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a review of recent literature

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June 9, 2008

The Role of Religion in Economic and Demographic Behavior in the United States:
A Review of the Recent Literature*

by

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I am indebted to Alicia Adsera, Carmel Chiswick, Chris Ellison, Jennifer Glass, and Lisa Pearce for valuable comments, and to Ramona Krauss and Zhenxiang Zhao for skillful research assistance.
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The past few years have witnessed substantial progress in our understanding of how religious factors influence economic and demographic factors including education, female employment, fertility, and union formation and dissolution. In this paper I highlight results from recent studies on the role of religion in these and related economic and demographic behaviors, updating the critical literature review presented in an earlier article (Lehrer 2004a). Based on the theoretical framework suggested there, I also offer a reinterpretation of previous findings in the literature and identify promising avenues for future research. The focus of this review is on the United States, but a few closely related studies that employ data from other countries are also included.

A REINTERPRETATION OF PREVIOUS FINDINGS

Analyses to date of how religion influences economic and demographic behavior have generally examined one relationship at a time, e.g., the religion-fertility linkage, the religion-female labor supply linkage, and so on. The broader perspective offered recently (Lehrer 2004a, 2000b), which emphasizes that in understanding any given relationship it is essential to consider the full picture, suggests a reinterpretation of previous findings in the literature and points towards a new direction for future analyses.

In his pioneering research and subsequent work, Goldscheider (1971, 1999, 2006) has made a distinction between fertility differences among religious groups that are attributable to (a) differences in socioeconomic and other demographic characteristics;
and (b) specific teachings of the religion such as norms regarding contraception, and more importantly, broader value orientations and worldviews associated with the religion such as pronatalism or gender inequalities. Influenced by this theoretical framework, the approach that has generally been used in the literature to study how religion affects a particular demographic or economic outcome is to first estimate a zero order regression model, including only religion variables, and then add controls for other demographic and socio-economic factors. For example, Mosher et al. (1992) report results on overall differences in fertility between various religious groups, and the differences that remain after controlling for a series of demographic and socioeconomic variables including education. Yet religious affiliation has a substantial impact on investments in human capital (Chiswick 1988; Lehrer 1999b). Thus when a control for education is added to a fertility regression, the new, smaller coefficients on the religion variables leave out the indirect influence of religion on fertility via its impact on such investments.

This point applies to each of the other realms of economic and demographic behavior. For instance, in their analysis of the relationship between religious intermarriage and marital stability between waves I and II of the National Survey of Families and Households, Call and Heaton (1997) first report a zero order regression, and then another with controls for socioeconomic and demographic variables, including the birth of a child between the waves. The coefficient on the religious intermarriage variable becomes smaller in magnitude and loses all significance in this second regression. But religious intermarriage may lead to a reduced level of investments in spouse-specific human capital, children in particular, thus increasing the probability of marriage.
dissolution (Becker et al. 1977; Lehrer 1996). The small, insignificant coefficient on religious intermarriage in the second regression leaves out this indirect effect.

Future analyses should make a careful distinction between variables that are not influenced by religion, such as age, race, and ethnicity, properly held constant in the second regression, and those that are, such as investments in various forms of human capital, which should be excluded. This second regression would provide information on the total effects of religion. One might be tempted to go on to estimate a third regression including the latter variables so as to distinguish between direct and indirect influences, e.g., in the case of the religion-marital stability linkage discussed above, adding a variable for the birth of a child; however, marital stability and fertility are jointly determined. Thus this third step would generally be possible only when having access to a data set, or combination of data sets, rich enough to contain instruments that could be used to take these endogeneity issues into account.

**RELIGION AND DEMOGRAPHIC OUTCOMES**

An early study by Williams and Zimmer (1990) found that Catholics in Rhode Island had substantially higher fertility than non-Catholics, contrary to results that had begun to suggest an end to high Catholic fertility in the U.S. as a whole (Westoff and Jones 1979). The Williams-Zimmer study was among the first empirical analyses to emphasize the importance of the community context: Rhode Island is different from other states in that Catholics there constitute a majority. Similar analyses would probably reveal that the influence of religious factors on the demographic behavior of Jews in New York or Mormons in Utah differs substantially from that for their counterparts in places
with smaller concentrations of coreligionists. McQuillan's (2004) work is an effort to advance our understanding of why the effects of religion on fertility vary across locations and over time. He presents evidence suggesting that religion matters when the religious institutions are able to articulate norms that are relevant to fertility and have the means to enforce compliance, and when individuals have a strong sense of attachment to their religious community. Berman et al. (2006) also emphasize the critical role of religious institutions, in a different dimension, namely, the extent to which they provide health, education, and other social services that affect the monetary costs of having children.

Fertility in the U.S. is considerably higher than that in most European countries, and indeed contrary to trends in other industrialized nations, the United States appears to be experiencing a baby boomlet; data for 2006 reveal the largest number of births since 1961 (Hamilton et al. 2007). Recent analyses of data for 13 developed countries shows that the ideal family size of individuals who have some religious affiliation is higher than that of their unaffiliated counterparts (Adsera 2006a), and for the case of Spain, a higher level of religiosity is associated with a faster tempo of births and also with higher fertility, by a small margin (Adsera 2006b). Related work for the United States shows that among more religious individuals both current and intended fertility are higher (Hayford and Morgan 2008). Although these results must be interpreted as purely descriptive, because religiosity is measured as of the survey date in the three studies, the results are suggestive of a positive influence of religiosity on fertility. An interesting question is the extent to which the difference in fertility between the U.S. and Europe is related to the much higher levels of religiosity and traditional family orientation that characterize the U.S. Analyses by Frejka and Westoff (2008) show that if the European
countries had the same religiosity levels as the U.S., the fertility of women 18-44 would be higher than current levels by 13-14% (depending on the measure of religiosity used).

With regard to mortality, another major demographic outcome, previous studies have shown that some involvement in religious activities is generally associated with beneficial effects on health and survival rates (Waite and Lehrer 2003). A recent critical literature review concludes that there is strong evidence supporting a connection between public religious attendance and mortality risk, with weaker evidence for the case of private religious activities (Hummer et al. 2004). However, the question of whether or to what extent participation in religious activities causes better health outcomes remains controversial (e.g., see Bagiella et al. 2005, Hummer 2005). Related work on self-reported happiness, a proxy for overall well-being, shows that attendance to religious services can help buffer an individual's happiness against income shocks— a finding that has implications for governmental provision of insurance (Dehejia et al. 2007). Although the linkages between religion and health/ well-being can have other, potentially far reaching economic implications, with few exceptions (Woodberry 2006) they have received virtually no attention in the literature to date. It is noteworthy also that participation in religious activities has been found to promote cooperative behavior, enhancing well-being for the entire community (Sosis and Ruffle 2003).

**RELIGION AND SOCIOECONOMIC OUTCOMES**

Earlier work has discussed possible pathways of causality linking religious affiliation and participation to schooling outcomes and educational attainment, key determinants of economic wellbeing (Chiswick 1988; Lehrer 1999b). Recent research
suggests that religious factors are associated with the level of conflict between the parents (Curtis and Ellison 2002), domestic violence (Ellison et al. 1999), the degree of fathers' involvement with their children (King 2003, Wilcox 2004), the quality of mother-child relations (Pearce and Axinn 1998), and parenting styles and approaches to child discipline (Bartkowski and Wilcox 2000, Bartkowski et al. 2000). These studies suggest a number of other channels, which deserve further attention and quantification, through which religion may affect the home environment, the quality and quantity of informal investments in children's human capital, and educational outcomes.

Substantial progress has been made in recent years in understanding the effects of religion on other socioeconomic outcomes including labor supply, wages, and wealth. With regard to labor supply, although there is heterogeneity within conservative religious groups regarding views on appropriate roles for women and men (Gay et al. 1996), conservative Protestant groups generally provide psychological rewards and institutionalized moral support to women who stay home with their young children, and there is growing evidence of a distinctive pattern of female labor supply behavior among such groups (Lehrer 1995, 1999a; Sherkat 2000; Glass and Jacobs 2005; Glass and Nath 2006). Substantial, related differences in wages have also been found; thus future economic analyses of the male-female wage gap-- its magnitude, causes, and changes over time-- should consider the role of religious factors, including the growth of conservative Protestant denominations in the U.S. (Glass and Nath 2006, Lehrer 2008a).

The possible role of religion on the labor supply behavior of men has received less attention in the literature, as it is unusual for prime-aged men to depart from a pattern of full-time work. Research in progress is examining this issue (Civettini and Glass 2008).
Religion has also been found to have a large impact on wealth, both directly, by defining worthwhile objectives (oriented to this world and/or the afterlife) and providing tools for the development of savings and investment strategies, and indirectly, through its effects on education, fertility, and labor supply behavior (Keister 2003, 2005, 2008a, 2008b). Wealth differentials by religion mirror the patterns that have been found for education and wages: conservative Protestants have the lowest levels of wealth; Jews are at the other end of the spectrum, and mainline Protestants and Catholics are at the center of the distribution.

THE IMPlications OF RELIGIOUS DISSIMILARITY

The most recent study on this topic shows that the prevalence of religious intermarriage in the U.S. has been rising for all groups except conservative Protestants (Sherkat 2004), confirming the patterns found in earlier work (Lehrer 1998). Differences in religious affiliation between husband and wife have repercussions for marital stability, depending in part on the ecumenical/exclusivist nature of the religions (Lehrer and Chiswick 1993) and such differences may also affect fertility and female labor supply (Becker et al. 1977; Lehrer 1995, 1996). Recent studies have found further confirmation for the importance of religious heterogamy for marital stability (Kalmijn et al. 2005), fertility (Adsera 2006b, 2006c), and female labor supply (Glass and Nath 2006).

New findings on the age at marriage–divorce relationship suggest that the implications of religious intermarriage for marital stability (and hence also for fertility and female labor supply) may vary by age at marriage (Lehrer 2008b). In this recent work
I found that women who are unconventional in marrying for the first time in their late twenties or thirties tend to be unconventional also in being more likely to wed partners who have had a previous marriage and who differ from them substantially in age, education, race/ethnicity, and also religion; yet their marriages are very stable. I interpreted these results as reflecting the importance of Valerie Oppenheimer's (1988) “maturity effect”-- the greater emotional maturity that comes with older ages, the better self-knowledge, and the greater ability to assess the likely trajectory of potential partners. A greater appreciation of the benefits from marriage--especially having a partner with whom to have and raise a child--probably plays an important role also. Thus it seems likely that replication of earlier analyses in the literature separately by age at entry into first marriage would reveal that the destabilizing effect associated with religious intermarriage is small or non-existent in the sub-sample of late entrants into first marriage. The potential fruitfulness of this line of investigation is suggested by the current trend towards increasingly delayed entry into first formal union (Lehrer 2008b).

Differences in religion between the parents lead to subsequent religious dissimilarity between at least one parent and the children, generating a potential source of conflict within the family; such intergenerational dissimilarity may arise also in households where the parents share the same religious affiliation, if a child chooses to follow a different path. Sherkat and Darnell (1999) find that conservative Protestant parents are less willing to make investments in higher education for children who do not follow their faith. Recent work has also found an association between parent-child religious dissimilarity and child’s law abiding behavior: when the mother is very religious
and the child is not, or vice versa, there is an elevated risk of adolescent delinquency (Pearce and Hayne 2004).

**TWO WAYS IN WHICH RELIGIOSITY MATTERS FOR DEMOGRAPHIC AND ECONOMIC BEHAVIOR**

Commitment to religion—in its various manifestations, including the strength of religious beliefs and the extent of participation in private and public religious activities—can affect demographic and economic behavior via two major pathways. First, a higher level of religiosity may be expected to accentuate the effects of religious affiliation, e.g., the tendency for conservative Protestant women to display low levels of employment when young children are present in the household should be most pronounced among highly observant conservative Protestant couples. Second, the generally beneficial effects of religiosity on health and well-being can have important implications for economic and demographic outcomes, e.g., children raised with some religious involvement in their lives tend to have better performance in school and to achieve a higher level of educational attainment. Analyses in the literature to date typically consider only one of these two pathways of causality. More recent work emphasizes the importance of taking both into account: the two pathways may exert countervailing influences, and in addition, the effects of religiosity may vary by religious affiliation (Lehrer 2006, 2008a).

The growing body of evidence showing that some involvement in religious activity is associated with better schooling outcomes has implications for the literature on the benefits of attendance to Catholic schools (e.g., Neal 1997; Altonji et al. 2005). Cohen-Zada and Sander (2008) note that most of these studies have failed to consider the
comparatively high level of religiosity among children enrolled in Catholic schools, thus overstating the advantage associated with attendance to such schools with regard to test scores, high-school graduation rates, and other educational outcomes.

Analyses that have found beneficial influences of religiosity on various health and economic outcomes have generally specified religiosity as either a continuous religious participation variable, or a dichotomous variable for high versus low attendance to religious services. Chiswick and Huang (2007) use a set of dummy variables for various levels of participation, thus allowing for the possibility of non-linearities. Based on data from the 2000/2001 National Jewish Population Survey, they find that individuals who attend religious services weekly have significantly higher earnings than those who attend less frequently, supporting the hypothesis that some religious involvement has a beneficial effect on labor market outcomes; however, those who attend religious services more than weekly have lower earnings than those who attend weekly. The authors suggest that beyond a point, time and effort allocated to religious activities begins to crowd out time and effort that could be oriented to labor market activities. They also point out that discrimination in the labor market and lifestyle restrictions associated with the Orthodox denomination may play a role.

Unusually high rates of participation are often associated with extreme positions that may not be conducive to wellbeing, and non-linearities may emerge for this reason as well. A recent study of intimate partner violence in Chile finds that college women raised with some religious involvement in their lives are less likely to experience intimate partner violence, a result traced to their generally healthier, less risky lifestyles. However, there is no protective effect for women raised with high levels of religious participation.
Such women probably include many raised with extreme views and role models, where the sacredness of family unity is seen as foremost even in the face of spousal abuse, and where submissiveness is viewed as a key female quality (Lehrer et al. 2007). Future research should use statistical specifications that allow for possible non-linearities. The key question is whether beyond a certain point, further increases in the level of religiosity have an insignificant or even adverse influence.

Related to this, although the U.S. literature on religion and health overwhelmingly points towards benefits associated with religion, there are exceptions, particularly in the area of sexuality. The abstinence-only programs advocated by conservative religious groups have been found to be ineffective in reducing the risk of pregnancy or sexually transmitted diseases among teens (Kirby 2001, Trenholm et al. 2007), and while most studies have found that high levels of religiosity are associated with delayed sexual debut, results to date on the connection between religiosity and sexual risk behaviors among sexually active adolescents have been mixed (Whitehead et al. 2001). A better, more nuanced understanding of the effects of religion on health and economic outcomes requires further attention to these and other important exceptions.

**SMALLER RELIGIOUS AND ETHNIC/RACIAL GROUPS**

Most of the studies in the U.S. literature on the role of religion in economic and demographic behavior have been based on samples of non-Hispanic whites, with a focus on the large religious groups—Catholics, mainline Protestants, and conservative Protestants. Recent research has begun to analyze samples of racial/ethnic and religious minorities (Warner 2002; Read 2004; Glass and Jacobs 2005; Wilcox and Wolfinger
2006; C. Chiswick 2007, 2008; B. Chiswick 2008). Further research on these smaller groups would be desirable. The "no-religion" group, which grew in size from 8% of the population in 1990 to over 14% in 2001, also deserves additional attention (Kosmin and Keysar 2006).

**MEASUREMENT AND STATISTICAL ISSUES**

Much of what we know about the connection between religion and economic/demographic behavior is based on analyses that use only two indicators of religion: broad categories of religious affiliation and frequency of attendance to religious services, usually measured during childhood. Recent research suggests the fruitfulness of considering more detailed categories of religious affiliation (Barrett et al. 2007); a richer array of dimensions of religion, including beliefs (e.g., in the existence of God, miracles, the inerrancy of the Bible), the salience of religion, and private religiosity (Idler et al. 2003; Kosmin and Keysar 2006; Glass and Nath 2006); and measures of parental religious affiliation and participation (Pearce and Thornton 2007; Branas-Garza and Neuman 2007).

One of the main reservations expressed with regard to results that show beneficial effects of religious participation in various areas is that such effects may be overstated, because the estimates include the influence of unmeasured positive characteristics that are correlated with religiosity (e.g., Freeman 1986; Regnerus and Smith 2005). For example, if parents who encourage their children to attend religious services also tend to encourage them to do their homework and engage in other constructive behaviors, part of the observed positive association between religious participation and educational
outcomes would reflect the influence of these other behaviors. However, to the extent that religious participation is especially beneficial for those who are more vulnerable (for reasons that might include poor health, unfavorable family circumstances, and adverse economic conditions), the estimated coefficients may actually understate the true effect of religiosity (Lehrer 2004c). Thus although the most serious concern expressed in this literature has been that the estimates overstate the effects, it may well be the case that the opposite is true.

Recent work by Barro and McCleary (2003) and Gruber (2005) uses instrumental variables methods to estimate the causal effects of participation in religious activities; additional efforts in this direction would be desirable. This approach offers promise in addressing endogeneity issues in connection with the effects of religious intermarriage (as discussed in Lehrer and Chiswick (1993), the same unobserved factors that lead an individual to enter an interfaith marriage may later influence the stability of the union); with the controversial religiosity-health relationship; and with the linkages between religiosity and each of the economic and demographic behaviors discussed in this article. While the theoretical arguments for these linkages are compelling and the evidence accumulated to date suggests that the magnitudes of the effects are likely not trivial, we need additional research that addresses concerns of reverse causality and confounding factors.
CONCLUDING REMARKS

The studies reviewed here describe the effects of religion on various economic and demographic behaviors, including education, female employment, wealth, fertility, and union formation and dissolution. Causality also flows in the opposite direction, and there is a growing literature that seeks to understand how economic and demographic variables influence the extent and form of involvement in religious activities, the process of switching from one religious affiliation to another, and other dimensions of religious behavior (for some recent contributions, see Branas-Garza and Neuman 2004; Barro and Hwang 2007; Zhai et al. 2007; C. Chiswick 2008; Waite and Lewin 2008). A major challenge that lies ahead is the need to do more to understand and model the reciprocal influences linking religion and economic/demographic behavior. The impressive recent advances in the field reviewed in this article bode well for continued progress.
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