that the final data sample contains a similar distribution of observable characteristics across religious and nonreligious individuals. They find that religiosity does indeed insure against negative shocks. Other work since has built on the idea that religion is an important provider of social insurance and the ability to cope with negative shocks.<sup>29</sup>

Gruber proposes a creative strategy: using variation in the ethnic composition of one's community to study the impact of religion. Put simply, an American of Italian ancestry may not make much of a distinction between living in a neighborhood full of Swedish individuals versus a neighborhood full of Polish individuals—except that the latter group, like Italians, are Catholic. If living side-by-side with ethnicities that share your religious tradition makes you more religious, but otherwise doesn't affect your wellbeing, than we can use ethnic composition to learn about the causal effects of religion. Gruber finds, again, that religiosity leads to better outcomes for a number of economic indicators.

Several more recent studies take up this topic using similar methodologies.<sup>30</sup> Especially noteworthy is a study by the economists Jane Fruehwirth, Sriya Iyer, and Anwen Zhang.<sup>31</sup> In an approach similar to Gruber's, they exploit variation in the religiosity of peers across cohorts within a school to identify how religion influences mental health in a sample of US adolescents. They find that religion plays an important causal role in promoting mental health. Their results are significant in light of the extent to which religiosity is associated with mental health—

these authors find that the basic association between religion and mental health actually understates religion's true effect on wellbeing. A selection effect underlies that finding: depressed individuals turn to religion, which works against identifying any improvements generated from religiosity, so that a simple analysis of the data will understate the benefits of religion for promoting mental health.

Some recent studies have proposed alternative methods for exploring the effects of religion on wellbeing. First, some researchers have attempted to randomize religiosity in an experimental setting to study how a subtle priming of people's religious identity can affect their decisions. For example, people might be asked to play a word game in which several answers involve religiosity. After doing so, they're more likely to mention their religion when asked to describe themselves—but they generally remain unaware that they're participating in a study meant to explore religiosity. Researchers can then see if these individuals make different decisions after being primed. The economists Daniel Benjamin, James Choi, and Geoffrey Fisher conducted an influential study using this method.<sup>32</sup> A number of other studies have also used behavior in games to learn about religion and decision-making.<sup>23</sup> Among the most ambitious work in this vein is a recent study by the economists Gharad Bryan, James Choi, and Dean Karlan, who randomized the use of an evangelical Protestant education program among the ultra-poor in the Philippines.<sup>34</sup> Their research is distinct in that the randomization was not a laboratory prime, but rather the randomized implementation of an evangelical social service program across communities.

This work represents an exciting advance in the study of religious groups and wellbeing. But as much as I admire these studies, I see two challenges related to this work. The first is that, in these studies, we might want to think carefully about what notion of religion is being randomized. Some questions about religion could likely be studied via a randomized lab or field experiment, but others (such as measuring the social value of religious institutions at a certain moment in history) wouldn't easily lend themselves to such randomized study. Of course, no methodology is perfect for all research projects, so this is meant as a mild critique. Second, the results produced by some studies of this kind are hard to interpret. For example, Bryan, Choi, and Karlan find that their Protestant-Christian-values-and-theology program raises income but has no significant effect on total labor supply, assets, consumption, or food security; this is for an extremely poor population where one might expect a change in income to coincide with a change in these variables. The results of the Benjamin, Choi, and Fisher study are also hard to summarize succinctly. But these studies reflecting an important style of research are significant nonetheless, though the final conclusions to be taken from such work assuredly lie ahead of us.

Other work has used natural experiments to rigorously investigate religion and wellbeing; there are several especially noteworthy examples. In one study, the economist Erik Meyersson examines the role of religious political leadership in affecting women's empowerment in Turkey.<sup>35</sup> Specifically, he focuses on candidates from the pro-Islamic Refah Party, which was quite popular in Turkey for a time but was later outlawed for violating the principle of secularism. Using a convincing methodology that compares

communities that just barely elect this type of Islamic mayor to communities that just barely elect another candidate, he finds that conservative Islamic leadership is associated with greater women's educational attainment.

While perhaps surprising, this result appears compatible with an excellent study by the economists David Clingingsmith, Asim Khwaja, and Michael Kremer.<sup>36</sup> They look at the effects of attending the Hajj—the pilgrimage to Mecca that Muslims are expected to make at least once during their lifetime. To study how attending the Hajj affects people's values, Clingingsmith, Khwaja, and Kremer use a Pakistani lottery that allocates Hajj visas; they find that participation in the Hajj leads to greater acceptance of female education and employment. More generally, Hajj lottery winners show both increased Islamic observance and greater belief in equality and harmony among all religions. A study by economists Felipe Campante and David Yanagizawa-Drott, which explores the observation of the Islamic holy month of Ramadan and subjective wellbeing, reaches similar conclusions.<sup>37</sup>

These studies show the potential of exploiting circumstances or events particular to a certain faith in a certain setting for identification. Many of the most convincing studies share this feature. Another example, and one of the most celebrated papers on religion and economic wellbeing, is by economists Sascha Becker and Ludger Woessmann.<sup>38</sup> These authors take up a famous question in social sciences: whether Catholic societies have traditionally had worse economic outcomes than others. This is not simply an “Is religion good?” question, but rather one that evaluates

the economic benefits of different religious traditions and their institutions. Becker and Woessmann plot out a positive relationship across countries between historic levels of Protestant affiliation (measured by the fraction of a population that was Protestant in 1900) and per-capita GDP in 1900.

Is this relationship driven by the religious traditions themselves? The great social scientist Max Weber famously considered whether a *Protestant ethic* for work might drive the difference between economic wellbeing in Protestant and Catholic communities. Becker and Woessmann take up this association in several steps. First, they put it to a careful test in historic Prussia, exploiting the fact that Protestantism expanded from its birthplace in Wittenberg (a previously unimportant town) in a pattern akin to concentric circles. Moving away from Wittenberg, you encounter all sorts of terrain and all types of communities—but places farther from Wittenberg are less likely to be Protestant, all else equal. Becker and Woessmann then confirm that distance from Wittenberg appears unrelated to various controls (such as the presence of schools in the 1500s, before the reformation), but centuries later it does predict income and economic circumstance—being closer to Wittenberg (and therefore more Protestant) is better for economic wellbeing.

This suggests that the link between GDP and Protestant affiliation is more than a simple association. Does this mean Weber was right? Not quite. The final step of Becker and Woessmann's study shows that variation in *literacy* can largely explain the economic gains of Protestantism. It appears that the Protestant emphasis that everyone should be able to read the Bible (and thus be able to read), rather than a “noncognitive” work

ethic, can explain why Protestant societies had higher economic productivity. More recently, Felipe Caicedo examined Jesuit missionaries in South America and found another example of how religiosity and education can lead to long-term economic gains.<sup>39</sup>

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*When [blue] laws are undone, religiosity declines, and risky behavior such as heavy drinking increases—but the increases are driven by those who report having been religious before the repeal occurred.*

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Becker and Woessmann's work and later studies thus provide compelling evidence that details of religious traditions can have large and enormously enduring effects on wellbeing, in this case by affecting cognitive development. But what about today? Looking at the United States, Jonathan Gruber and I investigated this by looking at the repeal of "blue laws" that restrict economic activity on a certain day of the week (often Sunday).<sup>40</sup> Most recent blue laws are narrow in focus—for example, alcohol can't be sold at grocery stores before noon on Sundays. But not that long ago, many states had strong blue laws that prohibited most Sunday economic activity. A Supreme Court ruling in 1961 provided a test by which these laws could be repealed, and many were consequently undone.

Gruber and I show that when such laws are undone, religiosity declines, and that risky

behavior such as heavy drinking increases—but the increases are driven by those who report having been religious before the repeal occurred. (We used the National Longitudinal Survey of Youth dataset, which follows individuals over time and asks about both religiosity and risky behavior.) Several later studies have also used the repeal of blue laws to study behavior.<sup>41</sup>

These studies are thus motivated by a change in government regulation. We might wonder whether and when it's possible to use regulation, or other changes in incentives for secular activities, to learn about religion. For example, let's suppose we were interested in studying whether religion mattered in some way for a person's drinking and drug use. Such a study could begin by finding random (or as good as random) variation in the incentive to be religious. But while several of the studies mentioned above have found variation in religious incentives, in many settings—particularly in the modern United States—such variation has yet to be identified. It's often easier to find variation in incentives to do things like drinking or using drugs (for instance, by looking at changes in laws related to drinking and drug use).

But it isn't clear that this latter variation, even if available, would be useful. Let's say I'm interested in whether eating French fries makes a person more likely to drink Coke. Here, "French fries" are like religion, and "Coke" is like drinking or using drugs. What we'd like to do is randomly vary people's incentives to eat fries (say, by reducing the price) and then see if those who are randomly induced to eat fries consequently drank less (or more) Coke. But what if we couldn't vary the price of fries? What if we varied the price

of Coke instead? It seems as if that wouldn't be useful—changing the price of Coke would tell us how people respond to changes in the price of Coke, of course, but this variation in incentives wouldn't typically tell us anything about what eating fries does.

In another study in this area, I argue that when it comes to religion, we actually can sometimes use “the price of Coke” to learn about “fries.”<sup>42</sup> How is this possible? I begin by noting that religion is special in a few critical ways. First, religion is a communal activity. Second, this activity often explicitly prohibits or discourages certain behaviors. These features of religiosity feature prominently in models of religious behavior, perhaps most notably in a study by economist Laurence Iannaccone, which is arguably the greatest contribution by economists to the study of religion.<sup>43</sup> Building on Iannaccone's model, I propose a test for using variation in prohibited secular activities to learn about religion.

To understand this test, I ask two questions: Why do religious groups go out of their way to discourage things? And why do people put up with it? To answer the first question, note that there may be strong positive spillovers to religious participation: if you become a devout person, others in your community may benefit. Thus religious consumption will involve a so-called “free rider” problem: religious individuals may under-invest in their faith because they don't fully account for the external social benefits their faith creates for others. Religious groups could combat this problem by making rules and prohibitions that outlaw certain activities. If these rules and prohibitions lead people to become more religious, then people could be willing to put up with the rules because they solve the free-rider problem. That's the idea that drives Iannaccone's study.

This idea can be especially powerful when people view religious groups and the forbidden good as substitutes. By definition, when the price of a substitute goes up, individuals buy less of the newly expensive good and substitute some other good. If some people view religion and risky activities (like heavy drinking) as substitutes, then discouraging heavy drinking for these individuals will cause a big shift out of drinking and a big shift into religiosity. This is a story where religion makes a significant difference in risky behavior.

This suggests a test in which we use variation in the secular good to learn about the effects of the religious good. Find a type of consumption that's both discouraged by religious groups and consumed less by religious individuals. Then identify a change in the price of this forbidden consumption, and see whether initially religious people substitute into or out of religion as a result. If they do, it indicates that religious prohibitions matter. This has the great benefit that one needs broad variation in the secular good to conduct the test.

My study offers a rigorous presentation of this idea, and then empirically conducts this test using variation in incentives to drink (based on drinking-age laws) and gamble (using casino openings). I repeatedly find evidence of substitution. Religious rules appear to be effective in discouraging heavy drinking and gambling. The results often indicate that the *most religious* individuals are those who are likeliest to substitute: it's the most religious groups whose religious giving declines when casinos open or when commerce is allowed on Sundays, and it's the most religious individuals who are likely to start drinking heavily when the legal drinking age changes. Scholars interested in

studying the role of religious proscriptions and rules might consider whether this test could be useful in their setting.

## **Summary, Future Work, and Policy Implications**

The results I've presented in this article suggest that religiosity matters for wellbeing. Religious groups discourage unhealthy behaviors and have played an important role in promoting educational attainment and economic wellbeing.

Religious participation can increase a person's tolerance of others, and in some circumstances can be particularly beneficial for human capital investments for women. Religion also appears to insure individuals against negative shocks.

What can we take away from these results? First, religiosity remains important. Second, recent rigorous research suggests that the beneficial effects of religion are often causal, and some work (such as Fruehwirth, Iyer, and Zhang's study of how religion affects adolescents' mental health, discussed earlier) finds that the large association between beneficial outcomes and religion observed in the data may understate religion's true effect.<sup>44</sup> Together, all of this suggests that religion is understudied by scholars (especially economists) interested in contemporary economic wellbeing.

Another implication concerns how to study these topics: there doesn't appear to be any magic-bullet methodology to use for "religion" in general. The closest thing could be the test I propose above.<sup>45</sup> But even this test is limited to activities that are subject to religious rules or prohibitions and to religious groups that take these sorts of rules seriously. The relevant notion of religion can vary in different settings, and

many of the best empirical studies have based their methodologies on the particular circumstances of a particular setting.

Certainly it's natural to look at the large body of research on religion and wellbeing and ask of it all, "Is this evidence of causality?" But convincing answers to that question probably must come piecemeal.

What are the largest questions facing scholars interested in religion and wellbeing? First, in recent years many economists have become especially concerned with economic mobility and inequality. Have religious groups influenced these trends, given their role in providing social services? Could they do so in the future? I know of no work that rigorously takes this up. Second, as new studies provide ever-stronger evidence of the association between religion and wellbeing, scholars could consider whether causal effects vary across measures of religiosity or across different groups of people (for example, men versus women). If possible, researchers should also discuss long-run effects. All these things could help steer future work on causality in studies of economics and religion. Next, and relatedly, though religion isn't going anywhere anytime soon in the United States, its recent decline is clear. What will be the consequences of this decline?

We also need more policy-focused work. Since religious groups are important providers of social services, government policies can interact with religious participation. On the one hand, government support of social service provision could in some cases crowd out religious activity (for example, the provision of food stamps could crowd out a soup kitchen). In other cases, government could subsidize religious activity (such as funding a religious school or training program through a voucher or block grant).

As my own work with Rinz and Frymark makes clear, these possibilities aren't mutually exclusive: we document a setting where a government subsidy (a voucher paid to private schools) helps keep churches open but nonetheless decreases purely religious activities.<sup>46</sup> These potentially complex church-state relationships may also interact with larger trends in religiosity. Declines in religious participation could cause religious social service activity to scale back, or cause religious groups to invest more in social services because doing so could generate revenue. Which of these stories will play out remains to be seen, although I think that a greater emphasis on social service provision is likely for some groups.

For example, Rinz, Frymark, and I show that in Milwaukee, Catholic churches that operate a school accepting vouchers now get more revenue on average from the vouchers—that is, from the government—than from any other source, including their own worshippers.<sup>47</sup> This would have been inconceivable even a few years ago. The particulars of how this type of relationship is allowed under the First Amendment

constitute a complex legal question. For example, who is allowed to cash a voucher check in Milwaukee—the family getting the voucher or the religious school providing the education—has changed over time.

Beyond parsing such details, we can also consider what the ideal relationship between the government and religious groups would look like, rather than just the permissible one. Of course, this question involves considering the wellbeing of those receiving services. That is, are religious groups better than other groups at providing social services? We need more work comparing the benefits (and costs) of religious versus nonreligious provision of education and other social services. But this conversation could also consider the wellbeing of those supplying the services: Is it better for a church to provide services independently, or to have its work remunerated by the government? On this issue, we have even less research to guide us. More research on these topics would help everyone—policy makers, religious leaders, and citizens—understand the consequences of religious activity and the religious provision of social services.

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