Holy Work: How Religiosity Shapes Local Labor Market Outcomes

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Abstract

We utilize a novel identification strategy to quantify the impacts of religiosity on US local labor markets. Exploiting the quasi-random variation in historical immigration from 1850 to 2010 and origin-specific religiosity, we isolate exogenous religiosity shocks at the commuting zone level for the 1940-2010 period. We find that, relative to the Unaffiliated share, an exogenous increase in Protestant, Liminal and Orthodox Christian, and "Other" religious shares decreases employment and marriage shares, whereas Jewish share increases employment and college education shares along with mean income in commuting zones. The share of married women in the workforce falls with all religious shares except Jewish share. Our findings reveal substantial heterogeneity by gender. We provide suggestive evidence that these results are partially driven by the ancestral compositions of US commuting zones.

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1 Introduction

A large body of literature since at least Weber (1930) has posited that religious faith is associated with a variety of economic outcomes. Yet, studying the causal impact of religiosity has been impeded by the non-randomness of religious identity. Failure to identify exogenous variation in religiosity results in the typical endogeneity problem for two major reasons. First, with regard to the labor market, if some individuals prefer to pursue higher education or exert greater effort in their work, this may impact their religiosity, leading to reverse causality.[1] Second, religious identity might be correlated with unobservable characteristics such as upbringing, culture, and preferences, creating an omitted variable bias and measurement error.[2] These two issues could potentially confound the estimates by producing a spurious correlation and imprecise measurement between religiosity and the outcomes of interest.

In this paper, we develop a framework to correct for the endogeneity concern in religious identity. Utilizing this method, we study how religiosity affects local labor market outcomes in US commuting zones. Religion can impact local labor market outcomes by fostering social capital (Fine, 2010; Deller et al., 2018), enabling networking and community engagement (Halstead and Deller, 2015). Furthermore, religion plays an important role in improving labor market outcomes via its effects on human capital formation, which can bear considerable implications.[3] Therefore, examining the causal impact of religiosity on local labor markets becomes a crucial avenue in further understanding the religious norms.

To address this question, we initially motivate two channels in overcoming the endogeneity in religiosity. The first channel can be attributed to cultural persistence (Bisin and Verdier, 2001) governed by the long-lasting impact of historical immigration through the transferability of religious human capital (Chiswick, 2015).[4] The second channel pertains to the endogeneity problem in the immigrant self-location into regions, corroborated by the presence of "ethnic enclaves" and "social networks" among immigrants (Altonji and Card, 1991; Card, 2001; Munshi, 2003).

Drawing on these channels, we then specify our identification strategy in a two-step procedure as follows. First, for each decennial census year from 1850 to 2010, we predict immigration stocks by exploiting historical origin-by-destination immigrant settlement patterns within a shift-share instrumental variable (SSIV) setting (Terry et al., 2021). In this step, we generate the quasi-random variation in immigration, which mitigates the endogeneity issue emanating from the immigrant self-location into given places. Second, using this quasi-

[1] See Hungerman (2014b) who leverages Canadian compulsory schooling laws to show that an increase in educational attainment decreases the likelihood of an individual's religious identity. For US-based evidence on the impact of religion on education, see Glaeser and Sacerdote (2008b). Gibbons and Silva (2011) investigate the impact of attending Faith schools on primary education achievement in England. See Silveus and Stoddard (2020) who document the causal effects of income on religiosity.

[2] Altonji et al. (2005) highlight the selection concerns in the pertinent context, and Hungerman (2014a) designs an empirical test in the context of religious participation.

[3] For instance, the literature documents the literacy reform in Judaism resulting in occupational switching from agriculture to crafts and trade (Botticini and Eckstein, 2005), the Protestant Reformation leading to economic prosperity (Becker and Woessmann, 2009), Catholic religious education lowering development (Squicciarini, 2020), and a political collapse weakening literacy among Muslims (Chaudhary and Rubin, 2011).

[4] Patacchini and Zenou (2016) emphasize the complementarity between parental efforts in imparting religious values and the religiosity of peers.

random variation interacted with origin-level religiosity shares, we isolate religiosity shock of each group, plausibly exogenous to any remaining concerns, for the 1940-2010 period within a canonical SSIV framework. We classify religious affiliations under broad categories, which are Catholics, Protestants, Liminal Christians, Orthodox Christians, Jews, Others, and the Unaffiliated as a reference group, employing data sourced from the Association of Religion Data Archives (ARDA).[5]

We make two main contributions to the existing literature. Our first contribution is pertinent to generating new instruments for religious affiliations. While previous works leverage the Protestant Reformation (Cantoni et al., 2018) and Ramadan fasting (Campante and Yanagizawa-Drott, 2015) in quasi-experimental settings alongside religious salience in a lab environment (Benjamin et al., 2016) among other techniques, we adopt a different approach.[6] We construct plausibly exogenous instruments for religious affiliations at the US commuting zone level by exploiting the interaction of historical immigration with corresponding religious identities at the global level. For this purpose, we argue that historical immigration has likely influenced present-day religiosity due to cultural persistence across US regions. Since immigration itself is endogenous, we initially predict immigrant settlements for each decennial census year for the 1850-2010 period using the granular commuting zone-country level data. The procedure relies on generating exogenous variation in immigration via the interaction of the origin-specific "push" factor and the destination-specific "pull" factor. To ensure that these terms do not capture any confounding shocks at the commuting zone and country levels, we "leave out" a given census division from the push factor and a given continent from the pull factor in the spirit of Terry et al. (2021). Later, to generate an exogenous religiosity shock for each group, we utilize an innovative method by interacting the quasi-random variation in immigration obtained in the previous step with the origin-level respective religiosity share from 1940 to 2010.

Our second contribution connects to investigating the causal effects of religiosity on local labor market outcomes. Prior studies analyze how religiosity affects education (Becker and Woessmann, 2009) as well as income and labor supply (Bryan et al., 2020; Joslin and Nordvik, 2021) utilizing various identification strategies in multiple contexts. However, our focus is different, in that we provide rigorous causal empirical evidence on all labor market outcomes within one unified framework. By doing so, we leverage the interplay between religiosity and the attitudes towards human capital accumulation, labor, and leisure. Moreover, to our knowledge, we are the first to causally estimate the impact of religiosity on demography, especially marriage, divorce, and fertility outcomes in an overarching analysis.[7] The significance of this examination lies in assessing the effects of religious identity on gender roles and family formation decisions, establishing a thorough causal basis for the suggestive evidence in the existing literature.

We find that, relative to the Unaffiliated share, an exogenous increase in Protestant, Liminal and Orthodox Christian, as well as "Other" shares reduces employment and labor force shares in commuting zones, with

[5] We define each of these groups and explain their construction in Section 3.

[6] Admittedly, the methods used in the literature for addressing endogeneity in religious affiliation to effectively quantify its causal effects abound, but one can refer to Hungerman (2011) for a comprehensive review of identification problems faced in similar investigations.

[7] See Lehrer (2009), Berman et al. (2018), and Herzer (2019) for correlation-based evidence.

stronger effects observed for women. On the other hand, a rise in Jewish share increases both employment and labor force shares.[8] Furthermore, an exogenous increase in Protestant share decreases mean income, while a rise in Jewish share increases both income measures. Gender-specific results reveal that the negative effects of Catholic and Liminal Christian shares on mean income are fully captured by female earners, whereas those of Orthodox Christian and "Other" shares primarily affect male earners. Positive effects of Catholic and Liminal Christian shares on mean occupational income score are concentrated on female earners, while that of Jewish share solely impacts male earners.[9]

The findings on education, marriage, and fertility outcomes reveal the following patterns. Relative to the Unaffiliated share, an exogenous rise in Protestant and Liminal Christian shares increases the population with a high school degree or less but decreases those with some college and a college degree in commuting zones. Conversely, a rise in Jewish share shows the opposite trend, whereas an increase in both Orthodox Christian and Jewish shares raises the share of population with education beyond a college degree.[10] For marriage outcomes, an exogenous increase in Protestant, Liminal and Orthodox Christian, and "Other" shares reduces the shares of ever-married individuals and those who are married and in the workforce. Similarly, a rise in Catholic share lowers the share of married and working population, and a higher Jewish share decreases the share of ever-married population. Regarding fertility, measured by the average number of children residing with parents, only an exogenous increase in Jewish share has a statistically significant negative impact. Notably, the effects on married and working shares and fertility are predominantly driven by females.[11]

What drives our estimates? To explore this, we disaggregate the outcome variables by the largest ancestries reported in the census—Irish, Italian, Mexican, English, German, and Chinese—at the commuting zone level. We then examine the effects of exogenous religiosity shocks for all affiliations, relative to the Unaffiliated, on these outcomes for two primary reasons. First, if the religious beliefs of, say, Irish and Mexican Catholics differ significantly, the resulting variation in the instruments could bias our estimates downward. Second, we test whether Catholics affect other Catholic-majority ancestries ("peer effects") differently than those adhering to other religions ("spillover effects"), or if these effects are comparable.[12] The findings from this exercise reveal that religiosity shocks across most groups impact the local labor market outcomes of their respective ancestral groups similarly, whereas the remaining estimates are inconclusive. These results are reassuring, since they suggest that our main estimates are not attenuated, while also highlighting significant

[8] Lehrer (2008) finds that labor force participation is the lowest among the exclusivist Protestant denominations. Nevertheless, their analysis relies on association-based evidence in a cross-sectional setting. While not directly comparable, Bryan et al. (2020) document that Protestant education has no statistically significant effects on labor supply among Filipino households. Fernández and Fogli (2009) show that culture, proxied by countries of origins, positively affects female employment and labor force participation rate.

[9] Our estimates on mean income related to Protestant share differ from those in Bettendorf and Dijkgraaf (2010), who demonstrate a positive effect of Protestantism on income in high-income countries, whereas we find a negative impact. However, the positive effect of Catholic share on mean occupational income score is consistent with their findings.

[10] Appendix Table B1 provides additional education estimates under additive educational attainment categories.

[11] Berman et al. (2018) link the decline in fertility among European Catholics to a decrease in religious service provision, while our Catholic share estimates on fertility are statistically insignificant.

[12] These arguments are closely related to the "religious market density" notion (Gruber, 2005).

peer and spillover effects.

Related Literature. Our study bridges multiple strands of literature. First, we contribute to the literature randomizing religion to identify exogenous variation in religious identity within various settings (Hungerman, 2011; Almond and Mazumder, 2011; Oosterbeek and van der Klaauw, 2013; Majid, 2015; Campante and Yanagizawa-Drott, 2015; Benjamin et al., 2016; Cantoni et al., 2018; Montero and Yang, 2022; Giles et al., 2023).[13] Gruber (2005) introduces a strategy similar to ours, but their method purely exploits the ancestral makeup of US regions in generating the random variation in religiosity.[14] In this regard, we introduce a novel approach that leverages the quasi-random variation in historical immigration interacted with origin-level religiosity in an SSIV setting immune to issues highlighted in the literature.[15] We demonstrate that our instruments have a strong explanatory power for endogenous religiosity at the US commuting zone level.

Second, our analysis relates to a large body of literature that quantifies the causal impact of religiosity on the economy. In particular, the literature examines how religiosity influences growth labor supply (Lehrer, 1995; Joslin and Nordvik, 2021; Akyol and Okten, 2024), income (Bettendorf and Dijkgraaf, 2010), innovation and business activity (Bénabou et al., 2015; Deller et al., 2018), and growth (Guiso et al., 2003; Rupasingha et al., 2009; Becker et al., 2024).[16] Compared with this literature, we document a reduction in employment and labor force shares due to a rise in Protestant, Liminal and Christian, and "Other" shares, but an increase in these outcomes along with income due to a rise in Jewish share relative to the Unaffiliated share in US local labor markets.

Third, we add to the literature studying the effects of religiosity on demography (Lehrer, 1996; Berman et al., 2018). Notably, our work is the first attempt to causally estimate the impact of religious affiliations on marriage, divorce, and fertility outcomes within a single framework. Since the existing literature highlights a marriage premium (Hill, 1979; Korenman and Neumark, 1991; Pilossoph and Wee, 2021), we also quantify the employment response of married individuals to religiosity.

Lastly, our paper connects to the growing literature on religiosity and human capital (Glaeser and Sacerdote, 2008b; Becker and Woessmann, 2009; Gibbons and Silva, 2011; Chaudhary and Rubin, 2011; Hungerman, 2014b; Binzel and Carvalho, 2017; Squicciarini, 2020). Relative to these studies, we show differential impacts of each religious affiliation on educational attainment across US commuting zones.

The remainder of the paper proceeds as follows. Section 2 discusses the empirical strategy by addressing the endogeneity issue in religious affiliation and describing the identification strategy. Section 3 depicts the sources of data and presents summary statistics. Section 4 reports the results and a brief discussion on them. Section 5 introduces the potential mechanisms driving the estimates. Section 6 discusses the findings and concludes.

[13] For an introduction to the field of Economics of Religiosity, see Iannaccone (1998). Azzi and Ehrenberg (1975) demonstrate the factors determining individuals' religious participation. For a comprehensive summary of the literature, see Iyer (2016).

[14] In addition, their focus is non-Hispanic white males, which could be restrictive in identifying the exogenous variation for some religious groups.

[15] Jaeger et al. (2018), Adao et al. (2019), Goldsmith-Pinkham et al. (2020), and Borusyak et al. (2022) illustrate the problems with the canonical SSIV methods. For a recently assembled practical guide on SSIV designs, see Borusyak et al. (2024).

[16] McCleary and Barro (2006) reviews the literature on economy and religion from an international perspective.

2 Empirical Strategy

2.1 Estimating Equation and Potential Threats to Identification

We examine the effects of religiosity shares on local labor market outcomes within US commuting zones. To this end, we estimate the following equation:

$$y_{z,t} = \gamma_z + \gamma_t + r'_{g,z,t}\beta_g + \varepsilon_{z,t}. \tag{1}$$

Here, $r'_{g,z,t}$ denotes a vector of religiosity shares of all groups, $g \in \{$Catholic, Protestant, Liminal Christian, Orthodox Christian, Jewish, Other$\}$ in commuting zone z at time t, in that the reference category is the share of all unaffiliated individuals that include atheists, agnostics, etc. $y_{z,t}$ represents each outcome variable in commuting zone z at time t. For each decennial census year and each specification, we define outcome variables under broad labor market, education, as well as marriage, divorce, and fertility outcomes. γ_z and γ_t are commuting zone and time fixed effects controlling for any commuting-zone- and time-specific trends in $y_{z,t}$, respectively, and $\varepsilon_{z,t}$ is the error term capturing all omitted factors.

The OLS estimates of the coefficient of interest, β_g, would likely yield biased results due to reverse causality and omitted variable bias although we include commuting zone and time fixed effects. In particular, a change in educational attainment (Glaeser and Sacerdote, 2008a; Gibbons and Silva, 2011; Hungerman, 2014b) or income (Silveus and Stoddard, 2020) of individuals may result in a change in their religiosity. Moreover, religiosity may be correlated with some unobservable individual characteristics including cultural traits, preferences, and upbringing among others (Altonji et al., 2005; Hungerman, 2014a). As a result, this endogeneity problem may lead to a spurious correlation and imprecise measurement between religious affiliation and local labor market outcomes. We highlight the mechanisms by motivating two channels to correct for endogeneity in religiosity in the following subsection.

2.2 What Drives the Variation in Religious Affiliations across US Commuting Zones Today?

The first channel that explains the variation in religious affiliations across US commuting ones at present can be ascribed to *persistence*, defined as the long-run impact of historical events (Nunn, 2014; Allen and Donaldson, 2020; Voth, 2021). One can emphasize the role of cultural persistence shaping the modern-day cultural traits, political preferences, and religious affiliations (Bisin and Verdier, 2001; Giuliano et al., 2020; Giuliano and Nunn, 2021; Alesina and Tabellini, 2024) as well as the involvement of parents and peers in passing on religious knowledge (Patacchini and Zenou, 2016). One particular factor that has likely shaped the religious identity leading to cultural persistence in the US is historical immigration. For instance, Chiswick (2015) underscores the "transferability of religious human capital" through immigration. Valencia Caicedo (2019) finds that the Latin American regions with historical Jesuit presence have higher educational attainment

and income today.[17]

The second channel pertains to immigrant settlement patterns forming "ethnic enclaves" and "social networks" over time (Altonji and Card, 1991; Card, 2001; Munshi, 2003). As a prominent example of the ancestral distributions across US regions, one can show the dominance of Irish ancestry in the Northeast and Mexican ancestry in the Southwest (Abramitzky and Boustan, 2017). In addition to the cultural persistence highlighted above, the heterogeneity in skills, human capital, and occupational specialization of immigrants adhering to various religions has led to the economic persistence in the present-day outcomes. For example, Moser et al. (2014) document that Jewish émigrés, expelled from Nazi Germany to the US, induced innovation by drawing new researchers to their own disciplines.[18]

2.3 The Construction of Valid Instruments

Guided by the channels underlined in the previous subsection, we specify our identification strategy as follows. First, we predict immigration stocks for each decennial census year from 1850 to 2010 using origin-by-destination settlement patterns within an advanced version of the shift-share instrumental variable (SSIV) framework. Second, utilizing the interaction of this quasi-random variation in immigration with origin-level religiosity shares, we construct plausibly exogenous religious affiliation of each group for the 1940-2010 period in a canonical SSIV setting.[19] We use these instruments to account for the endogeneity concern in religiosity determined above.

2.3.1 Predicting Immigration Stocks

In this subsection, we introduce the first step in instrument construction, whereby we predict the total number of immigrants from origin o (country) settled in destination z (commuting zone) at time t, $I_{o,z,t}$, similar to Terry et al. (2021). This approach relies on predicting immigration stocks through the "push" factors interacted with the "pull" factors in a leave-out setting. Specifically, we leave out continents, in which immigrant origin countries are located, from the "push" factor, while we leave out US census divisions, in which destination commuting zones are located, from the "pull" factor. This procedure ensures that immigration stocks are plausibly exogenous to both commuting-zone-specific and origin-destination-specific factors, thereby effectively generating quasi-random variation in $I_{o,z,t}$. To this end, we estimate the following equation:

$$I_{o,z,t} = \gamma_{o,d(z)} + \gamma_{c(o),z} + \sum_{\tau=1850}^{t} \theta_{d(z),\tau} \left(I_{o,-d(z),\tau} \frac{I_{-c(o),z,\tau}}{I_{-c(o),\tau}} \right) + u_{o,z,t}, \tag{2}$$

where $I_{o,z,t}$ is the total number of immigrants from o (one of *o*rigin countries) settled in z (one of US commuting *z*ones) at time t (one of decennial census years in 1940-2010). $I_{o,-d(z),\tau}$ is the "push" factor, representing the total number of immigrants from o at time τ settled in commuting zones *outside* of the

[17] The results in Garcia-Muñoz and Neuman (2013) demonstrate that the religiosity of immigrants establishes a "bridge" between immigrant and local populations in the US, whereas it generates a "buffer" between them in Europe.

[18] For a comprehensive survey of the literature on religion and economic outcomes in the historical context, see Becker et al. (2021).

[19] Note that we exclude the year 1960 owing to the unavailability of religious adherence data in that year.

census division where z is located. $\frac{I_{-c(o),z,\tau}}{I_{-c(o),\tau}}$ is the "pull" factor, in that the denominator denotes the total number of immigrants from o in the United States at time τ *outside* of the continent where o is located, while the numerator shows the total number of immigrants in z at time τ *outside* of the continent where o is located. $\gamma_{o,d(z)}$ and $\gamma_{c(o),z}$ are a set of origin country $\times$ destination census division and continent of origin $\times$ destination commuting zone fixed effects. The estimation of equation (2) yields the following predicted immigration stocks for all 183 origin countries and 722 US commuting zones for each decennial census year in 1940-2010:

$$\hat{I}_{o,z,t} = \sum_{\tau=1850}^{t} \hat{\theta}_{d(z),\tau} \left(I_{o,-d(z),\tau} \frac{I_{-c(o),z,\tau}}{I_{-c(o),\tau}} \right). \tag{3}$$

Here, $\hat{\theta}_{d(z),\tau}$ represent the coefficients we estimate using equation (2).[20] This step is crucial in addressing reverse causality, in which we effectively eliminate any remaining confounding factors arising from the size differences in destinations and origins (*i.e.*, unobserved productivity shocks). As opposed to the canonical shift-share approach, in which the observed or realized immigration stocks are utilized, the "leave-out" component in both "push" and "pull" factors ensures that our specification does not pick up spurious correlations between current immigration and outcomes of interest due to some persistent productivity shocks.

We explain the intuition behind equation (2) in the subsequent example. We predict a sizable number of immigrants from Poland relative to other immigrants from Europe to Pittsburgh in the late 1890s provided that the two events happen. First, a sufficiently large stock of Polish immigrants settles in census divisions in the late 1890s excluding Middle Atlantic in the Northeast. Second, Pittsburgh attracts immigrants from origins other than the European countries in the late 19th century corresponding to the period of the growth in the steel mills industry. Therefore, the "leave-out" aspect in the "push" and "pull" factors effectively isolates the quasi-random variation in immigration at the commuting zone level.

2.3.2 Generating Exogenous Religious Affiliations

In the second step, we generate exogenous religious affiliations by commuting zone for the 1940-2010 period, making it a major contribution in our identification strategy. For this purpose, we predict the total number of adherents in each religious category using the interactions of predicted immigration stocks obtained in equation (3) with origin-level religious affiliation shares. The estimating equation becomes

$$R_{g,z,t} = \gamma_z + \gamma_t + \sum_{o \in \mathcal{O}} \delta_{g,o} \cdot [\hat{I}_{o,z,t} \times r_{g,o,t}] + \epsilon_{g,z,t}, \tag{4}$$

where $R_{g,z,t}$ is the total number of adherents in each religious group g in commuting zone z at time t. γ_z and γ_t are commuting zone and time fixed effects, respectively. $\hat{I}_{o,z,t}$ represents the predicted immigration stocks estimated in equation (3). $r_{g,o,t}$ denotes the share of each religious group g in country o at time t, which is the total number of adherents in each religious affiliation relative to population of each country in a given year. We estimate equation (4) for each religious affiliation separately and obtain our main instruments for

[20] We take the residuals of the interactions of the push and pull factors relative to all of the fixed effects in equation (2).

endogenous religiosity share of each group, g, in commuting zone, z, at time t, $r_{g,z,t}$, in equation (1) as follows:

$$\hat{R}_{g,z,t} = \sum_{o \in \mathcal{O}} \hat{\delta}_{g,o} \cdot [\hat{I}_{o,z,t} \times r_{g,o,t}]. \tag{5}$$

We utilize these constructed instruments to correct for the endogeneity concern in religiosity by considering the potential channels identified above, which are (*i*) the transmission of religious human capital from historical immigration to local population through persistence and (*ii*) immigration-driven "ethnic enclaves" and "social networks."[21]

Identifying Assumption. We specify the identifying assumption such that the quasi-random variation in immigration, $\hat{I}_{o,z,t}$, is exogenous to local conditions. As formulated in Borusyak et al. (2022), this exogeneity condition corresponds to "shifts" ($\hat{I}_{o,z,t}$) being "as-good-as-randomly" assigned.[22]

We believe that it is reasonable to assume that the identifying variation emanates from the origin-by-destination-specific quasi-random variation in immigration ("shifts") as opposed to the origin-specific religiosity shares, $r_{g,o,t}$ ("shares"). First, as underscored above, the persistence in historical immigration has shaped the current path of economic development (Sequeira et al., 2020; Allen and Donaldson, 2020) and preferences (Gagliarducci and Tabellini, 2022; Alesina and Tabellini, 2024). Second, without *a priori* knowledge on preferences and religious identities within each individual country in our sample, it becomes more challenging to substantiate the argument that origin-level religiosity shares are uncorrelated with destination-level religious affiliations.[23]

First-Stage Performance. Figure 1 illustrates binned scatter plots of the first-stage estimates. We regress endogenous religiosity of each affiliation on exogenous religiosity shock of the corresponding group by including commuting zone and time fixed effects in each separate specification, and plot the result in each individual figure.[24] The figures show that, conditional on commuting zone and time fixed effects, endogenous variables and constructed instruments align well.

3 Data

3.1 Sources

Labor Market, Education, Marital Status, and Fertility. The decennial 1940-2010 data on marital status, employment status, occupational score, number of children, and educational attainment come from US full censuses (1940 and 1950), census samples (1970-2000) and the 2006-2010 five-year sample of the American Community Survey (ACS), utilizing harmonized variables obtained from the Integrated Public

[21] Appendix Figures C1 and C2 depict the maps of the endogenous religiosity share and exogenous religiosity shock of each group in 2010, respectively.

[22] See Goldsmith-Pinkham et al. (2020) for a different framework, in which the exogeneity condition is based on "shock orthogonality," in that the identifying variation stems from "shares."

[23] Had we assumed the exogeneity of religiosity shares at the origin level, it would have otherwise led to unconditional responses in our instruments confounding short- and long-run processes as underlined in Jaeger et al. (2018).

[24] The first-stage estimating equation takes the following form: $R_{g,z,t} = \gamma_z + \gamma_t + \alpha_g \hat{R}_{g,z,t} + \nu_{g,z,t}$.

Use of Microdata Series (IPUMS USA: Ruggles et al. 2024a,b).[25] We weigh observations using the person weights provided in these samples. We construct several commuting-zone-level outcome variables using the data in each census year. Each outcome is calculated as a share or mean of respondents of both sexes between the age of 25 and 54, but also stratified as a share or mean by sex and age bin (in 5-year age bins).[26] Our dataset on these outcomes of interest covers 722 commuting zones and 7 census waves.[27] We describe how we generate these variables in detail in subsection A.1 of Data Appendix.

Religious Affiliations. We acquire data on religious makeup at the county level from the United States Census of Religious Bodies file for 1940 (Department of Commerce and Labor, Bureau of the Census, 1940), Churches and Church Membership in the United States files for 1950 and 1970 (National Council of Churches, 1956; Johnson et al., 1974), and Longitudinal Religious Congregations and Membership File (Grammich et al., 2018) for 1980-2010.[28] The last file contains decennial 1980-2010 county-level data on the membership and number of adherents among 302 different religious denominations in the United States.[29] The data are merged from four different studies. The 1980 and 1990 studies mainly concern Judeo-Christian religious adherents and membership. The 2000 and 2010 studies expand in scope to count other religious bodies. The longitudinal file addresses differences over time such as church mergers and splits in order to streamline the data for analysis over time (Bacon et al., 2018). We describe how we generate the share of each religious group for each year at the commuting zone level in subsection A.2 of Data Appendix.

Data on religious counts and shares at the country level over time come from Religious Characteristics of States Dataset Project (Brown and James, 2019). The data are available annually from 1900 to 2015 and cover 220 independent states as well as 100 different religious traditions, including fine denominational details on Christian, Buddhist, and Islamic denominations.[30] Estimates are also included for nonreligious and Atheist populations. We transform non-1990-level historical and modern countries to 1990-level countries by using our own country crosswalk file. Since this dataset provides the shares of all religious groups, we take them as given.

Immigration. We obtain data on immigration from the decennial census samples of the IPUMS USA (Ruggles et al., 2024a) and National Historical Geographic Information System (NHGIS: Manson et al. 2023) for 1850-2000 along with the 2006-2010 five-year sample of the ACS. We utilize the person weights provided in these samples to weigh observations. Our dataset on immigration covers 722 US commuting zones, 183

[25]The 1940 and 1950 data come from the 1940 and 1950 Full Censuses and identify individuals at the county level. The 1970 census data are a 1 percent metropolitan "Form 1" sample, which identifies individuals at the county group level. The 1980, 1990, and 2000 data come from 5 percent census samples. The 1980 sample identifies the locations of individuals at the county group level, whereas the 1990 and 2000 samples along with the 2006-2010 five-year sample of the ACS identify them at the PUMA level. We exclude the 1960 sample, since the religiosity data do not exist for that year so we are unable to match this sample with the religious affiliations sample.

[26]We choose the prime-age population from 25-54 under the assumption that most respondents will be finished with their schooling by the age of 25, and will not have yet retired before the early retirement age of 55.

[27]We drop Alaska and Hawaii as a standard practice while investigating the effects on labor market outcomes.

[28]We use the 1936, 1952, and 1971 files in place of 1940, 1950, and 1970 to ensure consistency with the census files. Note that the data for 1960 are unavailable.

[29]It should be noted that not every denomination participated in every year.

[30]The coverage of the data extends as far back as 1790 for some countries.

foreign countries, and 15 census waves. We provide further details on the construction of immigration stock data in subsection A.3 of Data Appendix.

3.2 Summary Statistics

Table 1 reports summary statistics for the outcome variables used in our study. All variables are in shares, except for the mean occupational income score and mean number of children (fertility) variables, which are in logs. One can notice substantial variation in these variables by gender. In particular, Panel A demonstrates that the shares of employed as well as married and employed males are significantly higher than those of females. The share of married and employed males is notably higher than that of all employed males, whereas one can observe an opposite pattern for females. It should be mentioned that more than 45% of local female population is out of labor force. Mean occupational income score of males is also greater than that of females. Panel B shows that the shares of females with some college education along with a college degree are slightly higher than those of their male counterparts. However, the proportion of males with educational attainment beyond a college degree is slightly higher than that of females. Overall, the education statistics align with the popular estimates, suggesting that more than 30% of the US population has attained college education. Panel C reveals that the distributions of married, divorced, and separated females exceed those of males, while both sexes exhibit nearly identical mean fertility.

Table 2 presents summary statistics for religiosity shares at the global and US commuting zone levels. Of particular note is the fact that the US has a greater share of Protestants than Catholics relative to its local population, whereas the reverse holds true at the global level. The share of the Unaffiliated is notably high, accounting for nearly 50% of the local population in the US, compared to only 4% of the global population.

4 Results

The following section describes the findings of our analysis. It should be noted that throughout our results, the Unaffiliated share (those with no religious tradition) serves as the comparison group for all other religious groups. In other words, we measure how Catholic, Protestant, Liminal and Orthodox Christian, Jewish, and "Other" religious shares affect commuting zone outcomes relative to the Unaffiliated. We first present our main results–those for the local labor markets. Afterwards, we introduce a heterogeneity analysis for a different specification on our marriage outcomes. Finally, we discuss how employment, marriage, and fertility choice may drive our main results. All regressions include commuting zone and time fixed effects, and standard errors are clustered by state in all specifications.

4.1 Labor Market Outcomes

Employment Shares. Table 3 reports results for employment shares by religious group and separated by sex. Looking first at employment shares in columns (1)-(3), increases in Protestant, Liminal Christian, Orthodox Christian, and "other" religious share decrease employment share in a commuting zone. In column

(1), a one percentage point increase in Protestant, Liminal Christian, Orthodox Christian, and "Other" shares reduce employment share in a commuting zone by 0.32, 0.94, 7.98, and 2.49 percentage points, respectively. Column (2) shows that decreases in employment are largely concentrated among female employment. Impacts of religious share on male employment shares (Column 3) are also negative for all Christian groups and the "Other" category, but much smaller in magnitude (between 4 and 17 times smaller than impacts on female shares) and generally statistically insignificant with the exception of Orthodox Christian share. Jewish shares have different impacts on employment outcomes than all other religious shares: a one percentage point rise in Jewish share increases employment share in a commuting zone by 1.36 percentage points overall, and by 2.85 percentage points for women.

Unemployment and Labor Force Participation Shares. Looking at columns (4)-(9) of Table 3 helps decompose whether unemployment or lower labor force participation drives the results in columns (1)-(3). Declines in labor force participation explain more of the differences in employment share than unemployment does. For example, "Other" and Protestant share has a null impact on unemployment overall and slightly increases female unemployment (by 0.05 percentage points), but reduce in-the-labor-force share by 0.32 percentage points (with stronger decreases in labor force participation for women). The narrative is similar for "Other" religious groups and Liminal Christians. Orthodox Christian share raises commuting zone unemployment share by 1.07 percentage points, but unlike results for other groups, the effect is sharper on Orthodox Christian men: female and male unemployment increase by 0.61 and 1.39 percentage points respectively. They do see sharper decreases in labor force participation (7.05 percentage points) and the decreases are once again stronger for women (14.73 percentage points). As before, results from Jewish share differ from other religious groups. A one percentage point rise in Jewish share decreases unemployment by 0.35 percentage points overall, reduces female unemployment by 0.33 percentage points, and increases female labor force participation by 2.52 percentage points.

Mean Income. Table 4 reports income and earnings scores by religious group and sex. Incomes in columns (1)-(3) concern the respondent's reported income. Overall mean incomes decline by 1.6 and 7.7 percent per respective one percentage point increase in Protestant and "Other" share. Liminal Christian shares have negative impacts on female incomes (-5.6 percent) and Orthodox Christian shares have negative impacts on male incomes (-2.5 percent) per one percentage point increase. As before, the sign of Jewish shares oppose those of other religious groups: a one percentage point increase in Jewish share increases mean income by 10.5 percent, and raises female and male mean income by 11.2 and 11.0 percent respectively.

Columns (4)-(6) in Table 4 report mean occupational income scores. While the mean incomes in (1)-(3) are the respondent's reported wage and salary income, occupational income scores assign the respondent the median income (in hundreds of 1950 dollars) of all respondents with that occupation in 1950. As such, it is an estimate of expected wage based on occupation. The sign of the results does not change for Protestant, Jewish, or the "Other" category. However, the changes in occupational income scores are much smaller than those reported for mean income and are statistically insignificant for Protestant and "Other" shares.

Contrary to results for mean income, a one percentage point increase in Liminal Christian share and Catholic share increases female mean occupational income score by 2.4 and 2 percent, respectively.

4.2 Education, Marriage, and Fertility Outcomes

Next, we turn to education, marriage, and fertility outcomes, which might drive some of our labor market results.

Education Shares. Table 5 reports results for each education group. Reporting only those results that are significant at at least the 10 percent level, Jewish share increases some college and college education share in a commuting zone among 25-54 year-olds, and decreases the share of 25-54 year-olds with a high school education or less. An increase in "Other" religious share raises post-college education. An increase in Liminal Christian share reduces some college and college education among 25-54 year olds in a commuting zone, and increases the share of respondents with high school or less education. An increase in Orthodox Christian share decreases some college education share, but raises the share of those with above college education. A rise in Protestant share increases high school or less education among women, and reduces four-year college education in a commuting zone–more sharply among women. All results for Catholics carry large standard errors, but would suggest that increases in Catholic share increase the share of respondents with high school education or less, and decrease all educational obtainment above the high school level for males and females.

Marriage Outcomes. Fertility and marriage outcomes by religious group and sex are shown in Table 6. In columns (1)-(3), we find increases in Liminal Christian, Orthodox Christian, and "Other" religious share decrease the share of respondents who have ever been married in a commuting zone. For Orthodox and Liminal Christians, the decrease in ever married share is larger in magnitude for men than for women, but the opposite is true for "Other" religious categories.[31] Increases in Protestant and Jewish shares reduce marriage among female respondents. Columns (4)-(6) report changes in divorce shares. Orthodox Christian share decreases divorce share, while Jewish and Liminal Christian shares raise divorce shares in a commuting zone. Increases in Protestant share increase divorce share among women.

In columns (7)-(9) of Table 6, we find as expected that–except for increases in Jewish share–a one percentage point increase in religious share decreases the share of women in a commuting zone who are married and working between 0.65 (Protestants) and and 14.76 (Orthodox Christian) percentage points. We also find decreases in the share of men who are married and working with a rise in Orthodox Christian share.

Mean Fertility. In columns (10)-(12) of Table 6, we report results for fertility, with the caveat that U.S. censuses report only the number of children who live in the household with the respondent. We find that a one percentage point increase in Jewish share decreases the average number of children in the home by 7.2 percent, and decreases the average number of women with children in their household by 10.3 percent. All

[31] Table B2 reports alternative specifications of our marriage outcomes, including those who are currently married rather than those ever married.

other results are statistically insignificant, and typically negative in sign for Christian groups, except that Protestant share appears to have a largely null impact on fertility choice.

One aspect of these results worth noting is that the magnitude of the coefficients of interest with changes in Catholic and Protestant shares are generally the smallest: in other words, Protestants and Catholics are generally the least different from the unaffiliated. On the other hand, changes in Orthodox Christian shares and Jewish shares generally have the largest impacts on commuting zone outcomes.

4.3 Heterogeneity Analysis

In this section, we explore whether our main results differ among age groups or in alternative specifications of our outcome variables. For example, it is possible that older age groups drive positive divorce shares, and though we picked the 25-54 age group partially under the assumption that most respondents will have completed their education by that time, this may not be true for post-secondary degrees. Some of the increases in post-college education among religious groups may be driven by aging religious populations who have had more hours to dedicate to educational obtainment. Additionally, Mormons (one of our Liminal Christian groups) may delay post-high-school education to serve as missionaries for one or two year terms. Given that the census reports only children who live with the respondent, older respondents are also more likely to report few or no children in the home.

Marriage Outcomes. Table B2 reports alternative specifications of some of our marriage variables from Table 6. In columns (1)-(3), we report those respondents who are currently married instead of those who have ever been married. Those who are currently married most actively benefit from marital wage premiums, which may be reflected in reported wages or employment. As with "ever married" shares however, we find that increases in religious shares decrease the share of respondents who are currently married in a commuting zone (though some results have large standard errors). In columns (4)-(6), we limit "ever married" share to the 25-to-29-year-old age group. Increases in Liminal Christian, Orthodox Christian, Jewish, and "Other" religious groups decrease "ever married" share–and by larger magnitudes than seen for the whole 25-54 age group in Table 6. In columns (7)-(9), we also report the share of respondents "married and working" who are 25-29 years of age at the time of the census. We find that increases in religious share (except Jewish share) decrease the number of 25-to-29-year-olds who are married and working overall, and that married women who are not working largely drive these results.

5 Potential Mechanisms

In this section, we further explore the mechanisms through which religious affiliation impacts labor market outcomes by cutting our outcome variable samples down to those who report Irish, Italian, Mexican, English, German, and Chinese ancestry respectively, and report outcomes for each group separately.[32] We do this

[32]We choose these groups because they are among the largest reported ancestral origin groups in the U.S. census.

for two reasons. First, it is possible that (for example) the religious beliefs of Irish Catholics and Mexican Catholics differ in ways that lead to different labor market outcomes, which may place a downward bias on our baseline estimates. Second, we want to test whether Catholics, for example, cause stronger direct or indirect effects on commuting zone outcomes. In other words, do Catholics predominantly impact commuting zones through their influence on Catholic-majority ancestries, or does Catholic share influence Protestant-majority ancestries just as much or more?[33] Figures C3 - C17 report the results.

We consider this section to be mainly suggestive. However, Jewish shock appears to have positive impacts on employment for all included ancestral groups, and generally decreases unemployment for all ancestral groups. Jewish shock also increases labor force participation and income for those of Chinese ancestry. With Catholic shocks, those of German and Irish ancestry see decreases in employment share and increases in unemployment share, and there are decreases in female labor force share. Protestant shock appears to decrease employment for women of German ancestry, but may increase employment for males of Chinese ancestry. It also appears to decrease income for those of Irish and German ancestry. Orthodox shock is associated with increased employment for those of Irish ancestry and females of Italian ancestry.

In general, we find some evidence that Catholic and Protestant shocks impact employment outcomes of those of Irish (Catholic majority origin) and German (Protestant majority origin) ancestry in similar ways. However, Catholic shock decreases income for those of German ancestry but not necessarily those of Italian ancestry. In general, we see inconclusive (due to standard errors) results or heterogeneity in impacts from Christian and "Other" religious shocks on ancestral groups. However, Jewish shock increases employment for all ancestral groups, and either increases or has an imprecisely but on average positive or null impact on incomes on average.

6 Discussion and Conclusion

We ask how local religious share influences labor market outcomes. We are interested in this research question under the hypothesis that religious affiliation impacts beliefs and culture, which in turn may impact labor market decisions directly and indirectly through beliefs about gender roles and education, fertility, and marriage decisions. We study this question in a causal framework using new instruments for religious affiliation based on the religious origins of immigrants to the United States, removing endogenous factors that influence exit from the origin country and entry into specific regions of the US.

We find that a one percentage point increases in Protestant, Liminal Christian, Orthodox Christian, and "Other" religious group share decreases employment share among 25-54 year-olds in a commuting zone, that the decrease in employment is particularly sharp among women, and that all religious shares except Jewish share decrease the share of married women who are working. Decreases in employment primarily result from

[33] Irish, Italian, Mexican, and German are considered Catholic majority ancestries, Germans and English are considered Protestant majority, and Chinese "Other" majority.

declines in labor force participation (mostly among women).[34], and protestant share and "Other" religious share decrease mean income. In contrast, increases in Jewish share increase both employment and mean income, and decrease unemployment. Further breakdown by ancestry suggests that Jewish share increases employment for U.S. residents from a variety of ancestral origins.

Our exploration of potential mechanisms reveals a few avenues that may explain our results. First, religious shares impact education, which may in turn influence labor market outcomes. Higher Jewish share decreases high school or less education among 25-to-55-year-olds and increases college education, which may explain higher employment and income with increases in Jewish share. In contrast, higher Liminal and Orthodox Christian shares decrease college education (and higher Protestant share does the same for women specifically). This may attenuate labor market outcomes for these groups. Second, some religious groups may benefit less from marital wage premiums than the irreligious due to decreases in marriage with increases in Liminal and Orthodox Christian share, as well as "Other" religious share. Additionally, if the hours of two working spouses in the United States are complements, then decreases in the share of married women who are working with increases in Christian and "Other" religious share may decrease income. Third, increases in Jewish share decrease the average number of children reported by respondents in a commuting zone. Having fewer children may lead to more hours worked and more experience, increasing incomes and employment.[35]

Going forward, we plan further decompositions of our results to see if religious impacts are concentrated among certain age groups. For example, it is possible that younger respondents to US censuses are more or less likely to be devoutly religious than older generations. We also plan to decompose our results by industry choice, to see if religious beliefs impact career paths in ways we have yet to observe.

[34]though increases in Orthodox Christian share also increase unemployment, and increases in Protestant and "Other" religious share increase female unemployment

[35]Something else worth noting is the magnitudes in our results. Throughout our analysis, we find that Catholic and Protestant shares generally have the smallest impacts on commuting zone outcomes compared to the non-religious. If non-religious, Catholic, and Protestant groups see each other as culturally similar, they may be more likely to pool social capital.

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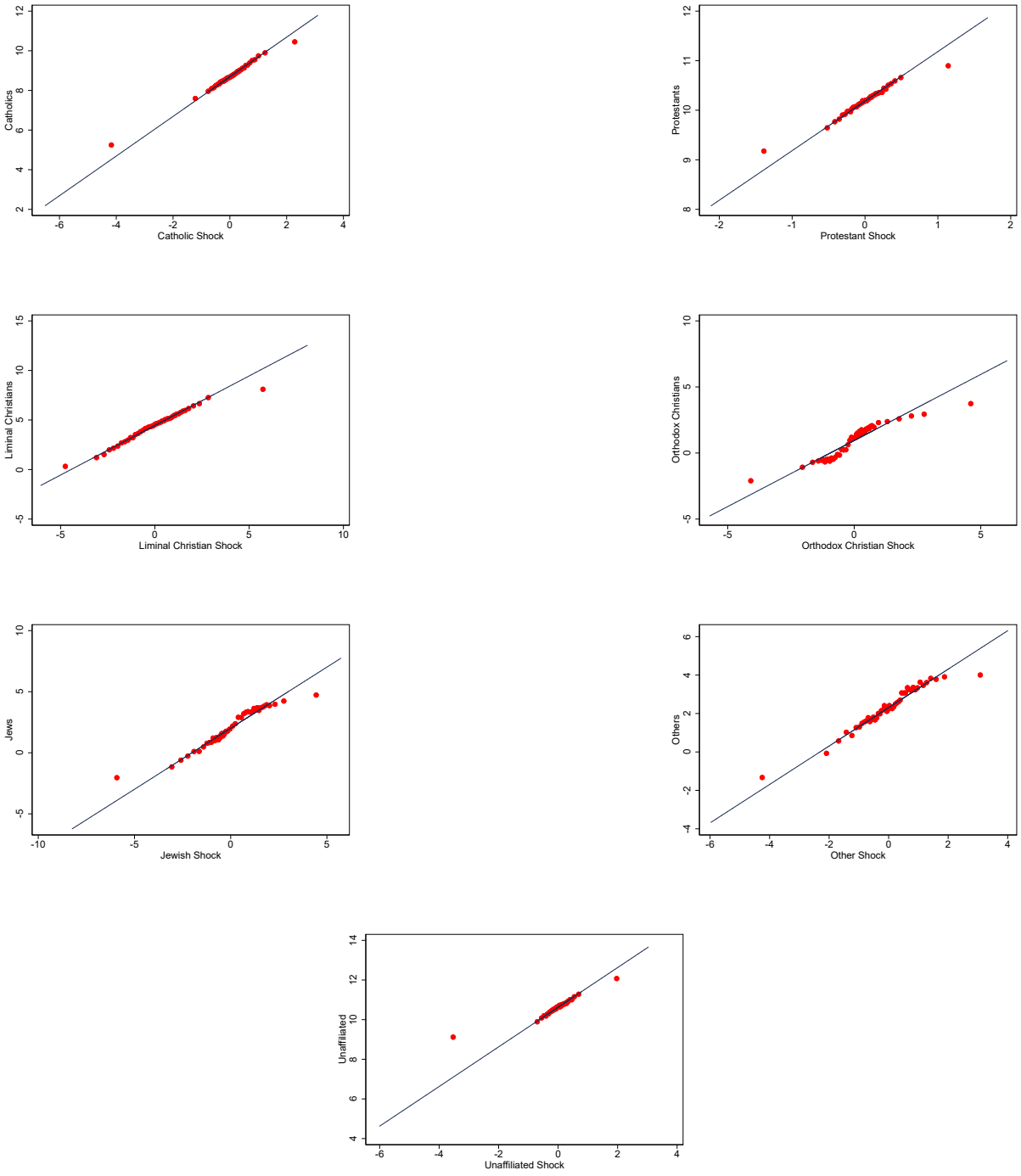


Figure 1: First-Stage Relationship

Notes: These figures portray binned scatter plots of the first-stage estimates. Each figure displays exogenous religiosity shock of each group isolated in equation (5) plotted against endogenous religiosity of the corresponding group by fixing the number of bins at 500. We include commuting zone and time fixed effects, and cluster standard errors by state for all specifications. We have plotted these figures utilizing the "`binsreg`" package in Stata (Cattaneo et al., 2024).

Table 1: Summary Statistics: Outcome Variables

	All	Female	Male
	(1)	(2)	(3)
Panel A: Labor Market Outcomes			
Employed (%)	68.92	51.68	86.07
	(9.47)	(20.65)	(5.99)
Unemployed (%)	3.43	2.68	4.15
	(1.60)	(1.56)	(2.13)
In the Labor Force (%)	72.35	54.36	90.23
	(9.85)	(21.73)	(5.25)
Married & Employed (%)	69.37	48.62	90.44
	(11.16)	(23.08)	(4.45)
Mean Occupational Income Score	24.93	22.61	26.56
	(2.60)	(2.75)	(3.11)
Panel B: Education Outcomes			
High School Degree or Less (%)	67.19	66.67	67.64
	(20.30)	(21.41)	(19.56)
Some College (%)	19.20	20.34	18.10
	(12.28)	(13.00)	(11.70)
College (%)	8.79	8.91	8.69
	(6.15)	(6.56)	(5.88)
More than College (%)	4.82	4.08	5.57
	(3.55)	(3.50)	(3.97)
Panel C: Marriage, Divorce, and Fertility Outcomes			
Married (%)	87.54	90.45	84.72
	(5.11)	(4.67)	(5.88)
Divorced (%)	7.64	8.26	7.00
	(4.94)	(5.26)	(4.69)
Separated (%)	1.86	2.15	1.56
	(1.37)	(1.64)	(1.14)
Mean Number of Children	1.48	1.57	1.39
	(0.35)	(0.35)	(0.36)
N	5,054	5,054	5,054

Notes: The table presents the means and standard deviations (in parentheses) of the outcome variables. The data cover the period 1940-2010 (excluding 1960) and are obtained from the census files as well as the 2006-2010 American Community Survey (ACS) 5-year estimates. All variables, except for mean occupational income score and mean number of children (in logs), are in shares and weighted by the person weights provided in these samples.

Table 2: Summary Statistics: Global and US Commuting Zone Religiosity Shares

	Global	US Commuting Zone
	(1)	(2)
Catholic (%)	29.39	13.61
	(33.60)	(13.29)
Protestant (%)	18.99	34.24
	(26.50)	(16.79)
Liminal Christian (%)	0.70	2.01
	(1.67)	(9.22)
Orthodox Christian (%)	2.91	0.03
	(12.66)	(0.14)
Jewish (%)	0.49	0.19
	(4.32)	(0.87)
Other (%)	43.39	0.41
	(39.02)	(1.09)
Unaffiliated (%)	4.13	49.50
	(9.14)	(17.01)
N	1,281	5,054

Notes: The table presents the means and standard deviations (in parentheses) of global and US commuting zone religiosity shares. All variables are in shares. Religiosity shares by country are normalized by population of each country, whereas those by commuting zone are normalized by population of each commuting zone. The data cover the 1940-2010 (excluding 1960) and are obtained from the Association of Religious Data Archives (ARDA). The sample contains 183 countries and 722 US commuting zones, excluding Alaska and Hawaii. The "Liminal Christian" category includes Mormons, Jehova's Witnesses, Unitarians, and Universalists. The "Other" category includes Hindus, Muslims, Buddhists, Jains, Sikhs, Confucianists, Taoists, Shintoists, and the adherents of Chinese folk religions and the other new religions. The "Unaffiliated" category includes agnostics and atheists.

Table 3: IV Estimates of Employment Outcomes

	Employment Share			Unemployment Share			In-the-Labor-Force Share		
	All	Female	Male	All	Female	Male	All	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Catholic	-0.449	-1.065	-0.271	0.145	0.039	0.221	-0.303	-1.026	-0.050
	(0.314)	(0.643)	(0.217)	(0.088)	(0.032)	(0.138)	(0.258)	(0.620)	(0.124)
Protestant	-0.320***	-0.529***	-0.047	0.000	0.047***	-0.031	-0.320***	-0.482**	-0.079*
	(0.100)	(0.188)	(0.052)	(0.019)	(0.013)	(0.030)	(0.098)	(0.180)	(0.044)
Liminal Christian	-0.937*	-2.323**	-0.110	0.075	0.050	0.065	-0.861*	-2.272**	-0.045
	(0.527)	(1.113)	(0.225)	(0.073)	(0.064)	(0.104)	(0.496)	(1.079)	(0.174)
Orthodox Christian	-7.985**	-15.207**	-3.436*	1.065**	0.606*	1.398**	-6.920**	-14.601**	-2.038
	(3.057)	(5.880)	(1.748)	(0.470)	(0.352)	(0.692)	(2.778)	(5.623)	(1.510)
Jewish	1.356*	2.848**	0.803	-0.347*	-0.325**	-0.313	1.009	2.523*	0.490
	(0.710)	(1.332)	(0.591)	(0.193)	(0.127)	(0.273)	(0.655)	(1.281)	(0.425)
Other	-2.489***	-3.856**	-0.523	-0.030	0.232**	-0.180	-2.518***	-3.625**	-0.704*
	(0.872)	(1.479)	(0.466)	(0.125)	(0.113)	(0.174)	(0.811)	(1.383)	(0.391)
AR Wald F-Test P-Value	0.000	0.000	0.110	0.000	0.001	0.000	0.000	0.000	0.200
N	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054
Outcome Mean	0.689	0.517	0.861	0.034	0.027	0.042	0.724	0.544	0.902
CZ FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The table presents the IV estimates of the effects of religiosity shares on employment outcomes. Both dependent and independent variables are in shares. Endogenous religiosity shares have been instrumented with their corresponding exogenous shocks. The reference category is the share of the unaffiliated (i.e., agnostics and atheists). The "Liminal Christian" category includes Mormons, Jehova's Witnesses, Unitarians, and Universalists. All regressions include commuting zone and time fixed effects and report the p-values for the Anderson-Rubin Wald F-Tests. Standard errors are in parentheses and clustered by state for all specifications, and *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 4: Income and Earning Score Estimates

	Mean Income			Mean Occupational Income Score		
	All	Female	Male	All	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)
Catholic	0.020	-0.006	0.021	0.010	0.020*	0.008
	(0.017)	(0.013)	(0.017)	(0.007)	(0.012)	(0.006)
Protestant	-0.016***	-0.017***	-0.013**	-0.002	-0.000	-0.002
	(0.006)	(0.006)	(0.005)	(0.001)	(0.002)	(0.001)
Liminal Christian	-0.031	-0.056*	-0.028	0.002	0.024**	-0.003
	(0.028)	(0.033)	(0.026)	(0.006)	(0.012)	(0.006)
Orthodox Christian	-0.239	-0.260	-0.253*	-0.042	0.074	-0.081*
	(0.158)	(0.173)	(0.149)	(0.043)	(0.063)	(0.043)
Jewish	0.105**	0.112**	0.110**	0.038***	0.013	0.043***
	(0.045)	(0.047)	(0.044)	(0.012)	(0.015)	(0.012)
Other	-0.078**	-0.062	-0.065**	-0.009	-0.003	-0.012
	(0.031)	(0.043)	(0.027)	(0.008)	(0.012)	(0.008)
AR Wald F-Test P-Value	0.000	0.000	0.000	0.000	0.000	0.000
N	5,054	5,054	5,054	5,054	5,054	5,054
Outcome Mean	8.991	8.353	9.352	3.250	3.154	3.309
CZ FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The table presents the IV estimates of the effects of religiosity shares on education outcomes. The independent variables are in shares, whereas the dependent variables are in logs. Endogenous religiosity shares have been instrumented with their corresponding exogenous shocks. The reference category is the share of the unaffiliated (i.e., agnostics and atheists). The "Liminal Christian" category includes Mormons, Jehova's Witnesses, Unitarians, and Universalists. All regressions include commuting zone and time fixed effects and report p-values for the Anderson-Rubin Wald F-Tests. Standard errors are in parentheses and clustered by state for all specifications, and *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 5: Education Estimates

	High School or Less			Some College			College			Above College		
	All	Female	Male	All	Female	Male	All	Female	Male	All	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Catholic	0.733	0.617	0.827	-0.412	-0.276	-0.523	-0.284	-0.335	-0.233	-0.037	-0.006	-0.071
	(0.516)	(0.447)	(0.574)	(0.259)	(0.197)	(0.316)	(0.196)	(0.229)	(0.164)	(0.134)	(0.123)	(0.151)
Protestant	0.121	0.172*	0.079	-0.046	-0.048	-0.051	-0.109*	-0.139**	-0.083	0.034	0.015	0.054
	(0.116)	(0.100)	(0.131)	(0.072)	(0.065)	(0.082)	(0.056)	(0.064)	(0.049)	(0.045)	(0.047)	(0.045)
Liminal Christian	1.370*	1.193*	1.524**	-0.863**	-0.705**	-0.993**	-0.555*	-0.622*	-0.488*	0.049	0.134	-0.042
	(0.694)	(0.627)	(0.757)	(0.413)	(0.346)	(0.483)	(0.291)	(0.338)	(0.248)	(0.156)	(0.147)	(0.176)
Orthodox Christian	3.009	2.391	3.814	-4.735**	-3.630***	-5.856**	-0.814	-1.597	-0.125	2.541**	2.836**	2.167*
	(3.078)	(2.576)	(3.604)	(1.791)	(1.345)	(2.390)	(1.429)	(1.652)	(1.260)	(1.061)	(1.058)	(1.123)
Jewish	-2.545***	-2.275**	-2.796***	1.416***	1.136**	1.646***	1.121***	1.077***	1.169***	0.008	0.061	-0.019
	(0.944)	(0.869)	(1.034)	(0.518)	(0.456)	(0.598)	(0.366)	(0.400)	(0.352)	(0.394)	(0.381)	(0.418)
Other	-0.152	0.272	-0.436	-0.278	-0.397	-0.264	-0.235	-0.416	-0.094	0.665**	0.541*	0.794**
	(0.625)	(0.547)	(0.715)	(0.424)	(0.355)	(0.529)	(0.326)	(0.377)	(0.285)	(0.300)	(0.296)	(0.311)
AR Wald F-Test P-Value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.009
N	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054
Outcome Mean	0.672	0.667	0.676	0.192	0.203	0.181	0.088	0.089	0.087	0.048	0.041	0.056
CZ FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The table presents the IV estimates of the effects of religiosity shares on regular education outcomes. Both dependent and independent variables are in shares. Endogenous religiosity shares have been instrumented with their corresponding exogenous shocks. The reference category is the share of the unaffiliated (i.e., agnostics and atheists). The "Liminal Christian" category includes Mormons, Jehova's Witnesses, Unitarians, and Universalists. All regressions include commuting zone and time fixed effects and report p-values for the Anderson-Rubin Wald F-tests. Standard errors are in parentheses and clustered by state for all specifications, and *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 6: Marriage and Fertility Estimates

	Ever Married Share			Divorced Share			Married & Working Share			Average Number of Children		
	All	Female	Male	All	Female	Male	All	Female	Male	All	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Catholic	-0.338	-0.033	-0.570	0.076	0.068	0.080	-0.691*	-1.193*	-0.167	-0.045	-0.036	-0.052
	(0.209)	(0.135)	(0.342)	(0.064)	(0.064)	(0.069)	(0.409)	(0.684)	(0.130)	(0.035)	(0.031)	(0.037)
Protestant	-0.093	-0.152**	-0.059	0.022	0.043*	0.003	-0.378***	-0.645***	-0.034	0.000	-0.001	0.000
	(0.060)	(0.059)	(0.079)	(0.023)	(0.024)	(0.025)	(0.122)	(0.215)	(0.037)	(0.005)	(0.005)	(0.006)
Liminal Christian	-0.587*	-0.198	-0.883**	0.217*	0.217*	0.214*	-1.214*	-2.321*	-0.007	-0.031	-0.016	-0.044
	(0.305)	(0.226)	(0.430)	(0.110)	(0.118)	(0.108)	(0.643)	(1.158)	(0.151)	(0.027)	(0.024)	(0.031)
Orthodox Christian	-6.000***	-3.904**	-7.825***	-1.461**	-1.069*	-1.863***	-9.248**	-14.757**	-2.817**	-0.033	0.027	-0.085
	(1.824)	(1.470)	(2.418)	(0.603)	(0.621)	(0.685)	(3.747)	(6.362)	(1.186)	(0.165)	(0.156)	(0.176)
Jewish	-0.360	-1.075***	0.190	0.628***	0.862***	0.393**	1.314	1.993	0.803	-0.072**	-0.103***	-0.046
	(0.405)	(0.296)	(0.586)	(0.193)	(0.265)	(0.147)	(0.805)	(1.326)	(0.510)	(0.035)	(0.034)	(0.038)
Other	-1.221**	-1.840***	-0.859	-0.144	0.050	-0.328**	-2.560***	-4.316**	-0.315	0.027	0.015	0.033
	(0.501)	(0.478)	(0.598)	(0.156)	(0.179)	(0.152)	(0.947)	(1.611)	(0.288)	(0.039)	(0.035)	(0.042)
AR Wald F-Test P-Value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000
N	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054
Outcome Mean	87.545	90.453	84.724	7.639	8.259	7.003	69.371	48.622	90.438	1.476	1.566	1.388
CZ FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The table presents the IV estimates of the effects of religiosity shares on marriage, divorce, and fertility outcomes. The independent variables are in shares. The dependent variables in columns (1)-(9) are in shares, while they are in logs in columns (10)-(12). Endogenous religiosity shares have been instrumented with their corresponding exogenous shocks. The reference category is the share of the unaffiliated (i.e., agnostics and atheists). The "Liminal Christian" category includes Mormons, Jehova's Witnesses, Unitarians, and Universalists. All regressions include commuting zone and time fixed effects and report p-values for the Anderson-Rubin Wald F-tests. Standard errors are in parentheses and clustered by state for all specifications, and *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Appendices

A Data Appendix

A.1 Construction of Outcome Variables

We crosswalk historical county and county groups, as well as modern PUMAs to 1990-level commuting zones utilizing the crosswalk files generated in Autor and Dorn (2013) and Eckert et al. (2020) to have a consistent geographic measure for commuting zones over time.[36] The weights in these crosswalk files are based on 1990-level commuting zone population. We describe the construction of each outcome variable below.

Labor Force. The first group of outcome variables of interest are the share of persons employed, unemployed, and in-the-labor-force in each group. Respondents were asked to report their employment status based on whether or not they worked or were looking for work the previous week. Those who performed paid work for at least one hour the previous week, or for 15 or more hours unpaid for a family business, or who were only temporarily absent from their work the previous week are counted as employed by the census. Those who did not have work the previous week but had been looking for work were counted as unemployed. The number of employed and unemployed persons together constitute those who are in-the-labor-force. Those individuals not working and not seeking work are excluded. All three variables are aggregated as shares per commuting zone.

Income and Occupational Income Score. Two different measures of income are utilized when constructing the mean income for each group: (*i*) the sum of all wage and salary income reported in the census for each respondent. This is given in the census in nominal dollars for each census year. We deflate it by CPI with a 1982-1984 base year. (*ii*) the mean occupational income score. The occupational income score is a variable that assigns each respondent an income (in hundreds of 1950 dollars) based on the median income of persons with their reported occupation in 1950.[37] Both variables are logged per commuting zone.

Married and Working. The share of respondents in each sex and age bin at the commuting zone level who are both married and working is constructed as the sum of respondents in each group who are employed and married (whether spouse is present or not) divided by the total number of married persons in the entire sex-age group.

Education. Because education impacts labor market outcomes, we capture the share of respondents in each sex-age group with (*i*) high school or less education, (*ii*) some college education (less than four years), (*iii*) a college education (four years of college), and (*iv*) above college education (more than four years of

[36] In particular, we use the crosswalk file created in Eckert et al. (2020) to crosswalk old counties in each decennial census year from 1850 to 1950 to 1990-level commuting zones. See Fabian Eckert's website. To crosswalk 1960-level counties, 1970- and 1980-level county groups, as well as 1990-, 2000-, and 2010-level PUMAs to 1990-level commuting zones, we utilize the crosswalk files generated in Autor and Dorn (2013). We use the files titled "[E2]" to "[E5]" available on David Dorn's website.

[37] The occupational earnings score is also available as an "earnings score," in which a value for the occupation from 0-100 indicates the percentage of workers in occupations with lower median earnings than the respondent's occupation.

college). In the appendix, we also report our education variables in an additive format as the share of respondents with high school or less, some college or less, and college or less education.

Marital Status and Fertility. Finally, because the literature shows that employment status, marital status, and children all impact labor market outcomes, we are interested to see if these variables decompose differently among religious groups. We construct: (i) the share of respondents in each group who are married, divorced, separated, or single (never married), as well as a "non-single" share defined as the share of all those who have been married in the past whether or not they are still married at the time of survey, and (ii) the mean number of the respondent's own children residing with the respondent at the time of survey.[38]

A.2 Construction of Religious Affiliation Shares

We generate the share of each religious group in the following steps. Initially, we construct the total number of church members or adherents all religious groups, including Catholics, Protestants, Liminal Christians, Orthodox Christians, Jews, and Others.[39] For the Protestant group, we take the sum of Mainlines and Evangelicals, whereas the Liminal Christian group is the sum of Mormons, Jehova's Witnesses, Unitarians, and Universalists. The Orthodox Christian group includes the sum of members or adherents of Russian, Greek, Armenian, Eastern, and Oriental Orthodox churches. We define the Jewish group as the total number of Conservative, Reformed, and Orthodox Jewish members or adherents. The Other group includes the sum of Hindus, Muslims, Buddhists, Jains, Sikhs, Confucianists, Taoists, Shintoists, and the adherents of Chinese folk religions and the other new religions. Our reference group is the total number of Unaffiliated individuals measured by the total commuting zone population net of the sum of members or adherents. We characterize these individuals as Agnostics and Atheists.

Afterwards, we crosswalk historical and modern counties to 1990-level commuting zones using the crosswalk files compiled in Autor and Dorn (2013) and Eckert et al. (2020). Finally, to generate the share of each religious group in each year, we divide the total number of members or adherents by the total commuting zone population in that year.

A.3 Construction of Immigration Stock Data

For each decennial census sample from 1850 to 2000 and the 2006-2010 five-year sample of the ACS, we define immigrants as "foreign-born" individuals born outside the US and its territories. We generate the immigration stock variable, $I_{o,z,t}$, as the total number of immigrants (foreign-born individuals) from origin (country) o, who settles in US destination (commuting zone) z in census year t. We use the detailed birthplace variable to identify the foreign-born individuals. To have a geographic consistency for both commuting zones

[38] This number includes the respondent's biological children, along with any adopted children and step children. It also includes a respondent's minor and adult children, but only if those children reside with the respondent. This variable, therefore, approximates but does not necessarily fully capture the respondent's fertility.

[39] For the 1940 and 1950 files, we define each religiosity group as the total number of members due to limited information, while for the 1970 file alongside the 1980-2010 longitudinal data, we define it as the total number of adherents.

and countries over time, we proceed as follows. First, we crosswalk historical counties and county groups alongside modern PUMAs to 1990-level commuting zones utilizing the crosswalk files generated in Autor and Dorn (2013) and Eckert et al. (2020).[40] Second, we transform non-1990-level historical and modern countries to 1990-level countries by using the country crosswalk file mentioned above.

[40]Furthermore, we match 1990-level commuting zones with states and census divisions using the files titled "[E8]" and "[E9]" available on David Dorn's website. This step is necessary to generate the "leave-out" "push" and "pull" variables for immigration stock in each census sample.

B Appendix Tables

Table B1: Additive Education Estimates

	High School or Less			Some College or Less			College or Less		
	All	Female	Male	All	Female	Male	All	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Catholic	0.733	0.617	0.827	0.321	0.340	0.304	0.037	0.006	0.071
	(0.516)	(0.447)	(0.574)	(0.282)	(0.291)	(0.276)	(0.134)	(0.123)	(0.151)
Protestant	0.121	0.172*	0.079	0.076	0.124	0.029	-0.034	-0.015	-0.054
	(0.116)	(0.100)	(0.131)	(0.075)	(0.080)	(0.073)	(0.045)	(0.047)	(0.045)
Liminal Christian	1.370*	1.193*	1.524**	0.506	0.488	0.531	-0.049	-0.134	0.042
	(0.694)	(0.627)	(0.757)	(0.325)	(0.342)	(0.319)	(0.156)	(0.147)	(0.176)
Orthodox Christian	3.009	2.391	3.814	-1.726	-1.239	-2.042	-2.541**	-2.836**	-2.167*
	(3.078)	(2.576)	(3.604)	(1.770)	(1.924)	(1.696)	(1.061)	(1.058)	(1.123)
Jewish	-2.545***	-2.275**	-2.796***	-1.129*	-1.139*	-1.150*	-0.008	-0.061	0.019
	(0.944)	(0.869)	(1.034)	(0.576)	(0.595)	(0.579)	(0.394)	(0.381)	(0.418)
Other	-0.152	0.272	-0.436	-0.431	-0.125	-0.700**	-0.665**	-0.541*	-0.794**
	(0.625)	(0.547)	(0.715)	(0.342)	(0.365)	(0.334)	(0.300)	(0.296)	(0.311)
AR Wald F-Test P-Value	0.000	0.000	0.000	0.002	0.012	0.000	0.002	0.001	0.009
N	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054
Outcome Mean	0.672	0.667	0.676	0.864	0.870	0.857	0.952	0.959	0.944
CZ FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

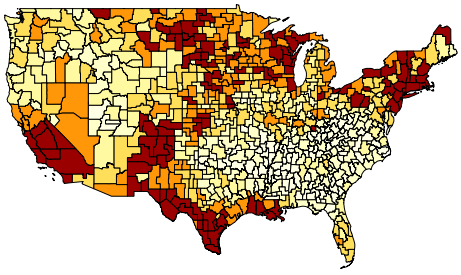
Notes: The table presents the IV estimates of the effects of religiosity shares on additive education outcomes. Both dependent and independent variables are in shares. Endogenous religiosity shares have been instrumented with their corresponding exogenous shocks. The reference category is the share of the unaffiliated (i.e., agnostics and atheists). The "Liminal Christian" category includes Mormons, Jehova's Witnesses, Unitarians, and Universalists. All regressions include commuting zone and time fixed effects and report p-values for the Anderson-Rubin Wald F-Tests. Standard errors are in parentheses and clustered by state for all specifications, and *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Table B2: Additional Marriage Estimates

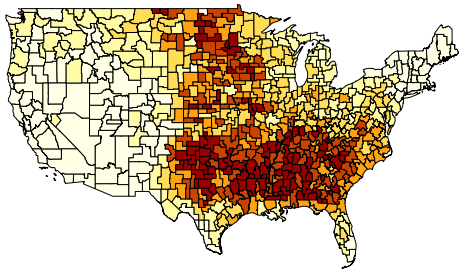
	Currently Married Share			Ever Married Share (25-29)			Married & Working Share (25-29)		
	All	Female	Male	All	Female	Male	All	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Catholic	-0.449	-0.049	-0.791*	-0.318	0.093	-0.656	-0.871*	-1.332*	0.017
	(0.269)	(0.131)	(0.469)	(0.294)	(0.253)	(0.455)	(0.473)	(0.732)	(0.113)
Protestant	-0.082	-0.148**	-0.041	-0.092	-0.161	-0.046	-0.355**	-0.679***	0.069
	(0.071)	(0.068)	(0.100)	(0.105)	(0.108)	(0.123)	(0.140)	(0.232)	(0.056)
Liminal Christian	-0.751**	-0.228	-1.199**	-0.768*	-0.340	-1.085*	-1.432*	-2.546**	0.154
	(0.359)	(0.242)	(0.559)	(0.438)	(0.404)	(0.553)	(0.732)	(1.251)	(0.213)
Orthodox Christian	-3.394*	-0.828	-5.780*	-12.923***	-10.643***	-14.904***	-9.174**	-14.794**	-0.146
	(2.001)	(1.493)	(2.878)	(3.223)	(2.954)	(3.864)	(4.056)	(6.569)	(1.636)
Jewish	-1.107**	-2.080***	-0.260	-1.921**	-3.018***	-0.896	1.856**	2.994*	0.166
	(0.521)	(0.503)	(0.722)	(0.749)	(0.656)	(1.037)	(0.922)	(1.504)	(0.742)
Other	-0.747	-1.457***	-0.300	-2.234***	-3.270***	-1.468	-2.261*	-4.458**	0.176
	(0.573)	(0.498)	(0.765)	(0.789)	(0.772)	(0.881)	(1.154)	(1.855)	(0.385)
AR Wald F-Test P-Value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.854
N	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054	5,054
Outcome Mean	0.759	0.768	0.752	0.738	0.801	0.677	0.661	0.455	0.899
CZ FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The table presents the IV estimates of the effects of religiosity shares on marriage outcomes. Both dependent and independent variables are in shares. Endogenous religiosity shares have been instrumented with their corresponding exogenous shocks. The reference category is the share of the unaffiliated (i.e., agnostics and atheists). The "Liminal Christian" category includes Mormons, Jehova's Witnesses, Unitarians, and Universalists. All regressions include commuting zone and time fixed effects and report p-values for the Anderson-Rubin Wald F-Tests. Standard errors are in parentheses and clustered by state for all specifications, and *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

C Appendix Figures



Catholic Share



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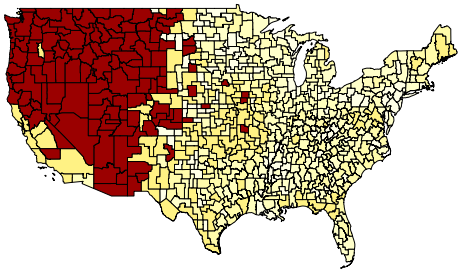
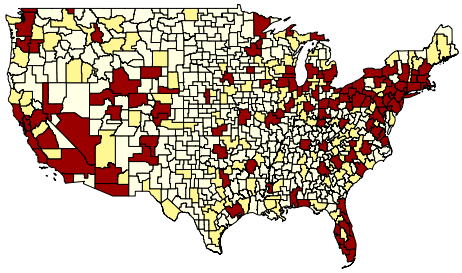


Liminal Christian Share



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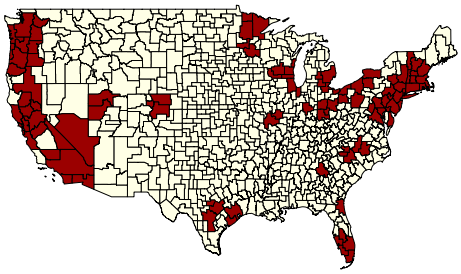
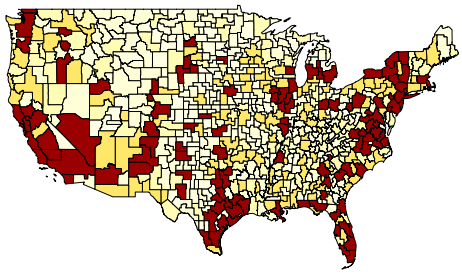
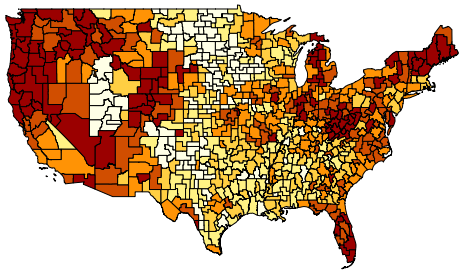


Jewish Share



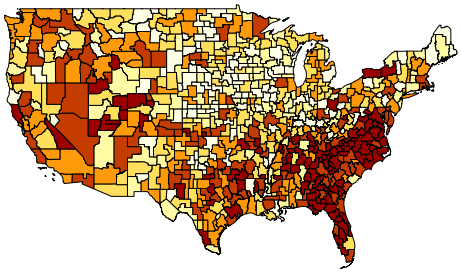
Other Share



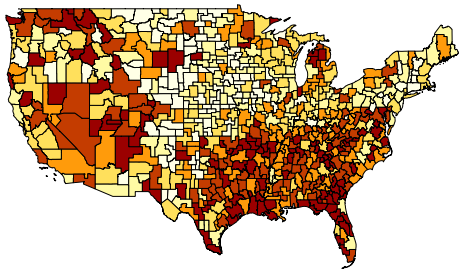
Unaffiliated Share

Figure C1: Endogenous Religiosity Shares by Commuting Zone in 2010

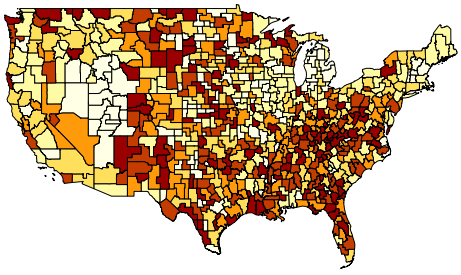
Notes: These maps portray the distribution of each religious affiliation (i.e., endogenous religiosity share of each group) by commuting zone in 2010. Each map's color coding illustrates 200 quantiles, whereby darker colors demonstrate higher quantiles. The "Liminal Christian" category includes Mormons, Jehova's Witnesses, Unitarians, and Universalists. The "Other" category includes Hindus, Muslims, Buddhists, Jains, Confucianists, Taoists, Shintoists, and adherents of the other new religions. The "Unaffiliated" category includes agnostics and atheists. We have mapped these figures utilizing the "`maptile`" package in Stata (see this website).



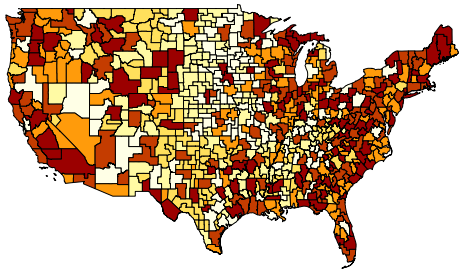
Catholic Shock



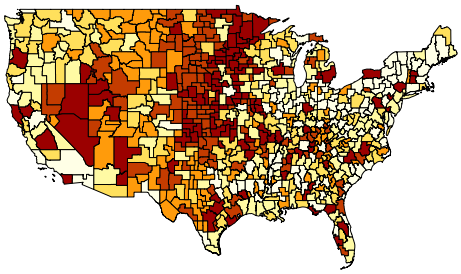
Protestant Shock



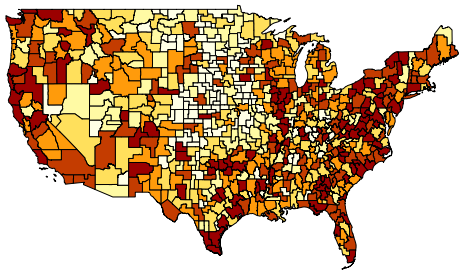
Liminal Christian Shock



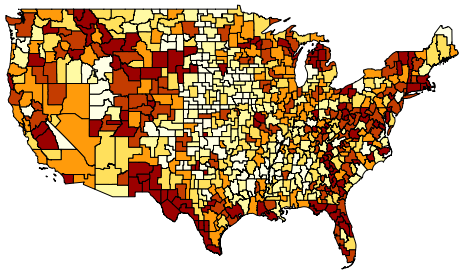
Orthodox Christian Shock



Jewish Shock



Other Shock



Unaffiliated Shock

Figure C2: Exogenous Religiosity Shocks by Commuting Zone in 2010

Notes: These maps portray exogenous religiosity shock of each affiliation by commuting zone in 2010, isolated in equation (5), used as instruments for the corresponding religious groups. We have regressed each instrument on commuting zone and year fixed effects, and computed the residuals. Each map's color coding illustrates 200 quantiles of those residuals, whereby darker colors demonstrate higher quantiles. The "Liminal Christian" category includes Mormons, Jehova's Witnesses, Unitarians, and Universalists. The "Other" category includes Hindus, Muslims, Buddhists, Jains, Confucianists, Taoists, Shintoists, and adherents of the other new religions. The "Unaffiliated" category includes agnostics and atheists. We have mapped these figures utilizing the "`maptile`" package in Stata (see this website).

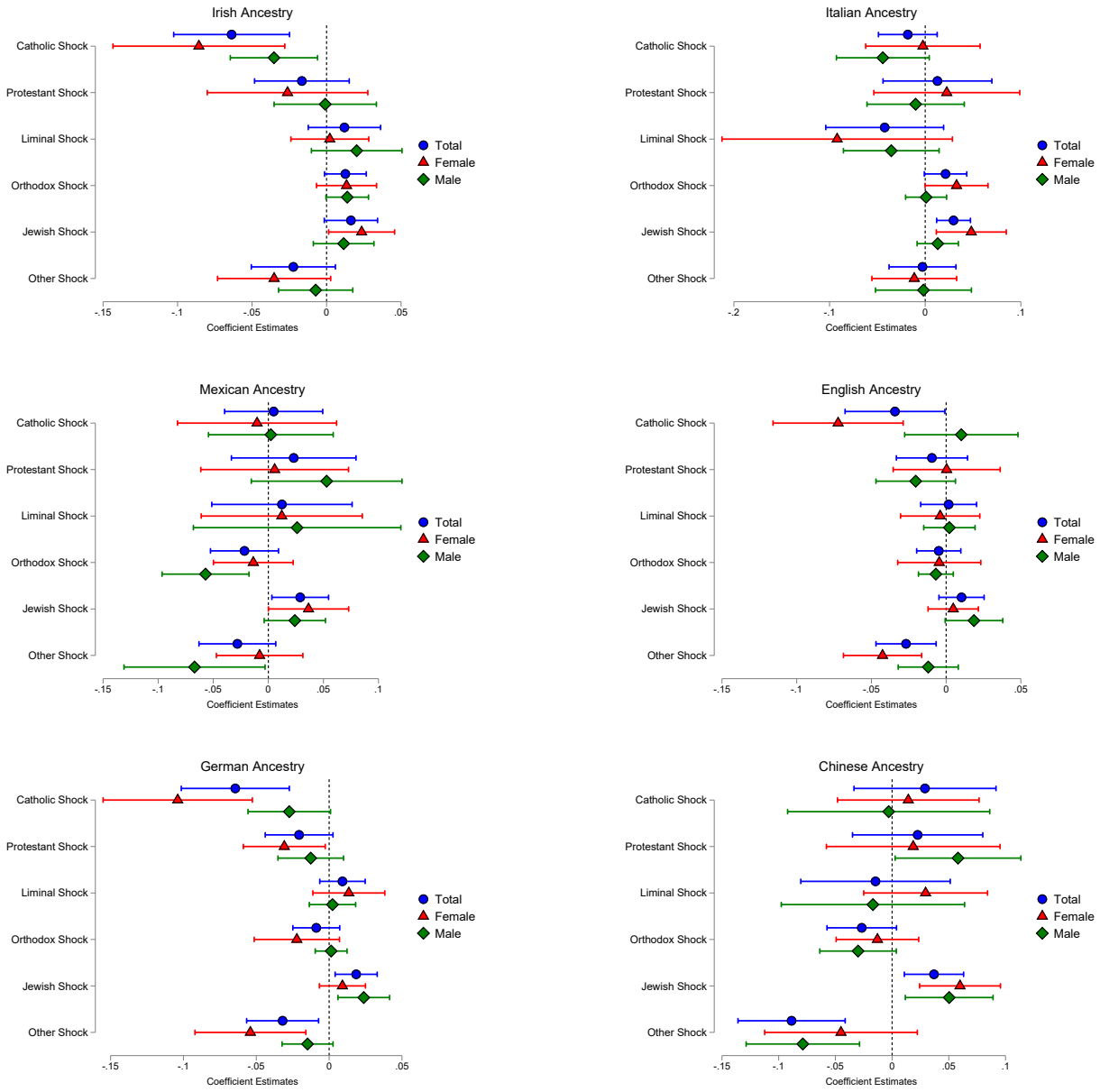


Figure C3: Reduced-Form Employment Share Estimates by Ancestry

Notes: These figures display the "reduced-form" estimates of the effects of exogenous religiosity shocks on employment shares by ancestry over the 1980-2010 period. Both dependent and independent variables are standardized. We include commuting zone and time fixed effects in all regressions. Whiskers indicate 95% confidence intervals based on standard errors clustered by state.

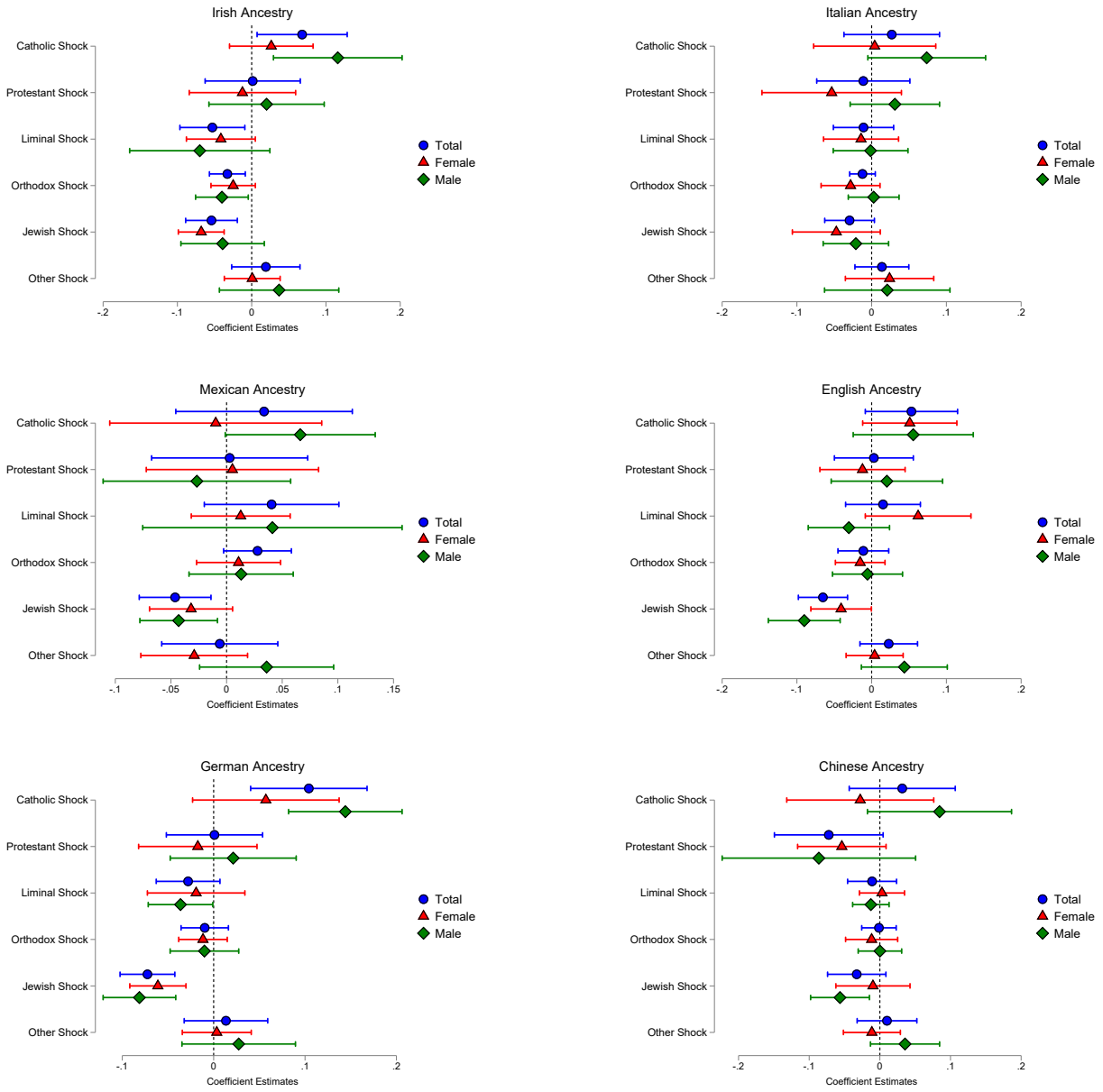


Figure C4: Reduced-Form Unemployment Share Estimates by Ancestry

Notes: These figures display the "reduced-form" estimates of the effects of exogenous religiosity shocks on unemployment shares by ancestry over the 1980-2010 period. Both dependent and independent variables are standardized. We include commuting zone and time fixed effects in all regressions. Whiskers indicate 95% confidence intervals based on standard errors clustered by state.

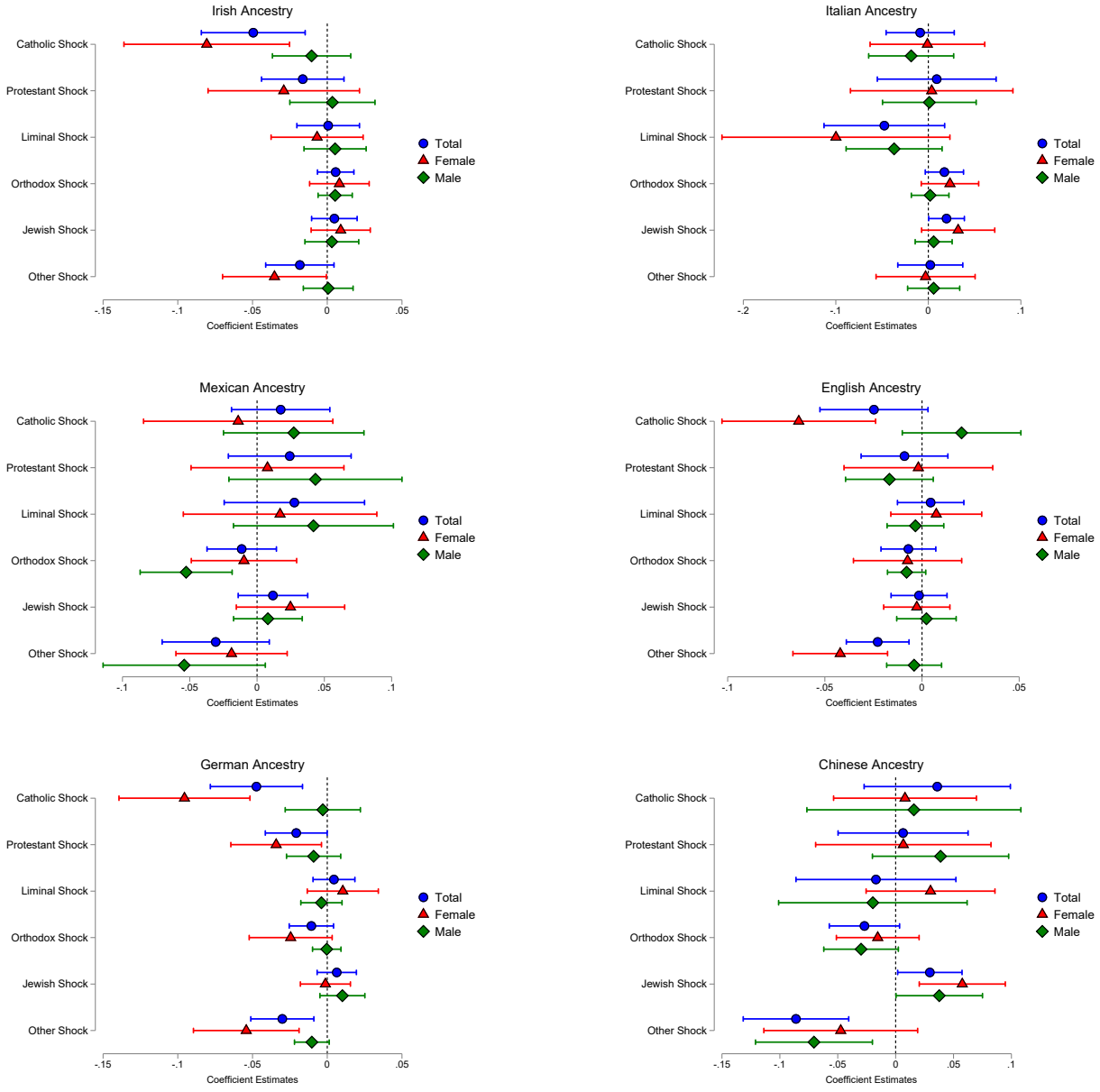


Figure C5: Reduced-Form In-the-Labor-Force Share Estimates by Ancestry

Notes: These figures display the "reduced-form" estimates of the effects of exogenous religiosity shocks on in-the-labor-force shares by ancestry over the 1980-2010 period. Both dependent and independent variables are standardized. We include commuting zone and time fixed effects in all regressions. Whiskers indicate 95% confidence intervals based on standard errors clustered by state.

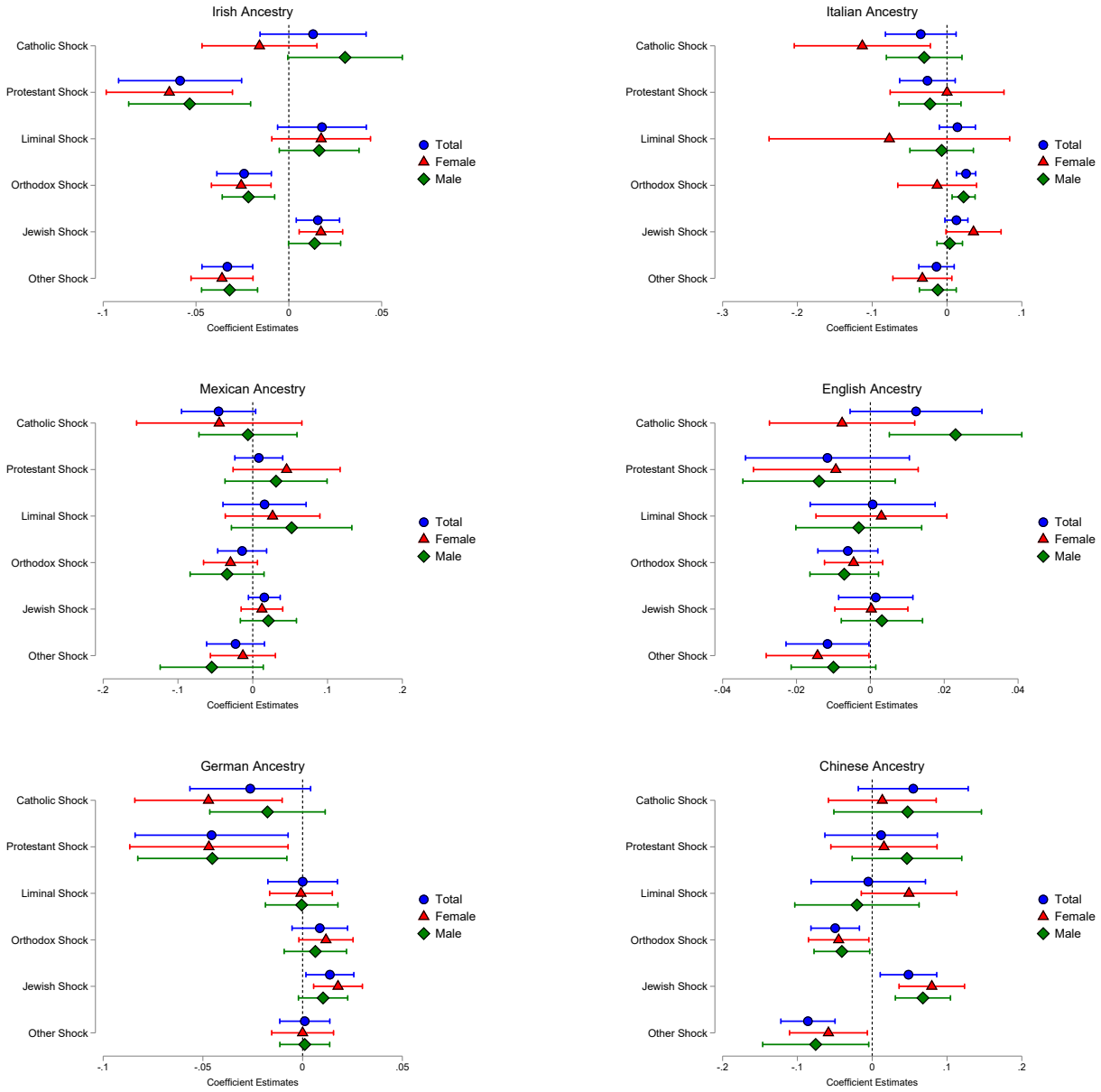


Figure C6: Reduced-Form Mean Income Estimates by Ancestry

Notes: These figures display the "reduced-form" estimates of the effects of exogenous religiosity shocks on mean income by ancestry over the 1980-2010 period. Both dependent and independent variables are standardized. We include commuting zone and time fixed effects in all regressions. Whiskers indicate 95% confidence intervals based on standard errors clustered by state.

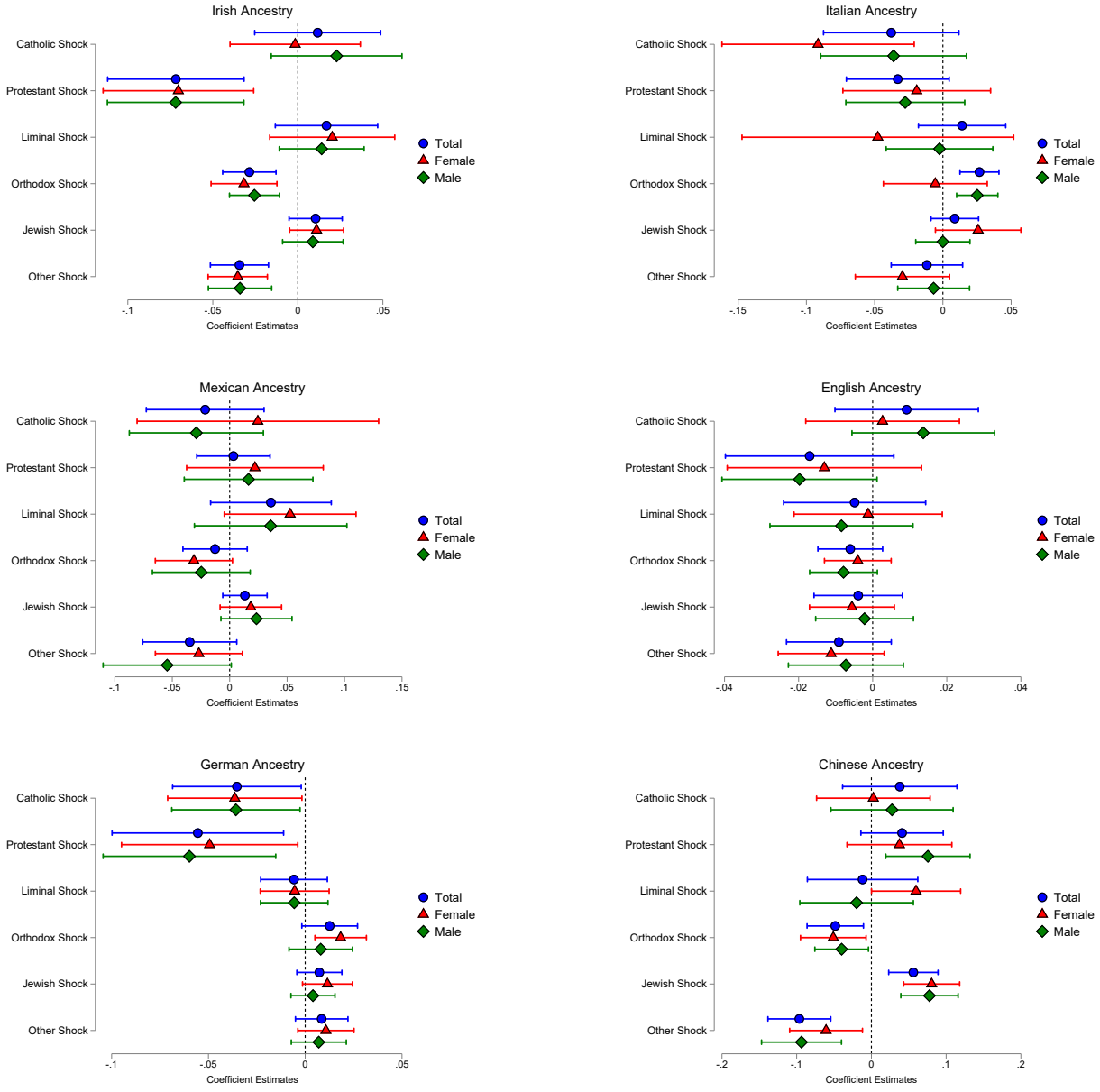


Figure C7: Reduced-Form Occupational Income Score Estimates by Ancestry

Notes: These figures display the "reduced-form" estimates of the effects of exogenous religiosity shocks on occupational income score by ancestry over the 1980-2010 period. Both dependent and independent variables are standardized. We include commuting zone and time fixed effects in all regressions. Whiskers indicate 95% confidence intervals based on standard errors clustered by state.

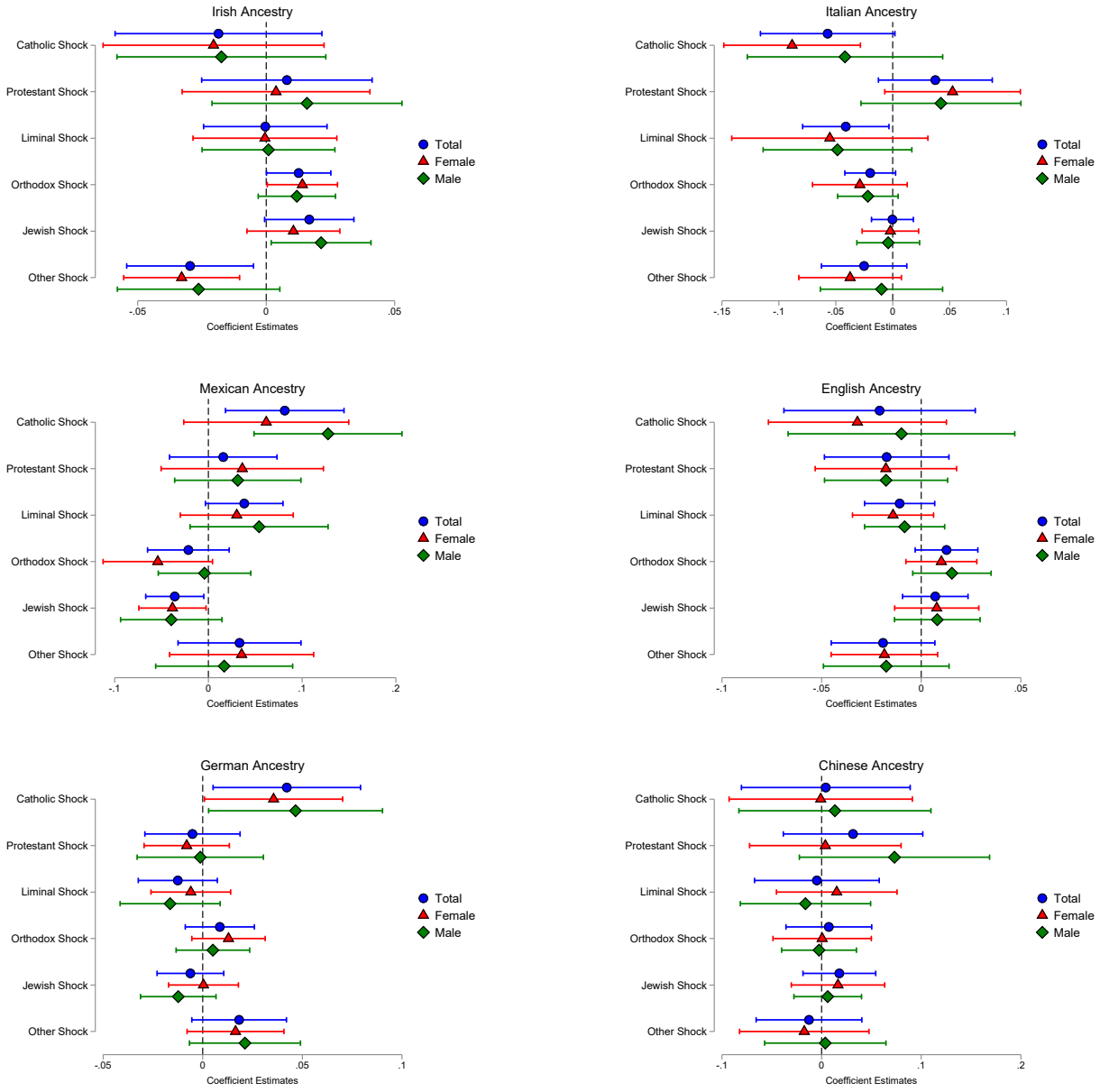


Figure C8: Reduced-Form Regular Education Share (High School Degree or Less) Estimates by Ancestry

Notes: These figures display the "reduced-form" estimates of the effects of exogenous religiosity shocks on regular education shares of individuals with a high school degree or less by ancestry over the 1980-2010 period. Both dependent and independent variables are standardized. We include commuting zone and time fixed effects in all regressions. Whiskers indicate 95% confidence intervals based on standard errors clustered by state.

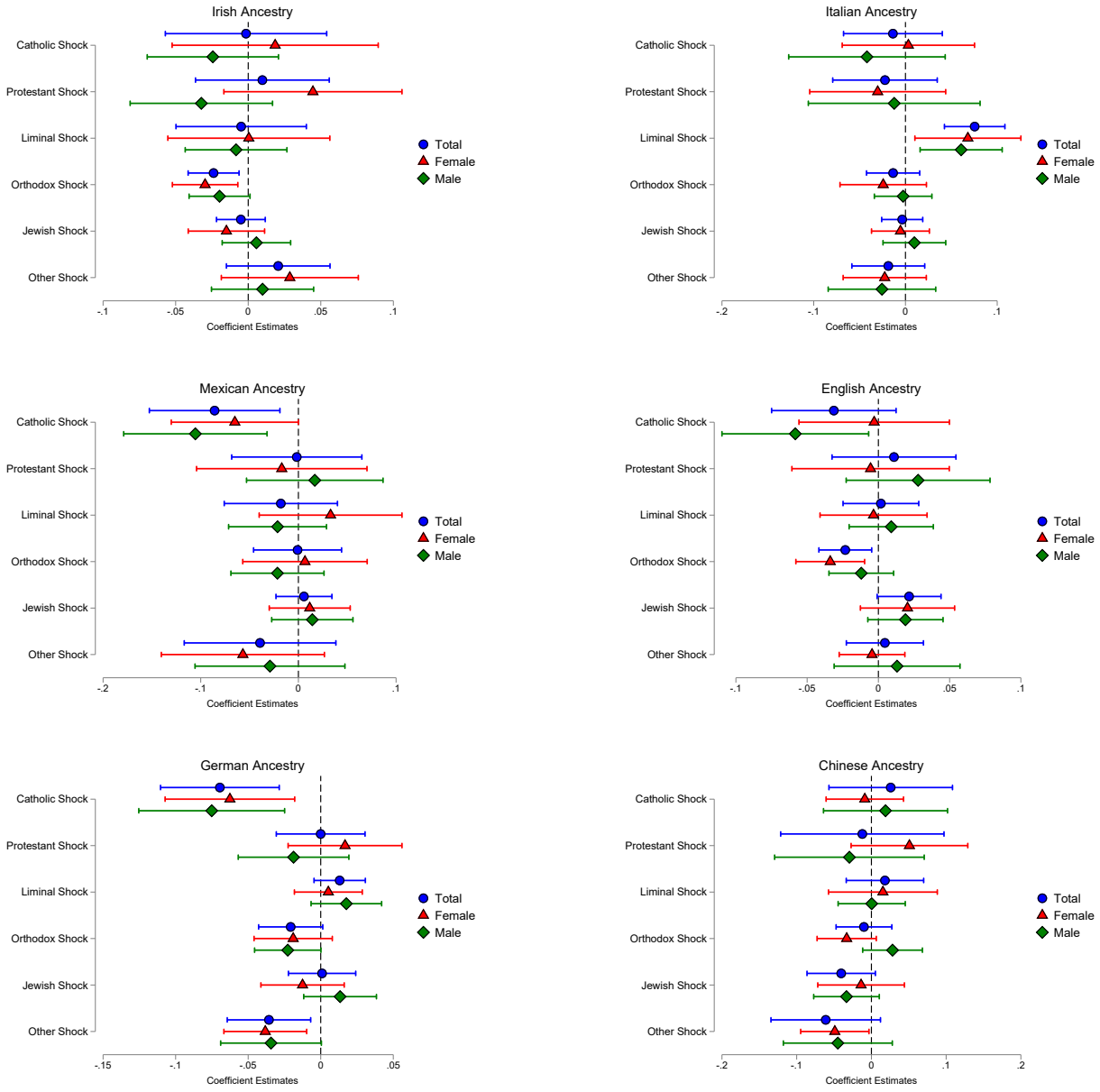


Figure C9: Reduced-Form Regular Education Share (Some College) Estimates by Ancestry

Notes: These figures display the "reduced-form" estimates of the effects of exogenous religiosity shocks on regular education shares of individuals with some college education by ancestry over the 1980-2010 period. Both dependent and independent variables are standardized. We include commuting zone and time fixed effects in all regressions. Whiskers indicate 95% confidence intervals based on standard errors clustered by state.

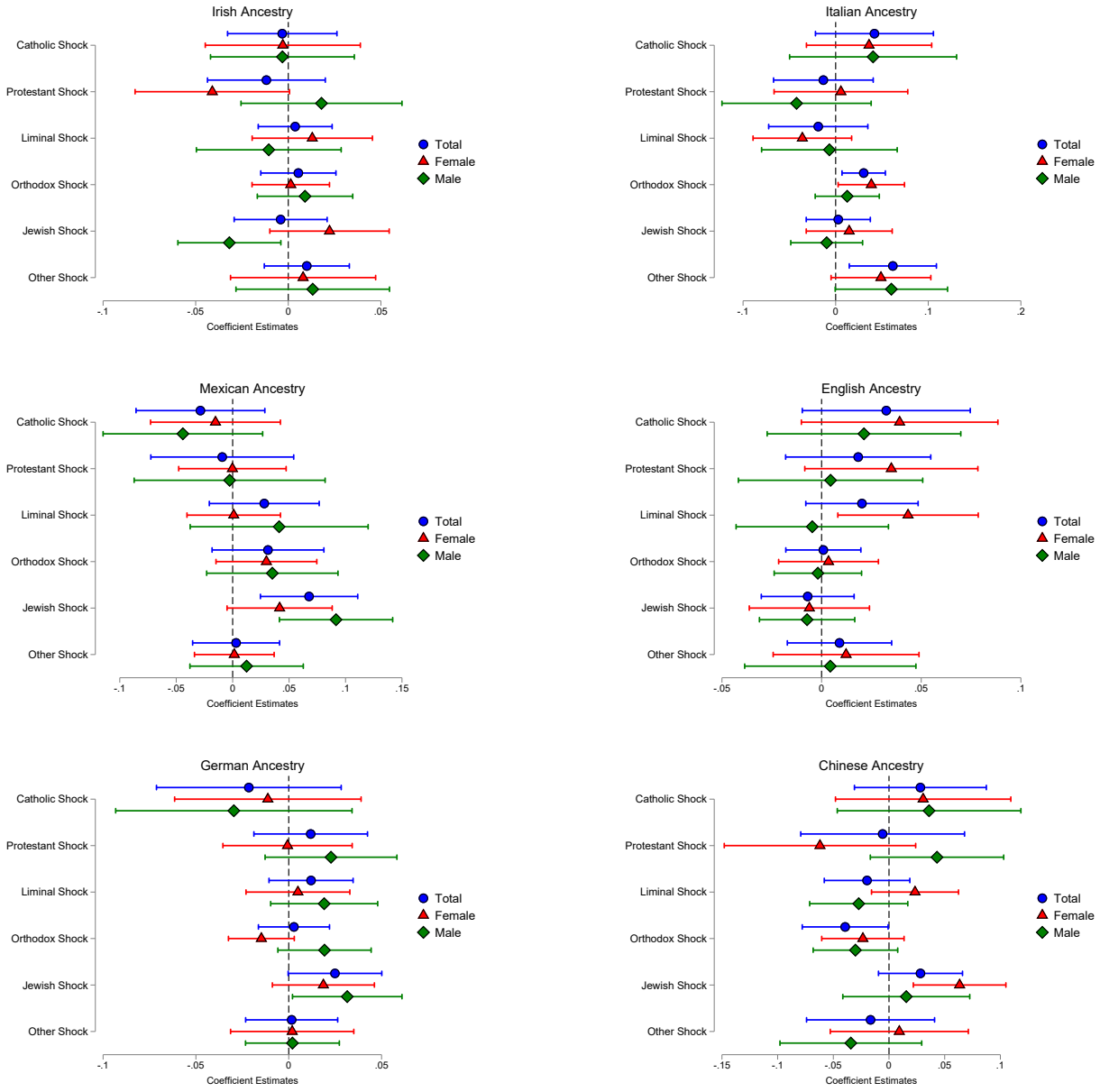


Figure C10: Reduced-Form Regular Education Share (College Degree) Estimates by Ancestry

Notes: These figures display the "reduced-form" estimates of the effects of exogenous religiosity shocks on regular education shares of individuals with a college degree by ancestry over the 1980-2010 period. Both dependent and independent variables are standardized. We include commuting zone and time fixed effects in all regressions. Whiskers indicate 95% confidence intervals based on standard errors clustered by state.

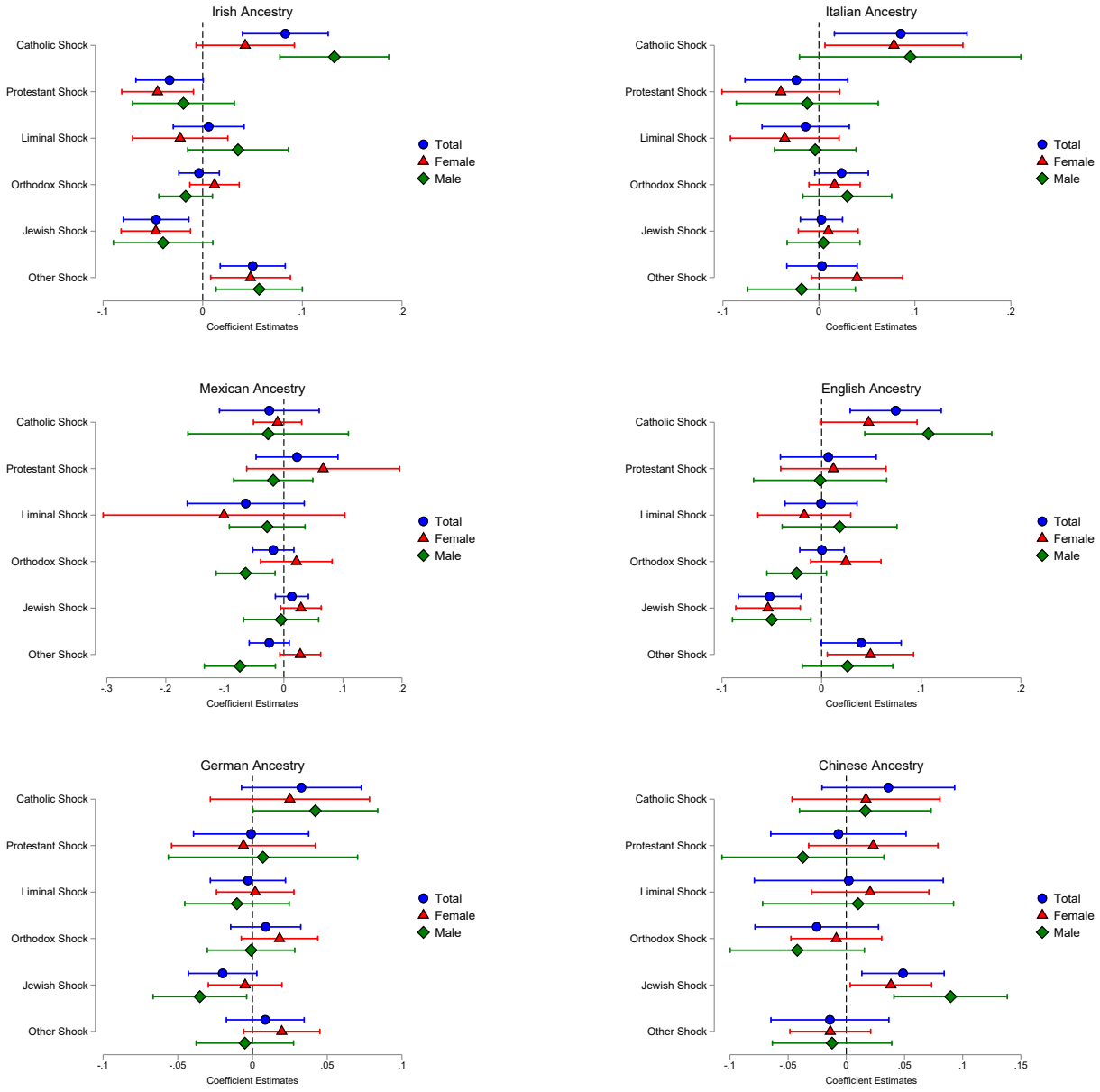


Figure C11: Reduced-Form Regular Education Share (Above College) Estimates by Ancestry

Notes: These figures display the "reduced-form" estimates of the effects of exogenous religiosity shocks on regular education shares of individuals with above college education by ancestry over the 1980-2010 period. Both dependent and independent variables are standardized. We include commuting zone and time fixed effects in all regressions. Whiskers indicate 95% confidence intervals based on standard errors clustered by state.

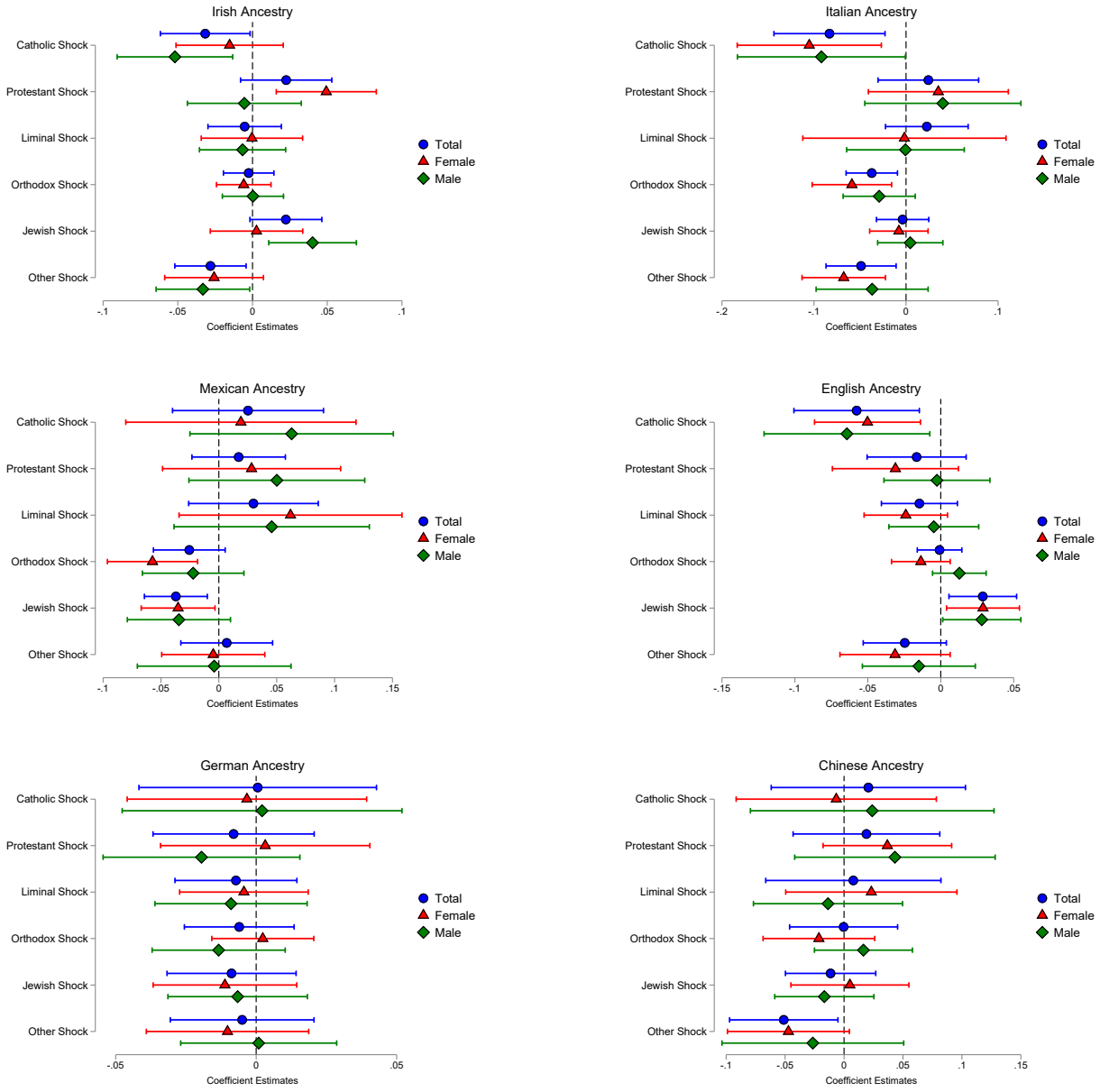


Figure C12: Reduced-Form Additive Education Share (Some College or Less) Estimates by Ancestry

Notes: These figures display the "reduced-form" estimates of the effects of exogenous religiosity shocks on additive education shares of individuals with some college education or less by ancestry over the 1980-2010 period. Both dependent and independent variables are standardized. We include commuting zone and time fixed effects in all regressions. Whiskers indicate 95% confidence intervals based on standard errors clustered by state.

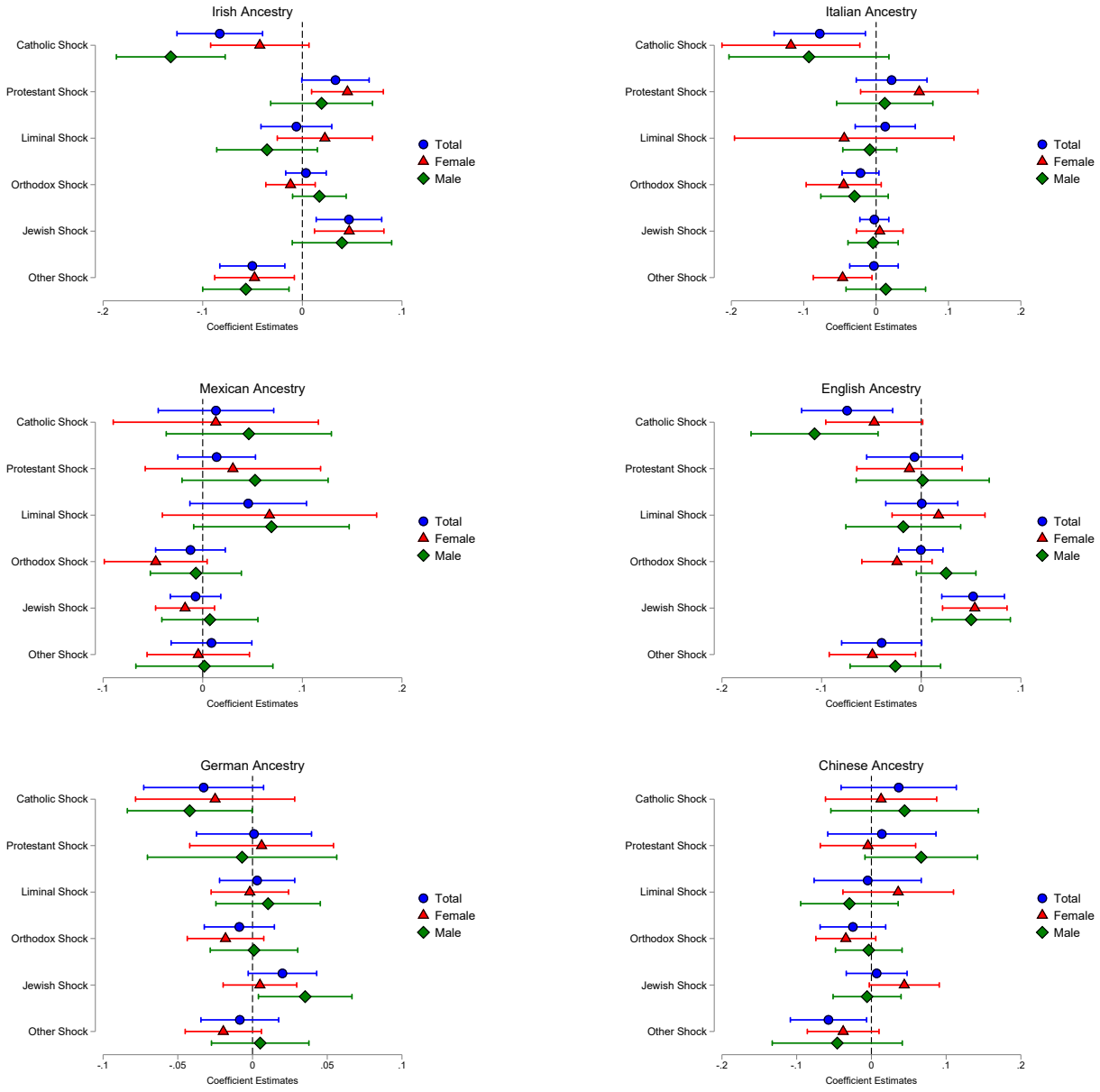


Figure C13: Reduced-Form Regular Education Share (College Degree or Less) Estimates by Ancestry

Notes: These figures display the "reduced-form" estimates of the effects of exogenous religiosity shocks on additive education shares of individuals with a college degree or less by ancestry over the 1980-2010 period. Both dependent and independent variables are standardized. We include commuting zone and time fixed effects in all regressions. Whiskers indicate 95% confidence intervals based on standard errors clustered by state.

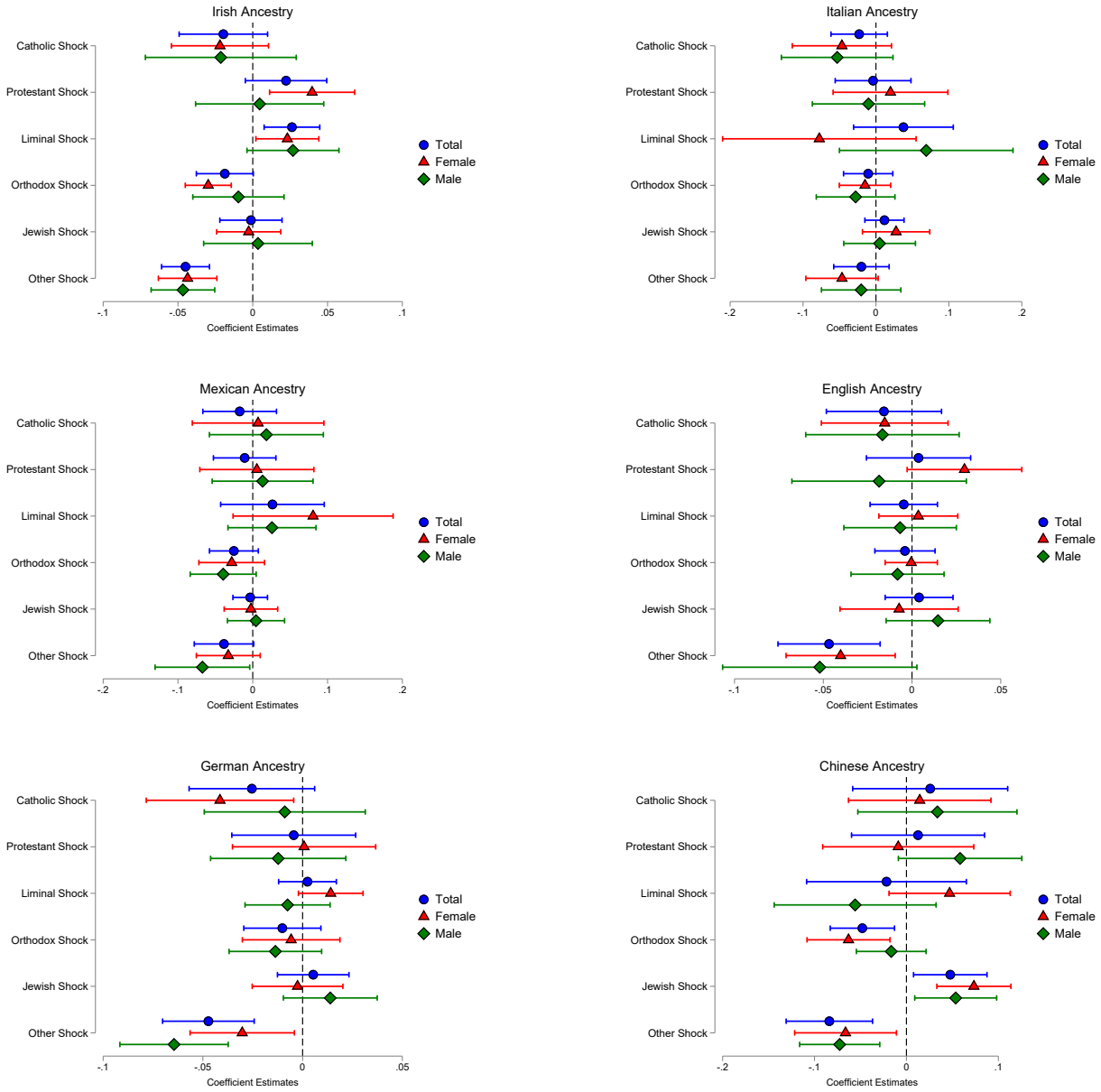


Figure C14: Reduced-Form Marriage Share Estimates by Ancestry

Notes: These figures display the "reduced-form" estimates of the effects of exogenous religiosity shocks on marriage shares by ancestry over the 1980-2010 period. Both dependent and independent variables are standardized. We include commuting zone and time fixed effects in all regressions. Whiskers indicate 95% confidence intervals based on standard errors clustered by state.

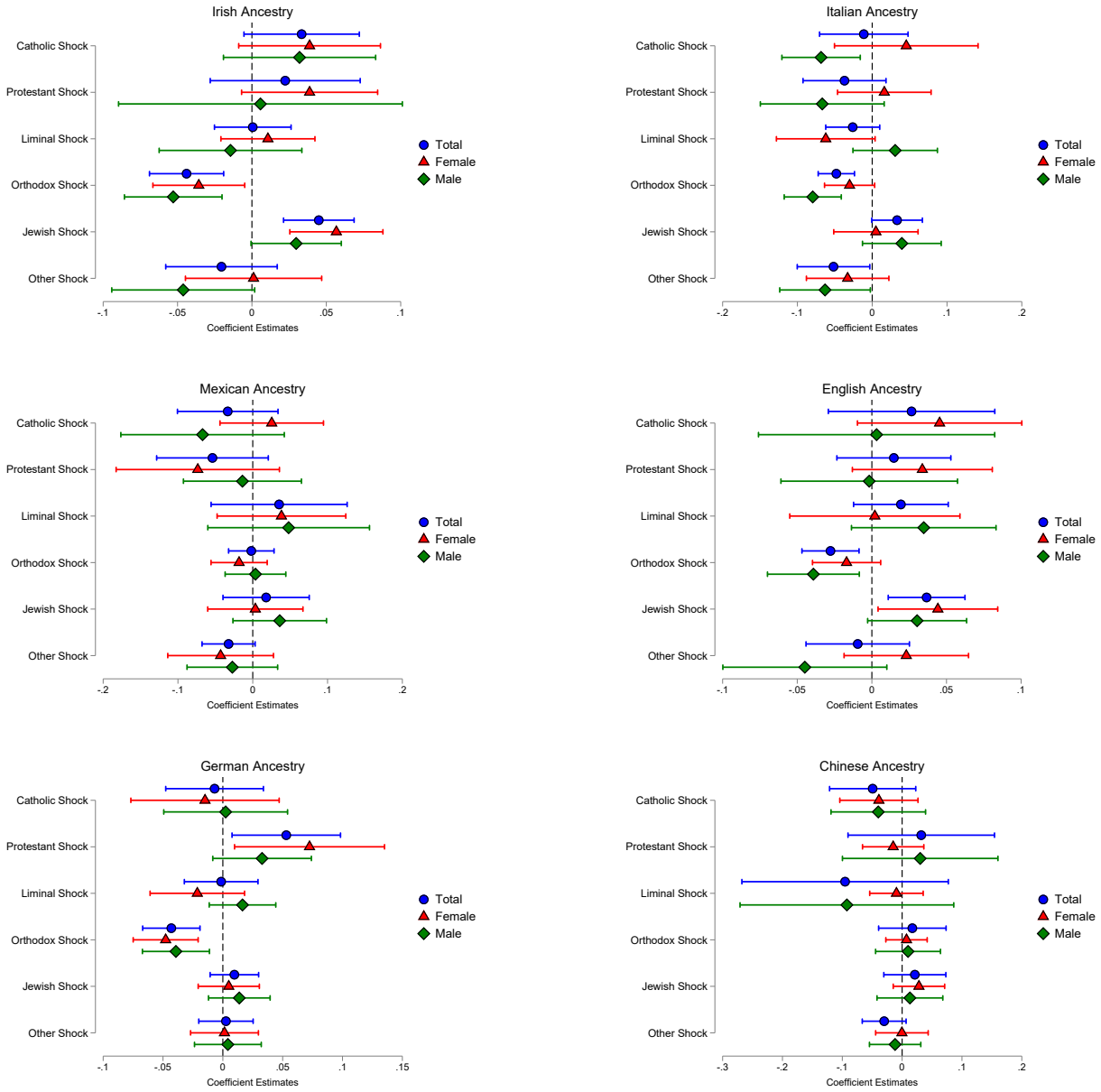


Figure C15: Reduced-Form Divorce Share Estimates by Ancestry

Notes: These figures display the "reduced-form" estimates of the effects of exogenous religiosity shocks on divorce shares by ancestry over the 1980-2010 period. Both dependent and independent variables are standardized. We include commuting zone and time fixed effects in all regressions. Whiskers indicate 95% confidence intervals based on standard errors clustered by state.

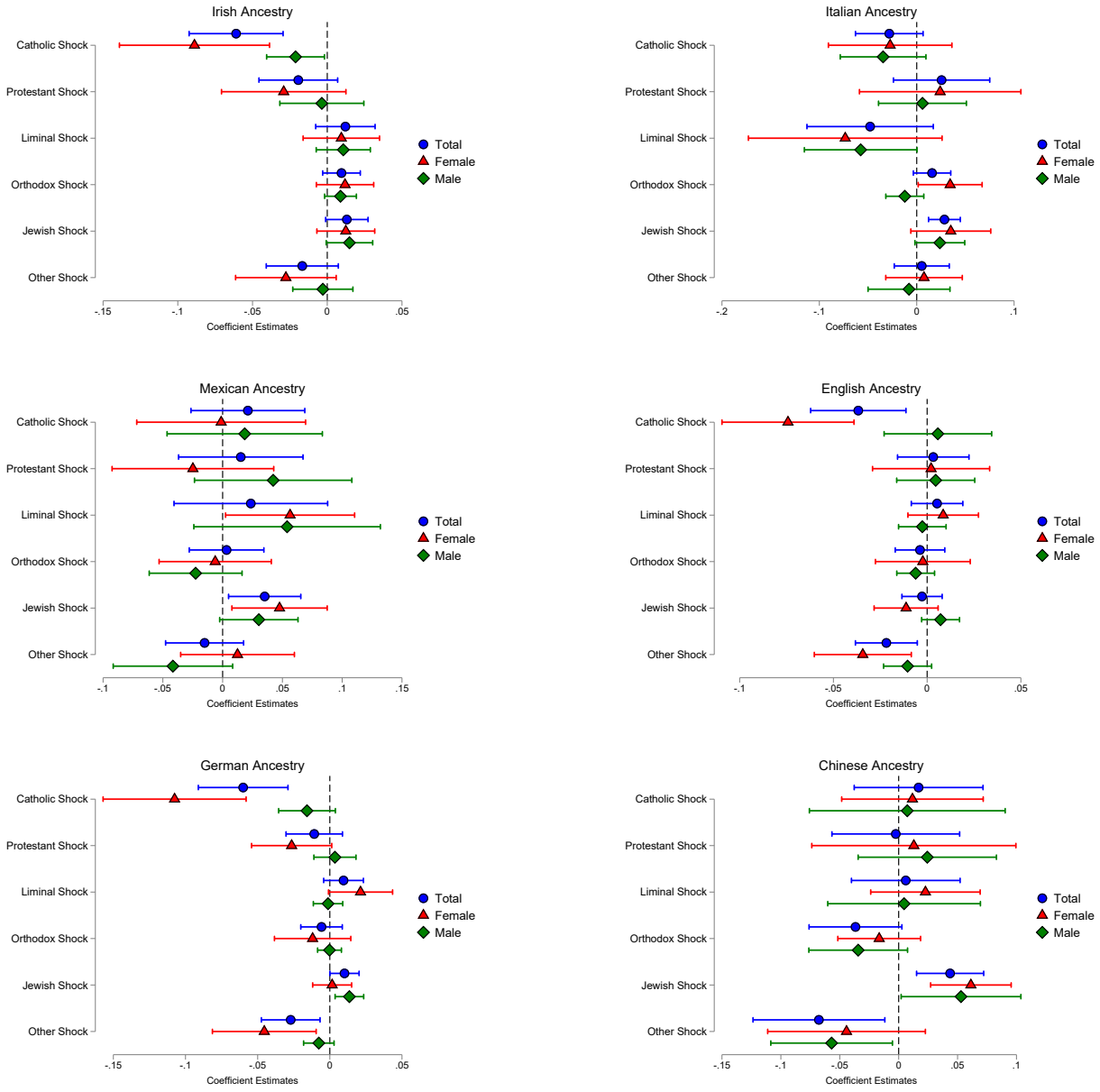


Figure C16: Reduced-Form Estimates of the Shares of the Married & Working by Ancestry

Notes: These figures display the "reduced-form" estimates of the effects of exogenous religiosity shocks on shares of the married and working by ancestry over the 1980-2010 period. Both dependent and independent variables are standardized. We include commuting zone and time fixed effects in all regressions. Whiskers indicate 95% confidence intervals based on standard errors clustered by state.

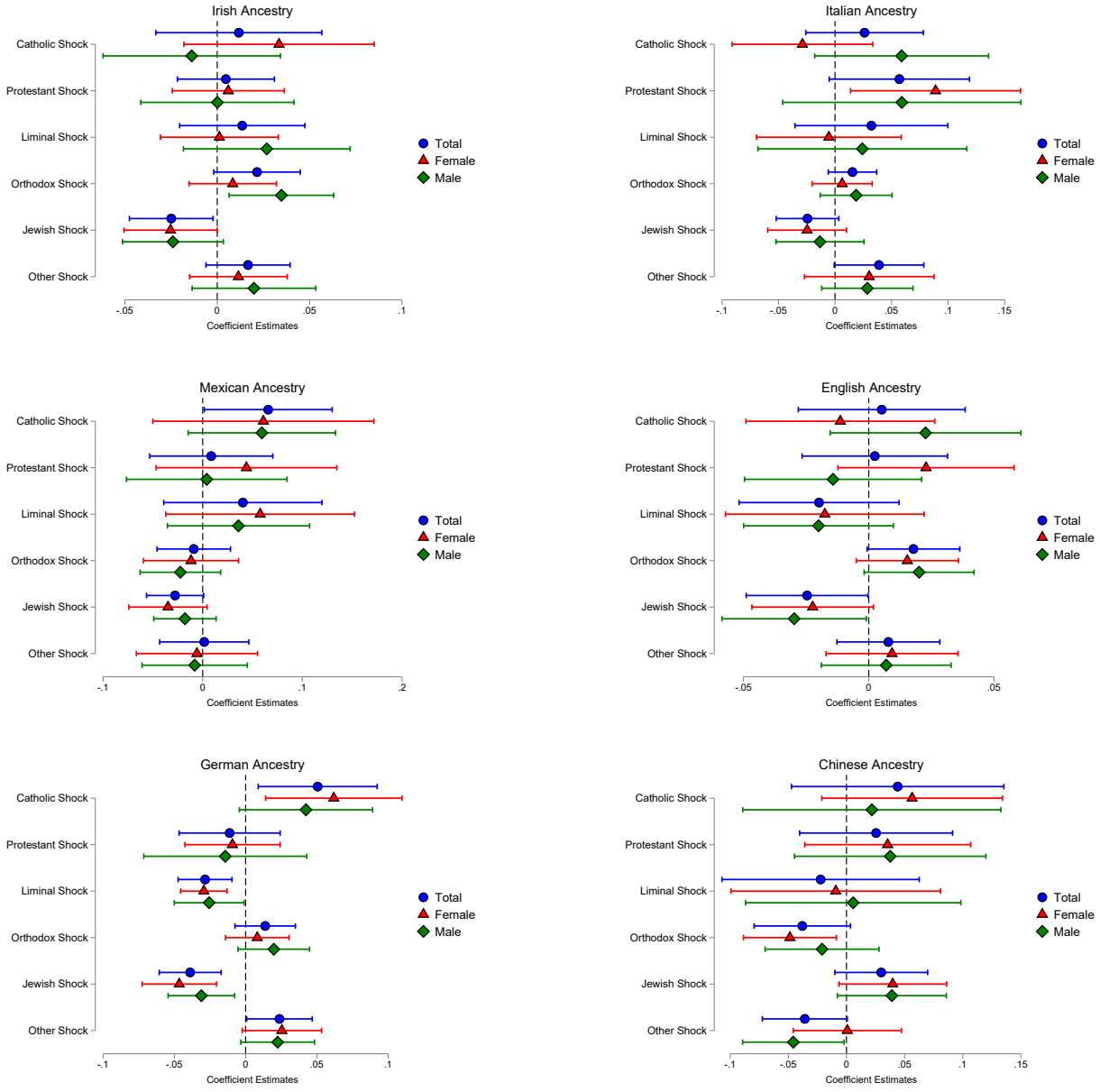


Figure C17: Reduced-Form Fertility Estimates by Ancestry

Notes: These figures display the "reduced-form" estimates of the effects of exogenous religiosity shocks on mean fertility, measured by the average number of children, by ancestry over the 1980-2010 period. Both dependent and independent variables are standardized. We include commuting zone and time fixed effects in all regressions. Whiskers indicate 95% confidence intervals based on standard errors clustered by state.