UNR Joint Economics Working Paper Series
Working Paper No. 09-003

Religion, Religiosity and Educational Attainment of Immigrants to the USA

Sankar Mukhopadhyay

Department of Economics /0030
University of Nevada, Reno
Reno, NV 89557-0207
(775) 784-6850 | Fax (775) 784-4728
email: sankarm@unr.edu

November, 2009

Abstract

This paper quantifies the association between religions, religiosity and educational attainment of new lawful immigrants to the U.S. This paper considers a broad set of religions that includes most of the major religions of the world. Using data from the New Immigrant Survey (2003), we show that affiliation with religion is not necessarily associated with an increase in educational attainment. Muslim and "Other religion" immigrants have less education compared to the immigrants who are not affiliated with any religion. However, affiliation with the Jewish religion is associated with higher educational attainment for males. With regard to religiosity, our results show that high religiosity is associated with lower educational attainment, especially for females. We also outline alternative frameworks that provide insight about the mechanisms that link religion and religiosity with educational attainment.

JEL Classification: I21, Z12

Keywords: Immigration; Religion; Religiosity; Education

Religion, Religiosity and Educational Attainment of Immigrants to the USA

Sankar Mukhopadhyay[1]

Abstract: This paper quantifies the association between religions, religiosity and educational attainment of new lawful immigrants to the U.S. This paper considers a broad set of religions that includes most of the major religions of the world. Using data from the New Immigrant Survey (2003), we show that affiliation with religion is not necessarily associated with an increase in educational attainment. Muslim and "Other religion" immigrants have less education compared to the immigrants who are not affiliated with any religion. However, affiliation with the Jewish religion is associated with higher educational attainment for males. With regard to religiosity, our results show that high religiosity is associated with lower educational attainment, especially for females. We also outline alternative frameworks that provide insight about the mechanisms that link religion and religiosity with educational attainment.

Keywords: Immigration, religion, religiosity, education

JEL classification: I21, Z12

[1] Department of Economics, University of Nevada Reno, Reno, NV, 89557. Ph: 7757848017. Fax: 7757844728. Email: sankarm@unr.edu

Religion, Religiosity and Educational Attainment of Immigrants to the USA

1. Introduction

A large body of theoretical and empirical research has investigated the association between religion, religiosity and educational attainment in the U.S. Early studies focused on the difference between Protestants and Catholics, yielding conflicting results (Featherman, 1971; Greely, 1981; Roof, 1979, 1981; Tomes, 1983, 1985). Some of the more recent studies find a negative effect of fundamentalism on educational attainment (Darnell and Sherkat, 1997; Sherkat and Darnell, 1999; Keysar and Kosmin, 1995; and Glass, 1999). Other studies (Freeman, 1986; Regnerus, 2000; Muller and Ellison, 2001) find that participation in religious activities has a positive impact on educational attainment. Lehrer (2004) finds that women who attend religious services frequently during their adolescent years complete one more year of schooling than women who are less observant.

Lehrer (2006) hypothesizes that "*(a) youth who grow up with no religious affiliation (and hence have zero involvement in religious activity, at least in the institutional context) are less likely to graduate from high school than their counterparts who grow up with some affiliation; and (b) among youth raised with some affiliation, a greater level of participation in religious activity during the adolescence years is associated with a higher probability of high school graduation.*" Using data on non-

Hispanic white and black women from the 1995 National Survey of Family Growth she accepts both hypotheses.

This paper re-visits the hypotheses proposed by Lehrer. We use data on new lawful immigrants to the U.S. from the New Immigrant Survey (NIS) 2003. The NIS has two main advantages. First, it allows us to look at a broader set of religions that includes most of the major religions of the world (previous literature has focused primarily on Christianity). Second, it allows us to extend the analysis to a demographic group that has not been addressed in previous studies.

The underlying analytical framework was developed by Becker and Chiswick (1966) and Becker (1967). The starting point in this theory is that the marginal rate of return (MRR) to education derived from each additional dollar spent on education is downward sloping (because of higher opportunity cost at higher levels of education). The optimal amount of education equates the MRR to education with the interest rate at which money is borrowed (or not lent) to invest in education. The cost of funds may be constant or increasing.

Religion or religious activity can shift either the demand curve or the supply curve. Lehrer (2004) considers three cases. First, high-religiosity parents may have a predisposition against scientific methods and secular education (Sherkat and Darnell, 1999). This may increase the perceived cost of funds (because of added utility cost), and thereby reduce optimal educational attainment. Second, a more religious environment may reduce critical inquiry and thinking (Sherkat and Darnell, 1999) in children, thereby reducing their MRR to education and their optimal educational attainment. Third, more religious activity may promote more healthy and constructive behavior in children

leading to an increase in MRR to education, thereby increasing optimal educational attainment. Lehrer (2004) reports evidence consistent with the third mechanism. She finds that the point estimate for MRR to education is not statistically different between the high-religiosity group and the low-religiosity group which suggests that cost of funds is flat in that region.

Our results show that immigrants who are affiliated with religion do not have more schooling compared to immigrants with no religion (except for Protestant and Jewish males). The negative association between religion and educational attainment (after controlling for a rich set of background variables) is strongest for immigrants from the Muslim religion and immigrants who belong to "Other" religion. Also, the negative association between religion and educational attainment is stronger in female immigrants compared to male immigrants. We also find that high religiosity is associated with lower educational attainment. Immigrants with high religiosity have about 0.36 fewer years of education compared to immigrants with low religiosity. Again the negative association is stronger for female immigrants. We also find that MRR to education is higher for low-religiosity immigrants. This result suggests that for this group of immigrants high religiosity shifts the MRR curve to the left (the second mechanism described above). Thus our results are consistent with Sherkat and Darnell (1999) but not with Lehrer (2004, 2006).

2. Data

In this paper we use data from the New Immigrant Survey which provides extensive information on nationally representative new lawful immigrants[2] over the age of 18 (at the time of the interview) who became permanent residents between May and November of 2003. The NIS provides extensive information about new immigrants to the U.S. including education, religion and measures of religiosity. We focus primarily on total years of education (inside and outside the U.S.). An alternative measure, years of education completed before immigrating to the U.S., yields similar results; therefore we discuss the results for total education in this paper[3]. 8573 adult immigrants (out of 12,500 contacted) completed interviews between June 2003 and June 2004, after they achieved permanent resident status[4]. We restrict our attention to immigrants more than 25 years old at the time of the interview when analyzing total education. Out of 8573 respondents we have data on educational outcome and a full set of controls on 5226 respondents.

The NIS data has several advantages compared to data used in previous studies. *First*, it covers broader set of religions compared to existing studies which primarily focused on Christianity. *Second*, it allows us to investigate the association between religion, religiosity and human capital investment decisions of new immigrants to the U.S. Neither of these issues has been addressed before. At the same time the NIS data presents additional challenges because a large part of human capital investment decisions were made in source countries. The institutional structures of different countries are very different and country of origin and religion is correlated. Hence if we do not adequately

[2]U.S. Citizenship and Immigration Service define immigrants as someone who has a Green card (permanent residence). All other foreigners in the U.S. are not considered immigrants.

[3] Results for the second outcome variable are available from the authors on request.

[4] See the survey overview available at http://nis.princeton.edu/overview for a more detailed description of the data.

control for these differences we might interpret country level institutional difference as a religion effect. We further discuss this in the methods section.

2.1 Religion and religiosity of new immigrants

Since the U.S. attracts people from all over the world and from very diverse backgrounds, there is a wide variety in the religion and religiosity of new immigrants. Table 1 presents the religious composition of our sample. Approximately 38% are Catholic, 10.8% Orthodox Christian, 15% Protestant, 7.5% Muslim, 1.5% Jewish, 3.3% Buddhist, 9.1% Hindu, and 2.7% of the respondents have "Other" religions not identified in the data. Finally 11.9% of the respondents reported that they have no religion.

Religiosity is defined as a dichotomous variable. Respondents who participated in a religious activity at least once a month are classified as high religiosity (we use same definition as in Lehrer 2004, 2006)[5]. Respondents were asked how often they attended religious services before and after immigrating to the U.S. The former measure is appropriate in this case for two reasons. *First*, most of the people were interviewed within a few months of obtaining permanent residency (the mean lag was approximately 3 months), so we can safely assume almost all of the educational investment decisions were made before getting permanent residency. Only 20% of respondents in our sample have any U.S. education and even among them a vast majority of their education was obtained before immigrating to the U.S. This implies that religiosity before immigration is a better measure of their religiosity at the time of their investment decision. *Second*, immigrants (especially those who just arrived) may not be aware of the location of preferred places of worship, or places of worship may not be easily accessible to them because of

[5] We experimented a little by altering this definition to check the robustness of our results. All the substantive results reported in this paper are robust to such changes.

information/ transport/ language problems. Hence reported measure of religiosity prior to immigration may be more accurate.

Column 2 of Table 1 shows the percentage of high-religiosity people within each religion[6]. About 71% of individuals who are affiliated with some religion are high-religiosity. The percentage of high-religiosity individuals varies across religions, with Catholics being most religious (82% are high-religiosity) and Buddhists being least religious (36% are high-religiosity).

2.2 Education

Our primary outcome variable is total years of education (TE). We restrict our attention to individuals who are more than 25 years old. Immigrants in this sample average 13.3 years of education. Column 4 of Table 1 presents average years of education by religious affiliation. Years of education vary widely across religious groups. In our sample, Jewish and Hindu immigrants have the most education (16.1 years) and Catholics have the least (11.7 years). Immigrants with no religious affiliation have 14.1 years of education which is just above the mean.

It is important to note that immigrant education levels are not indicative of years of education by religion in their source countries because of selection bias among immigrants. In other words, the descriptive statistics for our sample do not imply that a random sample of Hindus would have more education than Catholics. Instead it means that the Hindu immigrants to the U.S. have more education than the Catholic immigrants to the U.S. This is not surprising given that a lot of Hindu immigrants are highly skilled

[6] In the survey, the question about religiosity was also asked to individuals who do not have any religious affiliation. About 93% of them are low religiosity. In our analysis of religiosity we restrict our sample to immigrants who have some religious affiliation. Our results do not change if we remove this restriction.

professionals from India while a lot of Catholics are low-skilled immigrants from Mexico and other parts of Latin America. Table 2 shows the source continent composition by religion. About 62% of Catholics are from Latin America whereas 95% of Hindu and Buddhist immigrants are from Asia. These numbers suggest that there is a strong correlation between source country/region and religion.

We also examine educational attainment by religiosity. We define individuals to be of high-religiosity if they attended religious services at least once a month. Low-religiosity immigrants have about 1.7 more years of education than high-religiosity immigrants. This relationship holds for all religious groups except Jewish and Buddhist immigrants. Only among Jewish and Buddhist immigrants do high-religiosity immigrants have more education than low-religiosity immigrants but the small sample size for Jewish and Buddhist immigrants makes this observation suspect.

2.3 Other Control Variables

Table 3 presents summary statistics for other control variables used in the regression analysis. Immigrant age in our data shows a large variation. Even though we focus our analysis on people who are more than 25 years old there still may be a cohort effect as younger cohorts may be more educated. To control for this we use cohort dummies. Cohort 1 to cohort 4 represent individuals born before 1950, during the 1950's, during the 1960's, and during the 1970's respectively.

We control for father's education (in years), and self-reported family income of immigrants when they were 16 years old[7]. We also control for visa status of the

[7] In the NIS data, respondents were asked about their family income. The exact question was "*Now I'd like to ask you some questions about when you were a child. Thinking about the time when you were 16 years old, compared with families in the country where you grew up, would you say your family income during*

immigrants: employment principal, diversity principal, spouse of a U.S. citizen, or other. The 'other' category includes people who are refugees or asylees. While visa status should not directly affect educational investment decisions (especially when they are made outside the U.S.), it may be a proxy for unobserved individual level heterogeneity. For example if employment principals have characteristics that increase their MRR then they may chose to invest more in education.

3. Methods

To find the relationship between religion and educational attainment we estimate the following equation:

$$TE_{ic} = X_{ic}\beta + \gamma R_{ic} + \delta H_c + \varepsilon_{ic} \quad (1)$$

Where TE_{ic} is the total years of education of individual *i* from country/region *c*[8]. X_{ic} denotes the set of controls to account for differences in human capital and other observable differences. These are assumed to be exogenous. R_{ic} is a vector of dummies representing various religions. Immigrants who reported that they do not have any religious affiliation are the omitted group. H_c denotes country fixed effects. As noted in the data section, a large part of human capital investment decisions were made in source countries and country of origin and religion is correlated. This implies that it is important

that time was far below average, below average, average, above average, or far above average?" In our regression analysis we use dummies for income status with average being the omitted category.

[8] For some immigrants (about 31% in our sample) origin country is not identified but only origin region is identified. In those cases we use region fixed effects. All our qualitative results however still hold if we use data only on respondents for whom country is identified.

to account for country/region effects in the regression analysis to avoid misinterpreting country effects as religion effects.

To this effect we employ two strategies. First, we use source-country fixed effects in our regression analysis, which implies that the religion effect is identified only through intra-country variation. We also control for a rich set of control variables. However, there is a possibility that the impact of religion is different in different parts of the world. Second, we explore this by running the regressions separately for four source continents (Asia, Europe, Africa, and Latin America). We still use country fixed effects. Ideally one would like to run regressions for each source country, however sample size issues do not permit country level analysis for most countries. We do run the regressions for the two largest source countries: India and Mexico separately. These two countries account for almost 30% of all immigrants in our sample. The sample sizes are still moderately large (664 for Mexico and 589 for India). Most immigrants from India are Hindus while most immigrants from Mexico are Catholics. These Results are discussed below.

The analysis for religiosity was done separately for each religion. Here we estimate the following equation:

$$TE_{icr} = X_{icr}\beta + \gamma D_{irc} + \delta H_c + \varepsilon_{icr} \quad for\ r = 1, \overline{R} \qquad (2)$$

Where TE_{icr} is the total years of education for individual *i* of religion *r* from country/region *c* and $\overline{R}$ is the number of religions. This regression equation is estimated separately for each religion. We control for individual characteristics, family background and use country fixed effects. We also estimate equation (2) with all religions pulled together. In that case we use a religion fixed effect in addition to the country fixed effect.

We discussed in the backgrounds section that religiosity may shift the MRR curve (Becker and Chiswick, 1966; Becker, 1967). To explore whether MRR to education is different for the high-religiosity group and low-religiosity group we estimate wage regressions separately for the high-religiosity and low-religiosity group. We present these results in the results section.

4. Regression results

In this section we present the empirical results. We first discuss the relationship between religion and educational attainment. We find that religious affiliation is not associated with higher educational attainment. Then we discuss the association between religiosity and educational attainment. We find that high religiosity is associated with lower educational attainment.

4.1 Religion

Table 4 presents the estimates from equation (1). The first three columns present the effects of religion on education for the full sample, male, and female sub-samples respectively without any control variables. Individuals not affiliated with any religion are the omitted group. Overall, Catholics, Muslims, and "Other" religious groups have less education than immigrants with no religious affiliation. When we break it down by gender we find that Jewish males have more education than males who are not associated with any religion. On the other hand, Catholic, Orthodox Christian, Muslim, and "Other" religion females have less education than female immigrants with no religion. If we consider all of the religion coefficients (including the ones that are not statistically significant), 17 out of 21 are negative.

Estimation results for the regression equations with the full set of control variables are presented in the last three columns of Table 4. Inclusion of the control variables reduces the size of the religion coefficients. We find that Muslim and "Other" religion is associated with less schooling for females, while Protestant and Jewish religion is associated with more education for males. If we consider all of the religion coefficients (including the ones that are not statistically significant), 15 out of 21 are negative. The sizes of the coefficients show considerable variation. Most of the coefficients that are not statistically significant are small and not economically significant either. However religion has a strong negative association with educational attainment for Muslim women and women from "Other" religion. Association with the Muslim religion reduces educational attainment of women by about 1.3 years and association with "Other" religion reduces educational attainment of women by about 2.1 years compared to women who are not associated with any religion. On the other hand, association with the Jewish religion increases educational attainment of males by about one year compared to men who are not associated with any religion.

Estimation results for regressions that use source continent data subsets (Asia, Europe, Africa, and Latin America) are reported in Table 6 to explore whether results obtained for the full sample are uniform across continents. We still use country fixed effects. The results are presented in the appendix (Tables A1 to A4)[9]. Coefficients for control variables are omitted for brevity. Results for each continent are similar and also similar to the overall pattern. With the full set of controls, Muslim and "Other" religion

[9] We ran the regressions for India and Mexico separately. The results (in the appendix; tables B1 and B2) show that the qualitative results reported above remain unchanged.

have a negative association with educational attainment for women. For example, for Muslim women the coefficient of religion is always large. It is also statistically significant for Asia and Africa, where there are significant number of observations. The same holds for women from "other" religion. On the other hand, association between Jewish religion and educational attainment is not always consistent across continents. However, we are reluctant to read too much into the results for Jewish males given the small sample size (38 for all continents combined).

4.2 Religiosity

Table 5 presents the regression estimates for the association between religiosity and educational attainment. We estimate the effects of religiosity separately for each religion. These estimates are presented in columns (1) through (8). Estimates show that out of 24 religion coefficients (one for males, one for females, and one combined; i.e., 3 each for 8 religions) five are negative and statistically significant (Catholic full sample and females; Orthodox Christian males, Muslim full sample and females), 14 are negative but not statistically significant, and 5 are positive but not statistically significant. If we consider all coefficients (including ones that are not statistically significant) 19 are negative and 5 positive.

Again, most of the coefficients that are not statistically significant are small and not of economic significance either except for women associated with "Other" religion. For this group high religiosity is associated with a reduction of 2.3 years of schooling. Among the coefficients that are statistically significant, estimates show that high religiosity reduces educational attainment by 1.6 years for Muslim women and 0.7 years

for Catholic women. So while the association between religiosity and educational attainment is not very strong (in terms of its economic significance) for the full sample, it has a large negative impact on educational attainment for some subgroups (especially women from certain religions).

The last column shows the results for the full sample (i.e. all religions combined). For this regression we include all immigrants who have some religious affiliation. Our results do not change if we remove this restriction. For these set of regressions we use the full set of controls and religion fixed effects in addition to country fixed effects so that identification is coming from within religion, within country variation. We find that high-religiosity immigrants have 0.36 fewer years of education. When we separately estimate this equation for male and female sub-samples we find that being highly religious reduces educational attainment by 0.22 years for males (although this coefficient is not statistically significant) and reduces educational attainment of females by 0.56 years. These results are not consistent with the results reported by Lehrer (2004, 2006).

Results discussed above suggest that religion and religiosity is negatively associated with educational attainment for most groups. While these results are different from Lehrer (2004, 2006), they are consistent with Darnell and Sherkat (1997), Sherkat and Darnell (1999), Keysar and Kosmin (1995). However, we should be careful when comparing the results from this paper to the earlier literature. As discussed above, the earlier literature focused mostly on different forms of Christianity while we look at a broader set of religions. Secondly our sample is a random sample of immigrants to the U.S., which implies that it is not a representative sample of the religions considered in this paper. We only observe the individuals who chose to immigrate to the U.S. and

hence our sample may be affected by systematic selection. It is not possible to infer from NIS data what the results would be if we have a random sample of individuals from a particular religion as opposed to sample of immigrants from a particular religion.

5. Discussion

It is important to note that OLS results can only confirm association but not a causal relationship. Gruber (2005) used religious market density as an instrument but such a strategy cannot be applied here because we do not have valid instruments. However, the human capital models developed by Chiswick (1988), Lehrer (1999) and discussed in the Background section suggests three mechanisms through which education and religion (religiosity) could be causally related. Next we attempt to confirm such a relationship, albeit in an indirect way. If high religiosity shifts the MRR to education curve to the left then returns to education for low-religiosity group should be equal (if the cost of funds is constant) or higher (if the cost of funds is increasing) than the high-religiosity group. To estimate returns to education we estimate wage equations separately for the high-religiosity group and low-religiosity group. We use a rich set of variables to control for differences in human capital. Human capital acquired abroad and human capital acquired in the U.S enters the wage equation separately to account for differences in returns. Finally we use both country fixed effects and religion fixed effects so that returns are identified from within country and within religion variation. Table 6 presents the estimation results for the full TE sample as well as for male and female subsamples. Indeed we find that return to education is higher (statistically significant) for low-

religiosity group for each sample, consistent with the structural model with increasing cost of funds.

A difference in MRR to education may have an alternative explanation too. Suppose the low-religiosity group has a higher discount rate (because they are less patient) than high-religiosity group and the MRR to education curve for the low-religiosity group is to the right of the high-religiosity group. We know at the optimal choice MRR to education would equal the discount rate. If the MRR for low-religiosity group is far enough to the right then we should observe higher education and a higher rate of return for the low-religiosity group. This is exactly what we observe in the data.

6. Conclusion

This paper quantifies the association between religion, religiosity and educational attainment of new lawful immigrants to the U.S. Compared to the other papers in this area, this paper considers a much broader set of religions including almost all major religions of the world. Using data from the NIS we show that affiliation with religion is not necessarily associated with an increase in educational attainment. Muslim and "other" religion immigrants have less education compared to the immigrants with no religion. However, affiliation with Jewish religion is associated with higher educational attainment for males. With regard to religiosity our results show that high religiosity is associated with lower educational attainment, especially in females.

We also outline alternative frameworks that allow us to interpret the associations in a causal way. We find that MRR to education is higher for the low-religiosity group. This finding is consistent with the prediction of theoretical human capital models that establish

causal relation between religiosity and educational attainment. While this result, along with the rich set of variables that we use as controls, suggests that religiosity may affect educational attainment, we cannot conclusively claim a causal relationship.

References

Becker, G. S. (1967). Human Capital and the Personal Distribution of Income, Woytinsky Lecture No. 1. Ann Arbor, MI, University of Michigan Press.

Becker, G. S. & B. R. Chiswick. (1966). Education and the Distribution of Earnings. *American Economic Review* 56, 358–369.

Chiswick, B. (1988). Differences in education and earnings across racial and ethnic groups: Tastes, discrimination, and investments in child quality. *Quarterly Journal of Economics*, 103(3), 571–597.

Darnell, A., & Sherkat, D. E. (l997). The impact of Protestant fundamentalism on educational attainment. American Sociological Review, 62(April), 306–315.

Featherman, D. L. (1971). The Socioeconomic Achievement of White Religion-Ethnic Subgroups: Social and Psychological Explanations. *American Sociological Review* 36, 207–222.

Freeman, R. B. (1986). Who Escapes? The Relation of Churchgoing and Other Background Factors to the Socioeconomic Performance of Black Male Youths from Inner-City Tracts. pp. 353–376 in Richard B. Freeman and Harry J. Holzer (eds.) *The Black Youth Employment Crisis. Chicago and London*: The University of Chicago Press.

Glass, J. (1999). Growing Up Fundamentalist: Effects on Women's Early Life Course Transitions and Adult Attainment. Presented at the annual meetings of the Population Association of America, New York City.

Gruber, J. (2005). Religious market structure, religious participation, and outcomes: Is religion good for you? *Advances in Economic Analysis and Policy*, 5(1), Article 5. http://www.bepress.com/bejeap/advances/vol5/iss1/art5.

Greeley, A. M. (1981). Catholics and the Upper Middle Class: A Comment on Roof. *Social Forces* 59(3), 824–830.

Keysar, A. A. and B. A. Kosmin. (1995). The Impact of Religious Identification on Differences in Educational Attainment Among American Women in 1990. *Journal for the Scientific Study of Religion* 34(1), 49–62.

Lehrer, E. L. (2004). Religiosity as a determinant of educational attainment: The case of conservative Protestant women in the United States. *The Review of Economics of the Household*, 2(2), 203–219.

Lehrer, E. L. (2006). Religion and high-school graduation: a comparative analysis of patterns for white and black young women. *The Review of Economics of the Household*, 4(4), 277–293.

Muller, C. and C. G. Ellison. (2001). Religious Involvement, Social Capital, and Adolescents' Academic Progress: Evidence from the National Education Longitudinal Study of 1988. *Sociological Focus* 34(2), 155–183.

Regnerus, M. D. (2000). Shaping Schooling Success: Religious Socialization and Educational Outcomes in Metropolitan Public Schools. *Journal for the Scientific Study of Religion* 39, 363–370.

Regnerus, M. (2003). Religion and Positive Adolescent Outcomes: A Review of Research and Theory. *Review of Religious Research* 44(4), 394–413.

Roof, W.C. (1981). Unresolved Issues in the Study of Religion and the National Elite: Response to Greeley. *Social Forces* 59(3), 831–836.

Sherkat, D. E., & Darnell, A. (1999). The effects of parents' fundamentalism on children's educational attainment: Examining differences by gender and children's fundamentalism. *Journal for the Scientific Study of Religion*, 38(1), 23–35.

Tomes, N. (1983). Religion and the Rate of Return on Human Capital: Evidence from Canada. *Canadian Journal of Economics* 16(1), 122–138.

Tomes, N. (1985). Religion and the Earnings Function. *American Economic Review* 75, 245–250.

Table 1: Religion, religiosity, and years of education

	Percentage	Percentage high religiosity	Education (Standard deviation)		
			All	High religiosity	Low religiosity
Catholic	38.0	82.4	11.7 (5.4)	11.7 (5.4)	13.3 (5.3)
Orthodox Christian	10.8	62.6	14.2 (4.1)	13.8 (4.1)	15.0 (4.0)
Protestant	15.0	75.3	14.0 (5.0)	13.7 (5.0)	14.8 (5.1)
Muslim	7.5	48.2	13.6 (4.9)	13.4 (4.9)	13.9 (4.9)
Jewish	1.5	41.8	16.1 (3.4)	17.0 (3.2)*	15.4 (3.4)*
Buddhists	3.3	36.2	13.3 (4.6)	13.5 (3.9)	13.2 (4.9)*
Hindu	9.1	63.4	16.1 (3.6)	15.8 (3.8)	16.4 (3.2)
Other religion	2.7	78.2	11.6 (5.3)	11.5 (5.3)	12.4 (5.1)
No religion	11.9	-	14.1 (5.0)	-	-
All religion	100.0	-	13.3 (5.1)	-	-
All religion except no religion		70.8		12.7 (5.2)	14.4 (4.8)
Number of observations	5226	4605	5226	3260	1345

* Indicates cells with low number of observations (less than 100)

Table 2: Distribution of source continent by religion

	Catholic	Orthodox Christian	Protestant	Muslim	Jewish	Buddhist	Hindu	Other religion	No religion
Latin America	62.2	12.3	33.4	0.5	7.6	1.1	1.7	20.2	29.6
Asia	18.5	9.6	26.6	32.5	0.0	94.3	95.8	48.3	59.9
Africa	4.4	23.5	19.2	45.6	35.4	0.0	1.2	3.0	5.6
Europe	12.9	52.6	12.4	19.9	51.9	2.9	0.0	20.1	2.8
Other	2.0	1.9	8.4	1.5	5.1	1.7	1.2	8.3	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number obs.	1986	567	785	394	79	174	478	142	621

a. cell numbers are percentages. Columns add up to 100%.

Table 3: Summary statistics of control variables

	Percentage/mean	
	All religion	All religion except "no-religion"
Birth cohort		
before 1950's	13.9	14.1
during 1950's	16.6	16.4
during 1960's	31.8	31.5
during 1970's	37.6	38.1
Female	50.1	51.3
Father's education	9.2	9.1
Family income		
far below avg.	08.8	09.2
below avg.	16.0	15.8
above avg.	17.3	17.0
far above avg.	03.6	03.6
Visa category		
Employment principal	20.5	19.8
Diversity visa	14.0	14.8
Spouse of U.S. citizen	16.7	16.3
Number of observations	5226	4605

Table 4: Religious affiliation and total years of education (TE)

	Without controls			With full set of controls		
	Full sample	Males	Females	Full sample	Males	Females
Religion						
Catholic	-0.635	-0.328	-0.932	-0.217	-0.186	-0.268
	(2.59)**	(1.06)	(2.39)*	(1.07)	(0.70)	(0.86)
Orthodox Christian	-0.394	0.030	-0.808	-0.063	0.247	-0.460
	(1.39)	(0.08)	(1.84)	(0.27)	(0.79)	(1.31)
Protestant	0.052	0.428	-0.305	0.253	0.472	0.022
	(0.20)	(1.32)	(0.75)	(1.19)	(1.70)	(0.07)
Muslim	-1.923	-1.019	-2.970	-0.759	-0.244	-1.283
	(6.01)**	(2.52)*	(5.92)**	(2.85)**	(0.70)	(3.19)**
Jewish	0.549	1.662	-0.562	0.709	1.082	0.108
	(1.02)	(2.29)*	(0.70)	(1.59)	(1.72)	(0.17)
Buddhists	-0.813	-0.971	-0.616	-0.257	-0.708	0.205
	(2.02)*	(1.74)	(1.06)	(0.77)	(1.48)	(0.44)
Hindu	0.108	0.409	-0.501	-0.198	0.149	-0.582
	(0.28)	(0.83)	(0.85)	(0.63)	(0.35)	(1.23)
Other religion	-2.731	-1.142	-3.808	-1.288	-0.172	-2.114
	(6.18)**	(1.88)	(5.92)**	(3.51)**	(0.33)	(4.09)**
Birth cohort						
during 1950's				2.030	1.530	2.436
				(11.06)**	(5.78)**	(9.69)**
during 1960's				2.622	1.650	3.470
				(15.40)**	(6.75)**	(14.77)**
during 1970's				2.270	1.059	3.338
				(12.99)**	(4.17)**	(13.97)**
Female				-0.590	-	-
				(5.74)**		
Family income						
far below average				-1.801	-1.545	-2.068
				(9.24)**	(5.70)**	(7.53)**
below average				-0.382	-0.239	-0.590
				(2.64)**	(1.21)	(2.85)**
above average				0.536	0.514	0.659
				(3.80)**	(2.71)**	(3.20)**
far above average				0.014	0.331	-0.330
				(0.05)	(0.88)	(0.86)
Visa category						
Employment visa				1.901	1.906	1.912
				(12.48)**	(9.43)**	(7.69)**
Spouse of US citizen				1.080	0.918	1.160
				(5.87)**	(3.69)**	(4.20)**
Diversity visa				0.927	0.464	1.113
				(5.97)**	(1.90)	(5.49)**
Father's education				0.285	0.267	0.302
				(27.75)**	(18.55)**	(20.97)**
Constant	13.787	14.084	13.503	9.113	9.516	7.122
	(69.32)**	(57.77)**	(41.48)**	(33.45)**	(31.18)**	(20.88)**
Observations	5226	2610	2616	5226	2610	2616

a) Fixed effects regression with region/country fixed effects. Absolute value of t statistics in parentheses.
* significant at 5%; ** significant at 1%
b) Immigrants without any religion are the omitted group.

Table 5: Religiosity and total years of education (estimates for different religions)

	Catholic	Orthodox Christians	Protestant	Muslim	Jewish	Buddhist	Hindu	Other religion	All religions
Males and Females	-0.422 (1.86) [1986]	-0.358 (1.12) [567]	-0.124 (0.35) [785]	-0.916 (2.17)* [394]	0.833 (1.17) [79]	-0.362 (0.56) [174]	-0.157 (0.59) [478]	-0.233 (0.24) [142]	-0.359 (2.79)** [4605]
Males only	-0.175 (0.58) [869]	-0.780 (1.74) [279]	-0.464 (1.00) [399]	-0.247 (0.49) [221]	-0.013 (0.01) [38]	-0.090 (0.09) [72]	0.138 (0.47) [303]	0.578 (0.45) [61]	-0.215 (1.28) [2242]
Females only	-0.716 (2.09)* [1117]	0.040 (0.09) [288]	-0.032 (0.06) [386]	-1.632 (2.27)* [173]	1.242 (1.13) [41]	-0.580 (0.62) [102]	-0.564 (1.14) [175]	-2.302 (1.58) [81]	-0.561 (2.86)** [2363]

a) Each regression includes gender, age categories, father's education, family income categories and visa category dummies. Also included are country/region fixed effects.
b) First row (all religions combined sample) also includes a religion fixed effect.
c) Figures in parenthesis are absolute t-statistics. * significant at 5%; ** significant at 1%
d) Figures in brackets are sample sizes.

Table 6: Wage Regression: dependent variable log(hourly wage).

	High Religiosity Group			Low Religiosity Group		
	All	Male	Female	All	Male	Female
Outside educ.	0.029	0.030	0.025	0.045	0.048	0.038
	(7.05)**	(5.46)**	(4.26)**	(6.81)**	(5.38)**	(3.40)**
U.S. educ.	0.024	0.024	0.020	0.034	0.027	0.036
	(3.31)**	(2.42)*	(1.95)	(3.42)**	(2.05)*	(2.16)*
Outside exp.	0.003	0.004	0.002	-0.000	-0.002	0.003
	(1.81)	(1.92)	(0.83)	(0.05)	(0.63)	(0.68)
U.S. exp.	0.031	0.038	0.019	0.040	0.039	0.043
	(11.88)**	(10.57)**	(4.97)**	(8.86)**	(6.80)**	(5.04)**
Female	-0.164	-	-	-0.230	-	-
	(6.19)**			(5.32)**		
Family income						
far below average	-0.019	0.012	-0.049	0.043	0.123	-0.080
	(0.38)	(0.19)	(0.63)	(0.46)	(1.02)	(0.47)
below average	-0.038	-0.008	-0.074	-0.039	0.078	-0.231
	(1.04)	(0.17)	(1.38)	(0.62)	(0.98)	(2.11)*
above average	0.047	0.075	0.033	0.067	0.129	-0.040
	(1.31)	(1.54)	(0.63)	(1.24)	(1.90)	(0.41)
far above average	-0.018	-0.024	-0.001	-0.019	0.004	-0.042
	(0.26)	(0.27)	(0.01)	(0.16)	(0.03)	(0.19)
English	-0.079	-0.071	-0.087	-0.092	-0.097	-0.102
	(8.18)**	(5.41)**	(6.19)**	(5.93)**	(4.86)**	(3.68)**
Region						
East	0.032	-0.053	0.125	-0.082	-0.128	0.042
	(0.80)	(1.00)	(2.14)*	(1.30)	(1.57)	(0.39)
West	-0.071	-0.120	-0.018	0.005	0.019	-0.021
	(1.64)	(2.00)*	(0.30)	(0.08)	(0.22)	(0.18)
South	-0.034	-0.080	0.005	-0.017	-0.041	0.023
	(0.76)	(1.32)	(0.08)	(0.24)	(0.44)	(0.21)
Father's educ.	0.015	0.019	0.008	0.005	0.007	0.001
	(5.15)**	(5.04)**	(1.86)	(1.00)	(1.05)	(0.10)
Religion						
Catholic	0.170	0.139	0.155	0.144	0.325	-0.037
	(2.21)*	(1.35)	(1.37)	(1.08)	(1.54)	(0.20)
Ortho. Christian	0.052	0.080	-0.005	0.235	0.290	0.231
	(0.61)	(0.69)	(0.04)	(1.63)	(1.32)	(1.09)
Protestant	0.220	0.227	0.166	0.291	0.432	0.197
	(2.75)**	(2.11)*	(1.42)	(2.07)*	(2.01)*	(0.97)
Muslim	-0.002	-0.027	-0.007	0.058	0.159	0.056
	(0.02)	(0.23)	(0.05)	(0.40)	(0.74)	(0.25)
Jewish	0.343	0.392	0.323	0.775	0.927	0.615
	(2.20)*	(1.86)	(1.38)	(4.26)**	(3.41)**	(2.35)*
Buddhists	-0.026	-0.164	0.055	0.160	0.393	0.102
	(0.19)	(0.92)	(0.27)	(0.98)	(1.63)	(0.40)
Hindu	0.274	0.304	0.150	0.209	0.377	-0.425
	(3.20)**	(2.69)**	(1.15)	(1.22)	(1.67)	(1.06)
Constant	2.094	1.851	1.945	2.141	1.746	1.921
	(18.40)**	(13.07)**	(12.81)**	(11.02)**	(6.51)**	(7.31)**
Observations	1439	838	601	632	413	219

a) Regressions Include country/region fixed effect.
b) Absolute value of t statistics in parentheses. * significant at 5%; ** significant at 1%

Appendix 1

Table A1: Religious affiliation and total years of education (TE) for immigrants from Latin America

	Without controls			With full set of controls		
	All	Male	Female	All	Male	Female
Catholic	-0.845	-0.379	-1.403	-0.230	-0.143	-0.554
	(1.78)	(0.64)	(1.73)	(0.61)	(0.30)	(0.88)
Ortho. Christian	-0.687	0.141	-1.532	0.012	0.769	-0.781
	(0.93)	(0.14)	(1.37)	(0.02)	(0.93)	(0.90)
Protestant	-0.240	0.678	-1.109	0.129	0.483	-0.423
	(0.44)	(0.94)	(1.25)	(0.30)	(0.84)	(0.61)
Muslim	-8.834	-3.888	-13.872	-1.298	1.929	-4.504
	(2.52)*	(0.80)	(2.76)**	(0.47)	(0.50)	(1.16)
Jewish	2.313	3.112	1.975	0.892	0.414	0.846
	(1.13)	(0.64)	(0.84)	(0.55)	(0.11)	(0.46)
Buddhists	2.398	-2.888	7.407	-2.371	-6.138	1.574
	(0.69)	(0.59)	(1.48)	(0.86)	(1.58)	(0.40)
Hindu	-2.709	1.612	-4.206	-0.603	0.579	-1.479
	(1.50)	(0.46)	(1.91)	(0.42)	(0.21)	(0.86)
Other religion	0.163	1.435	-0.716	-0.195	-0.024	-0.776
	(0.18)	(1.05)	(0.58)	(0.28)	(0.02)	(0.81)
Observations	1761	796	965	1761	796	965

Table A2: Religious affiliation and total years of education (TE) for immigrants from Asia

	All	Male	Female	All	Male	Female
	Without controls			With full set of controls		
Catholic	0.146	0.766	-0.200	-0.080	0.567	-0.629
	(0.31)	(1.15)	(0.30)	(0.21)	(1.01)	(1.24)
Ortho. Christian	0.745	1.825	0.041	0.335	1.425	-0.554
	(1.16)	(2.02)*	(0.05)	(0.66)	(1.89)	(0.83)
Protestant	1.152	2.573	0.089	0.726	2.069	-0.219
	(2.56)*	(4.34)**	(0.14)	(2.04)*	(4.16)**	(0.45)
Muslim	-1.974	-0.880	-3.355	-1.144	-0.538	-1.555
	(3.85)**	(1.36)	(4.29)**	(2.81)**	(0.99)	(2.61)**
Jewish	-	-	-	-	-	-
	-	-	-	-	-	-
Buddhists	-0.702	-0.673	-0.682	-0.240	-0.558	0.086
	(1.58)	(1.11)	(1.08)	(0.68)	(1.11)	(0.18)
Hindu	0.223	0.755	-0.643	-0.466	0.405	-1.478
	(0.47)	(1.27)	(0.90)	(1.24)	(0.80)	(2.70)**
Other religion	-4.042	-1.862	-5.805	-2.113	-0.389	-3.652
	(6.53)**	(2.32)*	(6.32)**	(4.28)**	(0.58)	(5.21)**
Observations	1775	870	905	1775	870	905

a) Tables A1 and A2 include gender, age categories, father's education, family income categories and visa category dummies. Also included are country/region fixed effects.
b) Immigrants without any religion are the omitted group.
c) Figures in parenthesis are absolute t-statistics. * significant at 5%; ** significant at 1%

Table A3: Religious affiliation and total years of education (TE) for immigrants from Africa

	All	Male	Female	All	Male	Female
		Without controls			With full set of controls	
Catholic	-2.791	-1.444	-4.752	-1.668	-1.387	-2.095
	(2.64)**	(1.30)	(2.24)*	(1.77)	(1.31)	(1.17)
Ortho. Christian	-2.333	-1.400	-3.899	-1.863	-1.283	-3.052
	(2.23)*	(1.27)	(1.87)	(2.00)*	(1.22)	(1.76)
Protestant	-1.755	-1.730	-1.812	-1.250	-1.666	-0.859
	(1.71)	(1.62)	(0.87)	(1.37)	(1.64)	(0.49)
Muslim	-3.116	-2.062	-4.717	-1.997	-1.238	-3.053
	(3.10)**	(1.96)	(2.34)*	(2.21)*	(1.22)	(1.81)
Jewish	-0.713	0.402	-3.099	-1.278	-0.468	-1.813
	(0.58)	(0.31)	(1.21)	(1.16)	(0.38)	(0.86)
Buddhists	-	-	-	-	-	-
	-	-	-	-	-	-
Hindu	-6.102	-6.050	-5.832	-3.788	-4.797	-3.881
	(3.12)**	(2.23)*	(1.88)	(2.17)*	(1.85)	(1.49)
Other religion	-5.077	-0.756	-9.990	-2.604	0.184	-4.841
	(2.90)**	(0.37)	(3.27)**	(1.64)	(0.09)	(1.89)
Observations	616	376	240	616	376	240

Table A4: Religious affiliation and total years of education (TE) for immigrants from Europe

	All	Male	Female	All	Male	Female
		Without controls			With full set of controls	
Catholic	-0.343	-0.691	0.084	0.104	-0.139	0.421
	(0.81)	(1.22)	(0.13)	(0.27)	(0.28)	(0.70)
Ortho. Christian	-0.819	-1.081	-0.479	-0.183	-0.325	-0.067
	(2.26)*	(2.25)*	(0.86)	(0.55)	(0.75)	(0.13)
Protestant	-1.035	-1.248	-0.736	-0.265	-0.296	-0.249
	(2.25)*	(2.13)*	(1.01)	(0.63)	(0.55)	(0.37)
Muslim	-2.613	-1.935	-3.196	-1.260	-0.919	-1.539
	(5.28)**	(2.89)**	(4.34)**	(2.75)**	(1.53)	(2.17)*
Jewish	-0.762	0.625	-1.393	-0.096	1.258	-0.806
	(1.24)	(0.66)	(1.67)	(0.17)	(1.49)	(1.03)
Buddhists	1.855	0.905	5.129	2.550	1.795	5.612
	(1.20)	(0.53)	(1.48)	(1.83)	(1.18)	(1.75)
Hindu	-	-	-	-	-	-
	-	-	-	-	-	-
Other religion	-1.895	0.155	-3.871	0.670	2.245	-1.475
	(1.10)	(0.06)	(1.56)	(0.43)	(1.03)	(0.65)
Observations	910	468	442	910	468	442

a) Tables A3 and A4 include gender, age categories, father's education, family income categories and visa category dummies. Also included are country/region fixed effects.
b) Immigrants without any religion are the omitted group.
c) Figures in parenthesis are absolute t-statistics. * significant at 5%; ** significant at 1%

Table B1: Religious affiliation and total years of education (TE) for immigrants from India

	All	Male	Female	All	Male	Female
	Without controls			With full set of controls		
Catholic	-3.826	-1.875	-5.656	-1.224	0.039	-2.465
	(3.12)**	(1.39)	(2.57)*	(1.26)	(0.03)	(1.51)
Ortho. Christian	-2.692	-1.792	-4.267	-0.921	-0.360	-2.130
	(1.68)	(1.12)	(1.34)	(0.74)	(0.27)	(0.93)
Protestant	-2.728	-0.982	-4.814	-1.059	-0.206	-1.755
	(2.20)*	(0.75)	(2.13)*	(1.09)	(0.19)	(1.05)
Muslim	-5.049	-3.687	-7.017	-0.888	-1.366	1.149
	(4.08)**	(2.89)**	(3.03)**	(0.90)	(1.28)	(0.64)
Jewish	-	-	-	-	-	-
Buddhists	-3.692	-	-4.600	2.689	-	2.673
	(0.96)		(0.97)	(0.88)		(0.73)
Hindu	-2.153	-1.166	-3.875	-0.988	-0.355	-1.769
	(2.07)*	(1.10)	(1.96)	(1.22)	(0.40)	(1.22)
Other religion	-7.192	-3.996	-9.995	-3.174	-1.273	-3.816
	(6.48)**	(3.42)**	(4.87)**	(3.57)**	(1.27)	(2.43)*
Observations	589	355	234	589	355	234

Table B2: Religious affiliation and total years of education (TE) for immigrants from Mexico

	All	Male	Female	All	Male	Female
	Without controls			With full set of controls		
Catholic	-1.653	-1.362	-1.343	-0.738	-0.533	-0.983
	(1.75)	(1.23)	(0.76)	(1.06)	(0.65)	(0.79)
Ortho. Christian	-2.355	-3.681	-1.016	-1.346	-1.714	-0.723
	(1.66)	(1.86)	(0.45)	(1.30)	(1.17)	(0.46)
Protestant	-0.162	2.114	-0.573	0.544	1.645	-0.216
	(0.13)	(1.21)	(0.29)	(0.61)	(1.26)	(0.15)
Muslim	-	-	-	-	-	-
Jewish	-	-	-	-	-	-
Buddhists	-	-	-	-	-	-
Hindu	-	-	-	-	-	-
Other religion	-0.394	-1.014	0.413	-0.574	-2.156	-0.055
	(0.27)	(0.44)	(0.18)	(0.53)	(1.26)	(0.04)
Observations	664	260	404	664	260	404

a) Tables B1 and B2 include gender, age categories, father's education, family income categories and visa category dummies.
b) Immigrants without any religion are the omitted group.
c) Figures in parenthesis are absolute t-statistics. * significant at 5%; ** significant at 1%