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# Religion and institutions

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**Abstract:** Institutions, defined as “the rules of the game in society”, drive economic growth and prosperity. Institutions often arise from long-term processes influenced by geography, major historical events, culture, and, less commonly, religion. This chapter reviews the available evidence to demonstrate that religion has a strong effect on formal (laws, judicial and financial systems, contract enforcement) and informal (traditions, taboos, codes of conduct) institutions. Church-state relationships hundreds of years ago affect informal institutions like work ethic, preferences for rationality or spirituality, and attitudes towards innovation. In terms of formal institutions, there is evidence of causal effects of religious doctrines on institutions such as democratic government, independent courts, private property, or inheritance rights. Moreover, there is evidence that formal and informal institutions also influence religious institutions and doctrines. The chapter also reviews the theories of religious markets and secularization to conclude that neither of them are well positioned to predict how the relationship between religions and institutions will unfold in the future. The chapter then enumerates several empirical challenges inherent in the study of religion and institutions, and proposes way to overcome them. It also suggests several fruitful areas for future research, including using more fine-grained data and developing new theoretical tools, identifying mechanisms through both quantitative and qualitative data, and expanding the research focus beyond Christian denominations in order to focus on non-Western religions.

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## 1. Introduction

What role do institutions play and are likely to play in transmitting any influence of religious rules or principles? Moreover, besides being influenced by religion, do institutions also have the power to shape religion, closing the loop of influence between the two? To what extent are these influences persistent through time, and which are the other factors that modulate them?

Religion is very important for our daily lives, and its importance is not likely to diminish in the future. The majority of the world's population is religious, and the share of non-believers is projected to decrease in the coming decades (Lipka and McClendon 2017), from 16 percent in 2015 to 13 percent in 2060, largely because religious non-affiliates are older and have fewer children than people affiliated to a religion. To the extent that the institutions which surround us – the formal and informal 'rules of the game' that regulate human interactions – are influenced by religious rules or principles, religion will also matter in our everyday life. For this reason, the first question that this chapter explores is whether religion can affect institutions and, if so, how.

In addition, this chapter also investigates whether religion can be treated as independent of the institutions prevailing in the environment. Besides being influenced by religion, can institutions also influence religions, leading to their creation, change, or disappearance? This chapter therefore attempts to clarify the extent to which there is a bidirectional, mutually influencing relationship between institutions and religion.

The literature shows that institutions are highly persistent (see, for instance, Acemoglu et al. 2001 or Nunn and Wantchekon 2011). Therefore, religion could affect institutions even if institutions were not consciously built on religious grounds today, but were instead at an earlier point in history either consciously built to conform to a certain religion, or were populated by religious individuals who in turn shaped them. Therefore, the third question addressed in this chapter is to what extent one could expect that religion and institutions matter for each other in the future, and whether religion would retain its importance.

This chapter builds on the literature exploring the origins and consequences of institutions. One strand of the scholarship points to the importance of long-run factors such as high settler mortality, or geographic suitability for labor-intensive activities such as mining or sugar-growing. Geographic differences thus prompted the creation of low-quality extractive economic institutions in certain countries or regions within countries, and these institutions persisted until today (Acemoglu 2001, Engerman and Sokoloff 2000, Lowes and Montero 2020). Other scholars have linked political institutions to inequality (Boix 2003), migration (Nikolova 2017), income per capita (Boix 2011), and revolutionary threats (Aidt and Franck 2015). However, much of this literature is silent on the role of religion in institutional emergence and evolution. Since both religion and institutions are slow-moving processes that likely co-evolve or are driven by a variety of other intervening variables (for instance, inequality or education), identifying a causal effect of religion on institutions is difficult, and even more so in cross-country regressions. Both religion and institutions are long-term processes that exhibit complex feedback loops, and are also driven by other underlying variables.

This chapter also relates to a growing literature linking religion to a variety of outcomes, including happiness (Djankov et al. 2016, Djankov and Nikolova 2018), attitudes towards market economy, work ethic and thrift (Weber 1904, McCleary and Barro 2006), health (Cagé and Rueda 2020), attitudes towards women and members of other religions (Clingsmith et al. 2009), and education (Valencia Caicedo 2009). Much of this literature uses new sub-national data or individual-level survey data, which is better suited at identifying causal effects compared to cross-country data.

Understanding how and why religion influences institutions is important for several reasons. First, a large literature shows that formal economic and political institutions drive prosperity, both across countries (e.g., Acemoglu et al. 2001, 2019) and within countries (e.g., Dell 2010). In a similar vein, a complementary literature has shown that culture is an important determinant of economic and political development (Gorodnichenko and Roland 2021, Tabellini 2010). Understanding how these processes interact or are driven by religion is important for pinpointing the drivers behind growth and prosperity, and for designing appropriate policies. Second, as argued at the beginning of this section, religion has always been and still is an essential part of human life. Religion has caused conflicts (Sisk 2011) and cooperation (Ager and Ciccone 2018), and throughout history, religious communities have provided a host of social services (Gruber and Hungerman 2007). Third, religious identity is remarkably resilient, even when elites implement institutional structures that purposefully seek to eliminate it. For instance, Djankov and Nikolova (2018) argue that although communist elites sought to eradicate church-going in Eastern Europe over a period of half a century, many religious aspects (particularly those part of Eastern Orthodoxy) persisted as they helped advance the communist doctrine. In addition, as Nikolova and Simroth (2015) argue, religious identity is less imprecise compared to ethnic or language identity – one may be multi-ethnic or multi-lingual, but almost never does one profess more than one religion. In this way, religion is a precisely defined concept that provides the researcher with theoretical and empirical tractability.

This chapter is organized as follows. The following section presents a conceptual framework that includes definitions of the two major concepts used in this chapter – religion and institutions – and outlines the links between religion and institutions, along with the ensuing effect on economic prosperity and general wellbeing. Section 3 then discusses the individual and country-level evidence on the influence of religion on institutions, distinguishing between formal and informal institutions. Section 4 examines the evidence on the influence of institutions on religion. Section 5 discusses the perspectives for a future relationship between religion and institutions, separately examining the temporal persistence of the effect of religion on institutions, and perspectives for a secular future. Section 6 discusses empirical challenges arising in the studies investigating the connection between religion and institutions, and proposes several potential solutions. Section 7 outlines suggestions for future research, while Section 8 summarizes the findings of the chapter and offers concluding remarks.

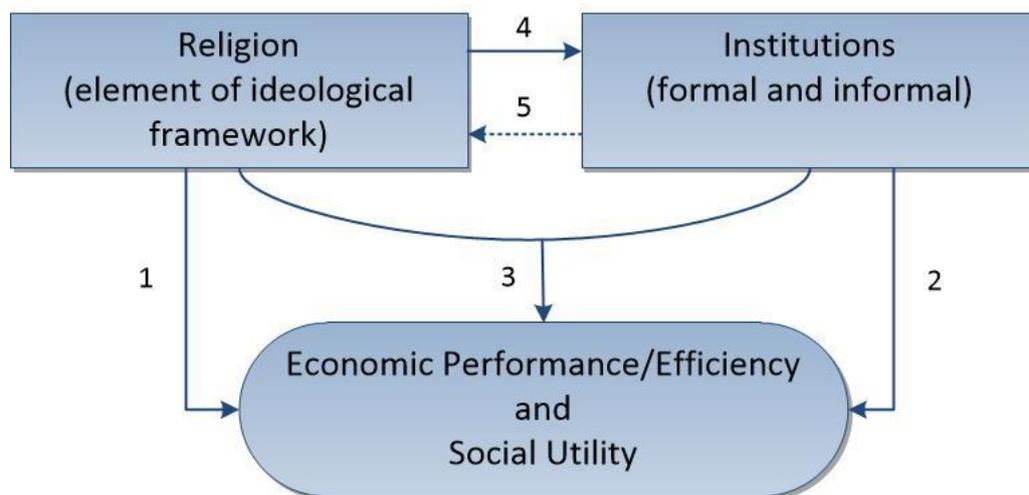
## **2. Conceptual framework**

This section defines two concepts whose links are examined in the rest of the chapter – religion and institutions – and presents a conceptual framework that describes the evidenced and postulated links between the two. While, as Iyer (2016) explains, there is no agreed definition of religion in

economics, substantive definitions interpret religion as a philosophy or system of beliefs which is used by adherents to understand the world. By contrast, functional definitions emphasize religion's role in people's lives in terms of supporting them either socially or psychologically. In empirical work, particularly that which uses surveys, religion is usually measured either in terms of religious beliefs such as self-identified religious affiliation, prayer, or church attendance. For instance, Djankov and Nikolova (2018) demonstrate that self-reported religious affiliation is highly correlated with proxies of religious behavior, or religiosity, including prayer, church attendance, whether the respondent was raised religiously, and whether the respondent derives comfort and strength from religion. Moreover, the incidence of religious persecution and violence has also been used in the literature as a measure of religiosity.

With regard to institutions, their standard definition advanced by North (1992) posits that "institutions are the rules of the game in society; ... the humanly devised constraints that shape human interaction" (p.477). According to North, institutions could be formal or informal. Formal institutions include: economic and legal rules, constitutions, laws, property rights, and contract enforcement. The informal institutions, broadly defined as "culture", include sanctions, taboos, customs, traditions, and codes of conduct. In economics, much of the recent empirical literature follows the Guiso et al. (2006) definition of cultural norms as "those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation", but theoretical work often treats culture as beliefs that can however be changed for benefit or by experimentation (Alesina and Giuliano 2015). In psychology, scholars instead view culture as embodied in values and preferences, a definition which emphasizes the role of emotions in motivating human behavior (Pinker 1997).

Figure 1 below summarizes the links between religion and institutions found in literature and postulated in this chapter. Religion and institutions influence economic performance and well-being individually (causal direction illustrated by arrows 1 and 2) and interactively (arrow 3). The literature shows that religiosity could be related to both happiness (e.g. Djankov and Nikolova 2018; Chen and Van der Weele 2018; and Campante and Yanagizawa-Drott 2015) and economic outcomes (e.g. Dehejia et al. 2007; McLeary and Barro 2006; Gruber 2005), while both formal and informal institutions are related to economic efficiency (e.g. Acemoglu 2005; Zak and Knack 2001; Rodrik 2008; and Guiso, Sapienza, and Zingales 2006) and general wellbeing (e.g. Chen and Van der Weele 2018; Deaton 2009). Moreover, the overall utility which individuals derive from specific economic and political outcomes depends on their preferences which are determined by their system of values, the integral part of which are views and beliefs related to their religion (Mladjan and Fatić 2018). Well-being and economic efficiency are essential for labor, human resources and population economics (e.g., Piper et al. 2021; Blanchflower and Graham 2020; and MacDonald et al. 2005), the study religion and institutions is highly relevant for the future research in the aforementioned economic sub-disciplines.



**Figure 1. The Importance of Religion and Institutions for Wellbeing**

When it comes to the interaction between religion and institutions, the review of related literature (see Section 3 of this chapter) illustrates that the influence of religion on institutions is documented by a large body of research (arrow 4). Section 4 of this chapter also emphasizes the importance of the reverse direction of causality (arrow 5, dotted line), from institutions to religion.

Exploring further the relationships presented in Figure 1 by using graphical aids, Figure 2 in section 4 schematically summarizes the ways in which historical pressure may catalyze an effect of formal and informal institutions on both religious institutions and religious dogmas. These belong to the group of influences represented by arrow 5 in Figure 1. In a similar vein, Figure 3 in section 5.2 summarizes the ways in which the effect of religion on institutions could persist though time, which belongs to the group of influences represented by arrow 4 in Figure 1.

### **3. Evidence on the impact of religion on institutions**

This section examines the evidence on the causal effects of religion on institutions, corresponding to the influences represented by arrow 4 in Figure 1 of our conceptual framework. It reviews both individual- and country-level evidence, as well as channels by which religion influences both formal and informal institutions.

#### **3.1 Religion and informal institutions**

Weber's (1904) book "The Protestant Ethic and the Spirit of Capitalism" is perhaps the most well-known scholarly work linking religion and attitudes. According to Weber, the Protestant doctrine was essential for the rise of capitalism in the West, since it regarded a person's calling and success in business as key for salvation. As McCleary (2011) summarizes: 'God demanded of each person a lifetime of works that were ordered by morality. The believer's action in the world originate in God's grace; this faith in turn justifies itself by the moral quality of the action... Thus, salvation by work (daily work, not ascetic activities of monastic communities, was organized and rationally justified in an impartial moral system that applied to the activities of one's daily life and logically led to the rational organization of labor' (McCleary 2011, p. 4).

Weber's hypothesis has not been without its critics. According to Iannaccone (1998), the most noteworthy aspect of the Protestant thesis is the lack of empirical support for it. Becker and

Woessmann (2009) find that Protestantism (in nineteenth-century Prussia) led to higher economic prosperity, but argue that human capital associated with reading the Bible is the mechanism behind this result. In contrast, Cantoni (2015) shows that within the Holy Roman Empire Protestantism had no effect on economic growth over the period 1300–1900. However, other literature – including Spenkuch (2017) – has shown support for Weber’s theory. Chong et al. (2014) provide an empirical measure of Weberian bureaucracy, or a professional bureaucracy with nonpolitical rules of recruitment, promotion, and compensation of employees.

While Weber’s work and much of the existing literature is focused on Protestantism, Djankov and Nikolova (2018) investigate the relationship between Eastern Orthodoxy and individual attitudes and beliefs. Although Christianity was for the most part a unitary religion until 1054, the Great Schism led to the separation of Eastern Christianity (the precursor of the Eastern Orthodox Church) from Western Christianity (from which Roman Catholicism and, eventually, Protestantism emerged, the latter in 16<sup>th</sup> century as a reaction to Roman Catholic doctrines and practices). State-church relations followed distinct patterns in Eastern and Western Christian countries. In the Roman Empire, the Catholic church was independent and had a reciprocal relationship with the state, due to its accumulation of ecclesiastical wealth. As early as the sixth century, the Western Christian church, in an attempt to increase bequests to the church, particularly by single women, encouraged virginity, prohibited marriage to close kin, close relatives or widows of close kin, and the adoption of children. These policies not only allowed the Western Christian Church to separate itself from the state, but also for the Church to push for the establishment of legal institutions (Djankov and Nikolova 2018).

By contrast, in Eastern Christianity, the Church remained subordinate to the state, partly because it was unable to acquire the same amount of wealth as its Western counterpart. It was Byzantine monarchs – rather than hierarchs of the Eastern Christian church alone – that were deciding on ecclesiastical matters, including heresy and schism. In the last five hundred years of the Byzantine empire, imperial decrees forced out of office nearly one third of Orthodox Patriarchs (Djankov and Nikolova 2018).

Djankov and Nikolova (2018) argue that these initial differences in church-state relations, along with theological differences between Eastern and Western Christianity, are responsible for long-run differences in informal institutions. More precisely, Western Christian theology placed a high emphasis on rationality, scholasticism and logical reasoning. Similarly, Protestantism urged believers to express their faith via rational and secular activities, leading to religious individualism, innovation, and the tendency to question established authorities.

Using data from more than 100 countries around the world, Djankov and Nikolova (2018) then go on to show that Eastern Orthodox believers have profoundly different worldviews compared to their Catholic and Protestant counterparts. Relative to Catholics, Protestants and non-believers, those of Eastern Orthodox faith are less happy, have less social capital, and prefer old ideas and safe jobs. In addition, Orthodoxy is associated with left-leaning political preferences, and stronger support for government involvement in the economy. Compared to non-believers and those of Orthodox faith, Catholics and Protestants are less likely to agree that government ownership is a good thing, and Protestants are less likely to agree that getting rich can only happen at the expense of others. What is remarkable is that these differences in attitudes and values persisted until today, even though communist elites in Orthodox countries sought to eradicate religion. However, the authors argue that communism in fact used and maintained many aspects of Orthodoxy – for instance, respect for government authority – which were useful for advancing the communist doctrine.

Beyond Christianity, there is evidence that Islam also affects informal institutions. Using data from 1981-1997, Guiso et al. (2003) find that while a Muslim religious upbringing increases trust in the government and the courts, it also lowers general trust, raises intolerance towards immigrants and other races, lowers the acceptance of inequality as a means of providing incentives, depresses faith in competition, and fosters repressive attitudes towards female employment, stifling economic development.

Bohnet et al. (2010) probe further into the relationship between Islam and low generalized trust, and argue that trust and formal institutions are substitutes. They use experiments using trust and risky dictator games in Kuwait, Oman, the UAE, Switzerland, and the US. Interestingly, Arab Gulf participants are particularly averse to betrayal, which lowers trust, except within social networks. As a result, Emiratis, Kuwaitis and Omanis require greater levels of trustworthiness before they will trust others. Social networks in Arab societies, which are small, informal, and highly personalist, have evolved to support such interactions. Untrustworthy behavior leads to expulsion and xenophobia is common. By contrast, the Swiss and Americans are substantially less averse to betrayal. One explanation is that these societies have institutions (such as independent courts and contract law) which require contract breakers to pay damages. Similarly, through experiments conducted in a Cairo slum, Binzel and Fehr (2013) find evidence of low trust which inhibits profitable exchanges. However, they show that social networks may be unable to completely resolve inefficiencies due to information asymmetries, thus questioning the idea that social networks can compensate for weak formal institutions.

### **3.2 Religion and formal institutions**

Weber's hypothesis also relates to a literature linking Protestantism and democratic institutions. Berger (2004) presents a broader discussion of the link between Christianity and democracy. Woodberry (2012) attempts to study the long-run link between Protestantism and democratic institutions, claiming that conversionary Protestant missionaries influenced the emergence of stable democracies outside of Europe. Woodberry's argument is that conversionary Protestants fostered democracy by spreading religious liberty, mass education and communication, printing and colonial reforms, and strengthening civil institutions. The theory is tested using cross-country regressions and descriptive historical analysis. Woodberry's substantive contribution is important because it turns modernization theory on its head by challenging its key tenet – that democracy developed as a result of secularization and processes associated with economic development, such as education and urbanization. However, in a scathing replication and extension of Woodberry's empirical analysis which extends the period covered in the cross-country regressions and uses twenty-six alternative democracy measures, Nikolova and Polansky (2020) show that in fact there is no empirical relationship between conversionary Protestantism and the prevalence of democracy. Their research raises questions about the exact causal chain – if any – that links religion and democratic institutions. Moreover, if, as discussed above, Protestants and Catholics share attitudes and behaviors which nurture democracy (such as social capital, happiness and support for new ideas), it may be Western Christianity more broadly that may drive better economic and political institutions.

Comparing Islamic economic institutions with those adopted in predominantly Christian countries reveals important differences that have been shown to be linked to religion. A complementary literature argues that Islam – unlike Christianity – produced a weak rule of law. Guttman and Voigt

(2015) investigate whether Islam affects the content or the enforcement of constitutions. They find that Muslim influence is in conflict with the independence of the judiciary and non-discriminatory legal institutions with respect to gender and religion. Yet, parliamentary power and the protection of property rights are not significantly more constrained in Islamic states. Using a new method coding the degree to which Islamic law is incorporated in the constitution. Gouda and Hanafy (2020) find that constitutions prescribing Islamic (Sharia) law have a negative effect on democracy. Importantly, the authors argue that Islam itself is not inimical to democracy when not entrenched in the constitution. However, both studies rely on cross-country data, which renders causality difficult to determine.

Enforcing a strong rule of law is impossible without an independent court system, which is essential for upholding contracts and for the efficiency of exchange (North 1991). However, unlike in Europe,<sup>i</sup> independent courts were slow to arrive in Muslim countries. Although today matters related to commerce, business or taxation are run under some variant of modern, Western-based law in all Islamic countries, Islamic law also has an important role to play. Historical analyses show that Islamic courts were not independent. For instance, Kuran and Lustig (2012) show that in the seventeenth century the procedures of Istanbul's Islamic court were biased systematically in favor of Muslims, men and state officials. Further evidence about the relative inefficiency of Islamic court is provided by the fact that non-Muslims in Muslim countries opted for non-Muslim court systems (practicing Western law) when conducting business. As Kuran (2018) explains in his seminal contribution, Christians and Jews in the Ottoman Empire had the choice of organizing their businesses according to Islamic law, or according to their own rules, which also included the adjudication of disputes. In the process, the Middle East's Christian and Jewish entrepreneurs were able to conduct impersonal exchange, and to benefit from banks, stock markets and formal insurance.

Kuran (2018) outlines how the specific development of several other economic institutions in Islamic countries stifled their economic development and growth. Kuran (2011, 2018) posits that Middle Eastern economic institutions limited incentives to preserve established commercial enterprises and accumulate private financial capital. While at the start of the second millennium Middle Eastern merchants and investors pooled resources within partnerships which were very similar to those in Europe, these partnerships were subject to Quran-based inheritance rules, which required the division of an estate among all members of the deceased person's immediate family and parents, and, under certain conditions, more distant relatives as well. These inheritance rules broke up large and successful enterprises after a founder's death, and incentivized small and relatively short-lived partnerships. By contrast, in the West, less egalitarian inheritance rules meant that large and successful businesses could expand and thrive over the long term. These developments were essential for the exploitation of the Industrial Revolution by the West, where new technologies required the pooling of capital and labor at a much greater scale. In complementary work comparing Hindu and Muslim inheritance practices, Kuran and Singh (2013) suggest that differences between Hindu and Muslim inheritance and resource pooling practices, combined with the Muslim proclivity to lock capital in waqfs, contributed to the relative underperformance of Muslims under British rule. Unlike in the Middle East, choice of law was not a critical factor.

Relatedly, the Middle East also lacked complementary business institutions, such as standardized accounting, banks, and stock markets. Credit markets in Muslim countries remained personal for a long time, and banks emerged with a delay. Kuran (2018) further argues that Islam's prohibition of interest was not crucial for the underdevelopment of the Middle East, since interest was banned in both regions for religious reasons, but people routinely dealt in interest through legal ruses accepted

by clerics. In a complementary theory, Rubin (2011, 2017) argues that early Islamic authorities had a stronger influence on Islamic rulers than clerics in the West. As a result, the Middle East's commercial and financial markets began their transition from personal to impersonal exchange at a much later stage as compared to the West. As a result, Muslim clerics had a greater influence on institutions and policies, and discouraged the emergence of economic institutions (such as secular courts necessary to enforce business disputes) at the expense of religious institutions (such as Islamic courts). Similarly, Muslim clerics continued to promote the restriction on interest even as Christian clerics in Europe relaxed this restriction.

Kuran (2018) delves deeper into the differences between Western and Islamic economic institutions. While the corporation was a fixture of the Western legal system, from the Middle Ages onward, it was absent in Islamic law. This means that Islamic law did not recognize any other self-governing associations besides the state. However, Islamic law recognized other institutions, including commercial partnerships, bill of trade, the market inspector, and tax farming. Until the Industrial Revolution, an Islamic trust known as the waqf fulfilled many of the corporation's functions (Kuran 2011). As Kuran (2018) explains, a waqf is established, under Islamic law, by a single person through income-producing private real estate to provide a social service in perpetuity, such as mosques, schools, and hospitals. Waqf assets were considered sacred and thus were immune from confiscation. The wealthy were able to appropriate some of the income from their waqfs, which prompted them to convert real estate into waqfs. However, waqfs were managed by a caretaker, while corporations were self-governing which made them more efficient and flexible, which suppressed commercial expansion and modernization in the Islamic world.

Muslim countries also have distinct financial institutions. According to Kuran (2018), Islamic finance refers to a class of financial transactions that are ostensibly free of interest and compatible with Islamic teachings. It encompasses Islamic banking, asset-backed Islamic bonds known as sukuk, Islamic insurance known as takaful, along with Islamic credit cards, mutual funds, stock indexes, mortgages, and microfinance.

Kuran (2018) reviews the literature on Islamic banks, which points to three main findings: (1) Islamic banking is very similar to conventional banking, and differences are based mainly on symbolism and terminology; (2) Islamic banks are relatively less efficient and cost effective; (3) Islamic banks perform better during financial crises, as they are better capitalized, hold higher reserves, and invest more conservatively. Additional research (Demirgüç-Kunt et al. 2014, and Ben Naceur et al. 2015) shows that there is little association between financial inclusion and access to Islamic banking, thus suggesting that Islamic finance has not been able to close the gaps in access to finance in many Muslim countries. Similarly, Godlewski et al. (2013) find that firms that issue sukuk bonds (a type of Islamic bond), rather than conventional bonds, subsequently experience lower performance and lose value compared to conventional bond issuers.

Although most of the literature linking religion and institutions focuses on the influence of Christianity and Islam, a small but important strand of the scholarship explores the kibbutz in Judaism. Established largely in the 1930s and 1940s, the kibbutzim are communities in Israel based on equal sharing of income and communal ownership of property. An important example of voluntary socialism (unlike the forced collectivization in the former Soviet Union and much of Eastern Europe), in 2000 the kibbutzim had around 120,000 members in 268 kibbutz and comprised 2.5% of Israel's Jewish population. Until recently, the identifying features of the kibbutz were: (1) equality ("from ability to needs"); (2) common ownership of property; (3) communal dining halls; (4)

separate communal residences for children; (5) many local public goods (such as swimming pools); (6) no use of hired labor and no private savings; and (7) voluntary and democratic participation, including elected officers and committees. However, in the late 1970s, children shifted into parents' homes, and in the late 1990s-2000s, many kibbutzim shifted away from equal sharing to various degrees, partly due to financial stress and the high-tech boom in Israel which prompted some members to exit (Abramitzky 2011a, 2018).

How did Israeli's kibbutz survive and thrive despite the inherent problems of shirking and free-riding, adverse selection (favoring the entry of low-ability individuals and the exit of low ability individuals) and few incentives to invest in skill development (because of the lack of return)? Abramitzky (2018) shows that, as expected, more educated kibbutz members and those with more skilled occupations are indeed more likely to exit, and that individuals who earn less are more likely to enter. However, surprisingly, kibbutz members work longer hours than the Israeli population on average, and sociological studies show that kibbutz members actually have more work motivation than non-members. Similarly, kibbutz members are more educated than non-members.

The kibbutz designed appropriate institutions and norms to reduce and eliminate incentives for free-riding and shirking. For instance, communal property was regarded as a bond that increased the cost of exit, and social sanctions and gossip were effective at preventing shirking. Many of the occupations were also easy to monitor (e.g., cotton picking). Moreover, religion played an important role in alleviating brain drain, adverse selection and moral hazard in kibbutz. Although ideology played an important part in avoiding opportunistic behavior, religion was likely more important, for at least three reasons (Abramitzky, 2011b, book chapter). First, one's religious beliefs are usually less likely to fake than ideology, because of religious restrictions (e.g., on food) and daily religious rituals. Second, religious ideology – unlike socialist ideology – does not necessarily emphasize equality. Third, religion itself had an intrinsic value for members, meaning that religious communes may be more attractive for religious individuals.

#### **4. The impact of institutions on religion**

While a substantial body of literature studies the ways in which religion may affect institutions, the channels through which both formal and informal institutions may affect religion appear to be more difficult to understand.

The Protestant Reformation has been linked to the practices of the Roman Catholic Church in Western Europe, as well as the practices of the states that supported the Roman Catholic Church. Martin Luther was not the first to criticize the extent to which avarice spread among Roman Catholic clergy (Becker et al. 2016). So did the Waldesian movement (12<sup>th</sup> and 13<sup>th</sup> centuries), the Lollards (14<sup>th</sup> century), and the Hussite (15<sup>th</sup> century), where the latter also opposed the selling of indulgences just like Luther did. The fact that many followers of these movements were ready to die for their beliefs, and did so, testifies of the potential of this perceived injustice to inspire a religious movement, as well as the determination of the Roman Catholic Church at the time, and the state-authorities which supported it, to suppress religious opposition.

Becker et al. (2016) review the recent literature on the causes and consequences of the Protestant Reformation. A number of studies they review identify both "demand-side" reasons that affected the desire for reform of the Roman Catholic Church, and "supply-side" technology and institutional features that helped spread the new teaching. On the demand side, Curuk and Smulders (2016)

argue that there was a greater desire for reform in areas where the Roman Catholic Church supported local rulers that maintained greater economic inefficiencies, resulting in cities with greater agricultural potential but lower populations being more likely to adopt the Reformation. However, regions more rooted in their existing religion, measured by the presence of Roman Catholic churches, were less likely to demand and accept change (Pfaff 2013). On the supply side, Rubin (2014) finds that cities with a printing press, allowing the spread of information about the proposed reforms, were more likely to accept the Reformation. In a similar vein, Dittmar and Seabold (2015) present evidence that places with more competition between printers were more likely to accept the Reformation. Iyigun (2016) argues that places more exposed to Ottoman invasions were those where the Reformation could spread more easily because the Christian states and the Roman Catholic Church had to dedicate significant resources to resist the Ottomans. Kim and Pfaff (2012) present evidence that the number of students at universities where the Reformation was widespread, or where it was strongly opposed, significantly affected the likelihood of a locality to adopt Reformation.

Another example of the influence of formal and informal institutions on the creation and the spread of religions can be related to the establishment and the political development of the US. Particularly in the early years of its history, one can observe a closed loop of mutual influence between religion and institutions. For example, a great number among the early settlers came from religious minority groups that decided to immigrate to the New World in search of economic prosperity and unconstrained practice of their faith. The English dissenters – a multitude of religious groups that separated themselves from the Church of England – could by the rules of the Uniformity Act of 1559 be fined or imprisoned for life in their homeland (Gee and Hardy 1896). In fact, restrictions on preaching certain branches of Christianity remained in place in some European countries well into the 20<sup>th</sup> century (Stark and Iannaccone 1994). The first English settlers to New England, Protestant Brownists who arrived to Plymouth in 1620 on the Mayflower ship, came from this group. In fact, the colonies which later became the US had greater religious diversity than the lands from which the immigrants came (Solly 2017). In such an environment, and following the US Declaration of Independence, the third article of the United States Bill of Rights (ratified in 1791) guaranteed religious freedoms and no imposition of a state religion. Waves of religious enthusiasm in the 18<sup>th</sup> and the 19<sup>th</sup> centuries resulted in the creation of a multitude of novel Protestant groups, which spread across the nation (Rossel 1970). Moreover, it also led to the creation and global spread even of new religions such as Mormonism (Phillips 2006).

The rise of New Religious Movements in the US confirms this trend, and agrees with the predictions of the religious markets theory, whereby developed state institutions would lead to more religious freedom and more religious movements (Robbins and Bromley 1993, Iannacone 1998). By contrast, the theory secularization argues that education, economic wellbeing, and institutional stability would make people less religious (Inglehart 2021). That informal institutions and the social environment could cause changes in religious practices is also confirmed by McBride (2010) who argues that higher income inequality might cause more strict religious groups to arise.

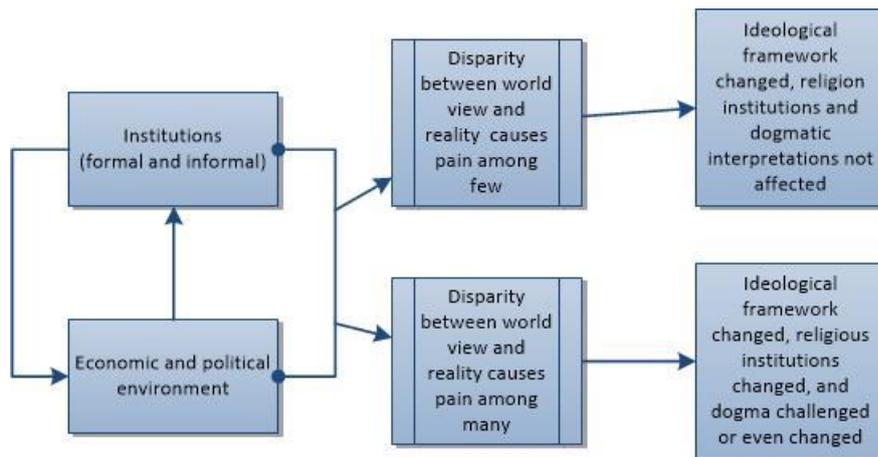
Some of the most recent examples of the influence of informal institutions on religious teachings and practices are the Second Vatican Council and the blessing of homosexual marriages by parts of the Anglican Church. The Second Ecumenical Council of the Vatican in 1962 took place in an environment of declining religiosity in the West and in a world without the Roman Catholic Empire of Austro-Hungary which ceased to exist after WWI. The council proclaimed the dedication of the Roman Catholic Church to religious freedoms and separation of the church and the state, thus giving

up privileges it still had in parts of the world and. Similarly adapting to the new culture of its surroundings, the Wangaratta Anglican Diocese in Australia voted to bless same-sex marriages in 2019, two years after such unions were legalized in their country.

There also are examples of religious institutions that affect the spread of other religions, even in very extreme ways. For example, Finley and Koyama (2018) study the persecution of Jews in the Holy Roman Empire during the Black Death and argue that localities ruled by archbishoprics, bishoprics, and imperial free cities experienced worse persecutions than localities ruled by the emperor. Another example of suppression of religions by other religions is the institution of medieval inquisition. There also are multiple examples for non-religious institutions that affect the spread of religions or the establishment of religious institutions. The Ottoman Empire, for instance, promoted the conversions to Islam in forced ways and for convenience (Mihajlović 2011). It also helped restore the authority of the Serbian Patriarchate to weaken the Greek political influence in the Empire in the 16<sup>th</sup> century (Sotirović 2011), but following the Serb uprisings against the Empire in the Great Turkish War (1683-1699) it populated Serb eparchies by more loyal Greek bishops and finally placed their territories back under the jurisdiction of the Greek Patriarchate of Constantinople. The traditionally weaker position of the Orthodox churches towards state authorities, documented by Djankov and Nikolova (2018), was more recently evident in the actions of the Yugoslav communists who promoted the separation of the church in the Yugoslav Republic of Macedonia from the Serbian Patriarchate in 1958, to mirror the secular division of the state into republics (Čairović 2018). It was also evident in the calls of the Ukrainian state officials to the Patriarch of Constantinople to recognize the legitimacy of the part of the Orthodox Church in Ukraine which proclaimed separation from the canonical Ukrainian Orthodox Church of Moscow Patriarchate (NOEK, 2017).

The interaction of political, legal, and religious institutions and religious teachings takes a completely different form in the Tibetan culture, where the political and religious authority were traditionally united (Wangyal 1975; Dreyfus 1995), and competing schools of Buddhism actually fought over the rule of the region (Karmay 2005).

Figure 2 summarizes the discussion in this section. In some cases, changes in religious institutions and the spread of religion result from brute force, such as the suppression of heresies in medieval Europe or the suppression of religiosity in former communist countries. In these cases, the spread of religions is affected, but their dogma is not. Figure 2 instead focuses on religious changes that result from changes in the conscience of individuals and groups. Both formal and informal institutions and the economic and political environment mutually interact, creating pressure on peoples' views of the world, greatly shaped by their religion (Iyer 2016), the religious institutions, and religious teachings. This pressure results from a disagreement in one's views on how the world should be, influenced by one's religion, and one's perception of reality created by the interaction of the institutions and the environment. When such a disparity is large and produces pain in one's conscience, the person could convert or become irreligious. When such disparities are not large, people's ideas and values and their ideological framework, may be altered to some extent, but religious institutions will have no incentive to change either their organization or dogmatic interpretations. The situation of the Roman Catholic Church in Europe during Enlightenment, when the faith of large parts of the elite may have weakened but great masses of the population still preserves their religiosity, is a good example.



**Figure 2. How institutions influence religion**

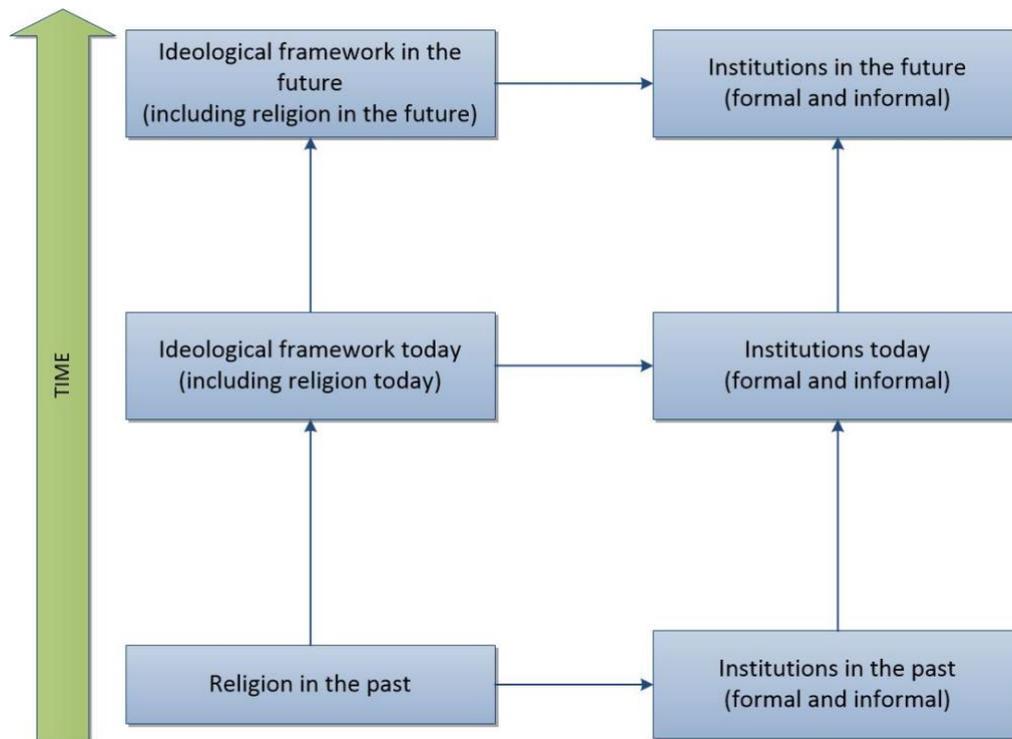
However, when in the view of most people the disparity between their world view and perceived reality is large, not only people’s ideological framework, but also religious institutions, or even the dogma itself may change. For instance, responding to the rapid secularization of European societies, the Second Vatican Council attempted to adapt the activities of the Roman Catholic Church to modernity, attempting to preserve important dogmatic interpretations. In periods when such disparity is large in the views of many people, such as the period of the Reformation, criticism of practices of the incumbent religion can promote both new religious teachings and create competing religious institutions.

## 5. Religion and institutions in the future

Having examined the likely channels of mutual influence of religion and institutions, this section presents a discussion on how the relationship between institutions and religion could unfold in the future.

### 5.1 Temporal persistence of the effect of religion on institutions

There literature has shown that both formal and informal institutions are persistent (e.g. Acemoglu et al. 2001, Nunn and Wantchekon 2011), which means that current institutions could be influenced not merely by contemporary religion but also by religious institutions, teachings, and practices from the past, as schematically represented in Figure 3. One potential mechanism is that religion affects preferences (e.g., Djankov and Nikolova 2018), and preferences affect and co-evolve with economic and political institutions (Aghion et al. 2010). The alternative way for religion in the past to affect contemporary institutions is via the historical persistence of religion. For instance the end of communism brought a religious revival throughout the former Soviet Union, even though religion was suppressed for nearly half a century (Zorkaya 2009).



**Figure 3. How the effect of religion on institutions persists**

## 5.2 Perspectives on a secular future

Two theories on the future of religion, which incorporate institutions, are the secularization theory (Inglehart 2021) and the religious markets theory (Iannaccone 1998). Precursors of the theory of secularization – which predicts a decline in religion’s role in public and private life – would, among others, be Weber (1904) and Marx (1844) who anticipated scientific knowledge to replace “religious superstition”. Similarly, Inglehart (2021) argues that rising educational levels, economic security, and institutional strength would lead to a decline in the demand for religion. Dhima et al. (2020) suggest that, without influencing the way people think, better career options and leisure activities would raise the opportunity costs of church attendance.

While secularization theory focuses on the demand side of religion, the religious markets theory (Iannaccone 1998) focuses on its supply side and reaches opposite conclusions. This theory postulates that developed countries with strong institutions would not engage in bureaucratic interventions to support monopolistic state religions as a means to secure power of the ruling elites. Monopolistic state religions function within uncompetitive markets and unfair fiscal systems, both being the indicators of poor institutions (Acemoglu 2005). Independence of religious life from the government would result in religions thriving within free markets, competition and unconstrained creativity supplying high-quality religious “products” to loyal “consumers.”

To what extent do the opposing predictions of the two theories agree with reality? Data from the past decades does not give a clear answer. While the secularization trend is visible when analyzing direct indicators of religiosity such as church attendance in select, mostly Western, countries (Inglehart 2021 and Bruce 2010), the trends in other parts of the world or of indirect measurements of religiosity (e.g., spiritual beliefs) are not as clear-cut (Dhima et al. 2020). According to the World

Values Survey, religiosity increased in 33 out of 49 countries studied in the period 1981–2007, but by 2020 the trend had tapered off (Inglehart 2021). While one could be tempted to extrapolate and predict a decline in religion in the future, recent history suggests otherwise. For example, during the 1970s, Islamist movements became prominent in Egypt, potentially as a reactionary response to the preceding secular government's attempts to modernize religious institutions (Zeghal 1999). In Turkey, reformed by Kemal Ataturk from an Islamic Empire to a secular state following WWI, a movement initiated in the 1960s and seeking more religious freedoms brought in 2001 to power the AKP Party which had built its ideology on religion (Arat 2010). In a similar vein, even though Hindu nationalism has been an acknowledged movement in India for decades, it was with prime minister Modi in 2014 that its promotion became a part of the government's agenda. Trends in religiosity therefore do not clearly support either of the two theories.

Secularization theory predicts that the various factors accompanying economic development, such as education and economic security, reduce the demand for religion. Even though many studies find that schooling reduces religiosity (Deaton 2011, Ruiter and van Tubergen 2009; Bettendorf and Dijkgraaf 2010; Mitchell 2018; Becker 2009), others show an opposite effect. Religious beliefs can be strengthened when the curriculum aims to achieve it or when abstract thinking – helpful for understanding religious texts – is taught (Franck and Iannaccone 2014; McLeary and Barro 2006). For example, after the collapse of the Soviet Union, young educated people increased their religiosity more than their parents in a likely attempt to rebuild a coherent ideological worldview by reading religious texts (Zorkaya 2009).

Experimental evidence on the effect of education on religiosity is also mixed. When girls were randomly assigned scholarships to prolong their education in Kenya, their religiosity did not change (Friedman et al. 2016). In Canada, on the other hand, students whose education was exogenously extended by changes in compulsory schooling laws exhibited lower religiosity than their peers with fewer years of education (Hungerman 2014). Sacerdote and Glaeser (2001) demonstrate that religiosity increases with education at the individual level, but that religious denominations with higher average education tend to have lower church attendance. They argue that people select religions that match their beliefs and level of education, in line with religious markets theory.

Similarly, pinpointing a link between economic security, economic development and religion is difficult. Per capita income cannot solely explain religiosity as seen in a simple cross-country analyses or household studies (Azzi and Ehrenberg 1975). Moreover, various dimensions of economic development may have different effects on different aspects of religion (McLeary and Barro 2006). For example, life expectancy was found to have a negative effect on religious attendance but a positive one on religious beliefs.

The Inglehart-Welzel cultural map of the provides one way to interpret secularization through the lens of economic well-being. It places countries on a diagram based on their preference for traditional versus secular values, and survival versus self-expression values. Survival values put greater weight on hard work and physical security, whereas self-expression values manifest in broader acceptance of traditionally excluded groups of people. Countries are expected to move to secular and self-expression values over time, but the group of Protestant European countries is the only one that went along this path over the past decades, appearing more as an exception to the

theory rather than the rule (Berger 2012). Likewise, perhaps the strongest counter-example to religious markets theory is Western Europe with its high levels of development and low religiosity. However, Stark and Iannaccone (1994) attribute European secularization to the over-regulated and inefficient religious markets, the presence of Roman Catholic and Protestant monopolies, and bans on the services and literature of non-majority Christian denominations being still in place as late as the 1980s.

Countries with dominant religions are usually seen as a contradiction to religious markets theory which suggests that, as the state gets dissociated from religion, new religions will appear to find their loyal followers. However, countries without state religions do not have higher religiosity levels (McCleary and Barro 2006). This result may be due to the fear of expressing one's views clearly in countries with state religions (Hadaway et al 1993; Presser 1998), or due to higher subsidies for followers of state religions (Barro and McCleary 2003). The fact that religions may strengthen when they are suppressed weakens further the religious markets theory. A lot of former communist countries and Turkey, where religion was suppressed, experienced a religious revival following the subsequent increase in religious freedoms (Grigoriadis 2009).

In sum, this section suggests that religion and institutions have a complex relationship with each other, and that individual country dynamics are very different. Thus, even if the future were to bring economic development and institutional improvement, the effect of such changes on religion and religiosity is not clear.

## **6. Empirical challenges**

Both religion and institutions are slow-moving processes that are unlikely to evolve in isolation, and that are likely to be driven by a number of observed and unobserved variables and characteristics. In addition, as discussed below, there may be reverse causality from institutions to religion. This chapter presents a number of likely instance of institutions affecting religion, but there remains a wealth of questions not yet studied and answered by establishing causal evidence through sound statistical inference (Becker et al. 2016).

Moreover, formal institutions – such as the rule of law or the quality of democracy – are usually measured only at the country level, necessitating the use of cross-country regressions. However, cross-country data further compound the identification issue. Causality issues are also a concern for studies investigating the link between religion and informal institutions (such as trust or attitudes towards women) at the individual level using survey data. On the one hand, survey data analysis rarely involves panel surveys, which means that religion may also be a proxy for other fixed but unobservable characteristics such as charisma or ability. On the other hand, panel surveys are not useful either, since religion, as a fixed characteristic, would be subsumed in an individual fixed effect. Similarly, coming up with a valid instrument for religion is challenging and not always convincing.<sup>ii</sup>

Andersen and Jensen (2019) offer an innovative approach which improvement over problem-ridden cross-country regressions, yet it is only applicable to the study of a very specific historical episode. They use variation in religious doctrine produced by the unexpected Vatican Council (1962-1965) and a difference-in-difference cross-country approach to investigate the impact of religion on democratization. The authors argue that the Council represents the most significant example of institutionalized religious change since the Protestant Reformation, and that Vatican II transformed

the Roman Catholic Church into a leading apostle of religious freedom, human rights and democracy. Andersen and Jensen (2019) find that Vatican II is a strong predictor of democracy, and that the results hold with and without different confounders, and for different subsamples. However, it is puzzling that the identified relationship only starts appearing in the 1980s, and not immediately after the Council. The authors show that pre-conciliar democracy trends in minority and majority Catholic countries are satisfied and thus claim that the difference-in-difference identification assumption is satisfied. Since the analyses utilize cross-country regressions, it is difficult to believe that the only pro-democracy factor at work during this time was the second Vatican council, and that other unobserved factors – such as changes in social capital, ideology, or unmeasured factors at the local level did not play a role.

In a similar vein, Koukal (2020) exploits the sudden and unexpected modernization of the Catholic doctrine following Vatican II, along with a new municipal-level on the Swiss enfranchisement process covering the period 1919-1983. The analysis shows that men in Catholic municipalities increased their acceptance of female enfranchisement by around four percentage points more, compared to men in Protestant municipalities. The paper highlights the role of religious leaders as an additional and quicker lever for promoting cultural change.

Although instruments in the religion-institutions literature are rare, the broader economics literature focusing on religion provides some useful examples that could be exploited by scholars. For instance, Clingensmith et al.'s (2009) identification compares successful and unsuccessful applicants in a lottery used by Pakistan to allocate Hajj visas. The authors find that the Hajj pilgrimage increases belief in equality and harmony among ethnic groups and Islamic sects and leads to more favorable attitudes toward women, including greater acceptance of female education and employment. Moreover, increased tolerance within the Islamic world does not produce antipathy towards non-Muslims, but rather leads to increased belief in peace, and in equality and harmony among adherents of different religions. Becker and Woessmann (2009) and Cantoni (2015) use geographic distance from Wittenberg, where Martin Luther posted his Ninety-Five Theses, as an instrument for the adoption of Protestantism. Basten and Betz (2013) and Spenkuch (2017) use different peace treaties signed 500 years ago as instruments for local Protestant versus Catholic share and find support for a Protestant work ethic.

Given that religion is usually transmitted from parents to children, or purposefully selected by the individual in (the relatively rare) case of a conversion, randomizing religion is impossible. Yet, a strand of the psychology literature uses laboratory experiments to study religious effects by exogenously varying the *salience* of religion on outcomes such as pro-social behavior. Shariff et al. (2016) provide a review of this literature and conclude that randomized religious priming<sup>iii</sup> has robust effects on pro-social behavior. However, religious priming does not reliably affect non-religious participants, suggesting that priming depends on the cognitive activation of culturally transmitted religious beliefs. Therefore, religious priming is not a robust technique for eliciting experimental evidence among the non-religious. By contrast, Benjamin et al. (2016) also use laboratory experiments varying the salience of religion, but find that the effects of priming are heterogeneous. Religious priming causes Protestants to increase contributions to public goods, while Catholics decrease contributions to public goods, expect others to contribute less to public goods, and become less risk-averse. Among Jews, the authors find that priming religion increases the rate at which workers raise their work effort in response to higher wages in a gift exchange game. Among agnostics and atheists, religious priming reduces risk aversion. But, Due to smaller samples, these results are more tentative than the ones for Catholics and Protestants.

Similarly, while not directly exploring religion and institutions, Bryan et al. (2020) randomize the administration of an evangelical Protestant Christian values and theology education program among ultra-poor households in the Philippines. The paper finds that six months after the end of the program, treated households have higher religiosity and income; no statistically significant differences in total labor supply, consumption, food security, or life satisfaction; and lower perceived relative economic status. Interestingly, thirty months after the program ended, significant differences in the intensity of religiosity disappear, but those in the treatment group are less likely to identify as Catholic and more likely to identify as Protestant, and there is some mixed evidence that their consumption and perceived relative economic status are higher.

Finally, another useful technique that could aid identification is event-study analysis, using religious unexpected shocks or changes. Bottan and Perez-Truglia (2015) use this technique to identify how US Catholic clergy abuse scandals affected religious participation, religious beliefs, and prosocial behavior. The event-study analysis exploits the rich temporal and geographic variation in the distribution of the scandals, under the main identifying assumption that the timing of the scandals is exogenous. The authors find that a scandal causes a significant and long-lasting decline in religious participation in the zip code where it occurs. Second, the decline in religious participation does not generate a statistically significant decline in religious beliefs, pro-social beliefs, and some commonly used measures of pro-social behavior. Third, the scandals cause a long-lasting decline in charitable contributions.

## **7. Suggestions for future research**

There are at least three ways to push forward the literature on religion and institutions. First, given the measurement and identification challenges inherent in using cross-country regressions, it is important to make use of more fine-grained religion data at the sub-national level. Cagé and Rueda (2020) is a good example of such an approach. The authors build a new geocoded dataset locating Protestant and Catholic missions in the early 20th century, as well as the health facilities they invested in, combining them with individual-level Demographic and Health Survey data. However, measuring institutions at the sub-national level is hard, as most existing proxies are at the country level. One exception is the European Quality of Government Index (published in 2011, 2013, 2017 and 2021) (QOG Institute, 2021), which is the only measure of institutional quality available at the sub-national level in the European Union. Institutional quality is defined as a multi-dimensional concept consisting of high impartiality and quality of public service delivery, along with low corruption. Similarly, Iddawela et al. (2021) use existing survey data (the Afrobarometer) to create a novel index of sub-national government quality in Africa. However, building sub-national indices is impossible for the case of economic institutions, such as the rule of law, since laws, by definition, are decided and implemented at the country level.

Second, better identification and data will help with unpacking the causal chain running from religion to institutions, and the other way around. Identifying the precise mechanisms, however, will require more analytical work using case studies and other qualitative data, such as analytic narratives (Bates et al. 1998; Nikolova and Nikolova 2017) and qualitative fieldwork (Jha 2013). Although regression analysis is useful at hypothesis testing and generating broad propositions, econometric work may be less successful at identifying causal mechanisms and choosing an adequate explanation given many possible models and explanations (Gerring 2007; Kreuzer 2010). Some scholars even claim that investigating causal mechanisms without case studies is simply too

difficult, as it requires too many unmeasurable or poorly measured variables (Kreuzer 2010). Rodden (2009) provides an important discussion on how case studies relate to standard econometric techniques, such as IV, selection models and natural experiments.

Finally, this article has shown that most of the existing research on religion and institutions focuses on Christianity, and on the two Christian denominations of Catholicism and Protestantism. With the exception of Djankov et al. (2016) and Djankov and Nikolova (2018), there is little work on Eastern Orthodoxy. A smaller but growing literature explores the impact of Islam on economic and political institutions in Muslim countries, and an even smaller scholarship focuses on Judaism. However, scholarly work on the link between religion and institutions in other religions – including Buddhism, Hinduism, as well as other tribal or non-traditional religions in Asia and Africa – is sorely lacking. Casting a wider geographical net will allow scholars to access new data, triangulate existing findings, and explore novel theories on the impact of religion and institutions beyond WEIRD (Westernized, Educated, Industrialized, Rich and Democratic) populations.

## **8. Summary**

This chapter investigates the complex interplay between institutions and religion. The majority of the world's population is religious, and everyone lives in an environment of certain formal and informal institutions. Religion and institutions are important because they – individually and in interaction – influence prosperity and well-being, factors which are crucial for the studies of labor, human resources, and population. Using North's (1992) definition of institutions as "rules of the game" for human interactions, this chapter demonstrates that many of these rules have been shaped by religion, complementing the view that institutions also result from geography, climate, migration, income, and other factors.

The evidence presented in this chapter indicates that religion plays an important role in shaping both formal and informal institutions. Church-state relationships hundreds of years ago affect informal institutions like work ethic, preferences for rationality or spirituality, and attitudes towards innovation. In terms of formal institutions, there is evidence of causal effects of religious doctrines on institutions such as democratic government, independent courts, private property, or inheritance rights. Moreover, there is evidence that formal and informal institutions also influence religious institutions and doctrines.

A significant body of the existing literature suggests that the state of institutions today may predict the state of religion in the future, and vice versa. The two main theories in this regard include secularization theory (which predicts lower religiosity due to more economic security and education), and religious markets theory (which anticipates a thriving religious market in the absence of state interference). Analyzing the existing evidence for both of these theories, this chapter finds multiple counterexamples for each of them in cross-country analyses, case studies, and experimental settings. Therefore, it calls for caution when generalizing the findings of any given theory or study to a broader population.

The analysis of the mutual dependence of religion and institutions is complicated by reverse causality and country-specific dynamics, whereby any relationships found are very likely to be confounded by omitted variables. Econometric techniques trying to address these shortcomings include instrumental variables and natural or designed experiments. However, potential

shortcomings, such as the violation of exclusion restrictions, or sensitivity to the timeframe chosen, need to be kept in mind.

Several avenues for future research are proposed. The presented evidence on the interaction between institutions and religion is conflicting and nuanced, which calls for the development of novel theoretical frameworks and empirical research. It is important to use more fine-grained religion data at the sub-national level, to focus on identification and the construction of supporting datasets – such as qualitative fieldwork or case studies – and to improve research coverage of non-Roman Catholic, non-Protestant Christian denominations and other religions. Such research would allow for a better understanding of the relationship between religion and institutions, and would provide new insights into the mechanisms driving human self-identification, social interactions, growth, and well-being.

### **Acknowledgments**

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<sup>i</sup> For instance, Montesquieu’s idea of separation of powers (which also included independent courts) was first published in 1748, and put into practice in the next fifty years.

<sup>ii</sup> See, for instance, the critique of Woodberry’s (2012) instruments in Nikolova and Polansky (2020).

<sup>iii</sup> Priming involves the presentation of a stimulus, which passively and temporarily affects processing or response, often in a different domain (Shariff et al. 2016).