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The Impact of Religiosity on Personal Financial Decisions

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Abstract

This paper explores the impact of religiosity on personal financial decisions. Specifically, I examine whether people in areas of high religious social norms are likely to have higher credit scores and lower levels of credit card debt, foreclosures, and bankruptcies. Prior research suggests a link between individual religiosity, ethical behavior, and risk aversion with results that show how these attributes influence managerial actions. I find that these links also influence personal financial behavior in that individuals located in areas with higher levels of religiosity take less risk and display higher ethical standards. My results suggest that individuals residing in areas with strong religious social norms tend to have significantly higher credit scores as well as significantly lower levels of credit card balances, foreclosures, and bankruptcies compared to those individuals residing in areas with lower levels of religiosity.

Introduction

[1] The purpose of this paper is to explore whether religiosity is a factor associated with personal financial behavior. Specifically, I examine whether religious social norms are associated with levels of credit card debt, credit scores, foreclosures, and bankruptcies for individuals. Prior research has extensively examined the influence of religion on personal behavior (Lehrer; Iannaccone) and there is a growing body of literature on how religious attitudes affect firm behavior (Baxamusa and Jalal; Grullon, Kanatas and Weston; McGuire, Omer and Sharp; Hilary and Hui). However, the extent to which religiosity is associated with personal financial behavior is less understood. This line of research is important because

inappropriate personal financial practice seems endemic in American society as evidenced by excessive debt, poor credit scores, foreclosures, and bankruptcy. Yet not all people behave this way. Some people live in cultures and communities with incentives and attitudes that promote good financial decision making.

[2] Social norms and religion have been shown to have important influences on human behavior (Cialdini and Goldstein; Sunstein). More specifically, prior research has linked religiosity with individual decision in areas such as marriage (Lehrer and Chiswick), divorce (Heaton and Pratt), suicide (Bainbridge), and drug and alcohol consumption (Cochran and Akers). The notion that religion plays a central role in economic development and decision making has also been established. This research dates back to Max Weber. Reflecting on the rise of Northern Europe, he suggests that one of the cultural consequences of the Reformation was the creation of a strict moral code based on abstention and individual self-improvement that created fertile ground for the rise of capitalism.

[3] Later research has also confirmed that religion affects managerial actions in the corporation. Hilary and Hui find that firms located in counties with higher levels of religiosity display lower degrees of risk exposure and lower investment rates. Dyreng, Mayer, and Williams find that religiosity is associated with lower levels of financial reporting irregularities. Baxamusa and Jalal show that capital structure decisions are impacted differently depending whether a firm is located in a county with a Catholic or a Protestant majority. McGuire et al. show that religiosity reduces financial reporting irregularities and abnormal accruals and increases real earnings management.

[4] Other research has demonstrated that culture and religion are key social mechanisms for influencing beliefs and behaviors (Kennedy and Lawton) and religious individuals are more ethically inclined (Conroy and Emerson; Longenecker, McKinney and Moore) and have higher levels of risk aversion (Hilary and Hui; Osoba; Diaz; Miller, and Hoffman). There are a variety of definitions for culture, but for this paper the definition provided by Guiso, Sapienza, and Zingales is most useful. They state, "Culture is those customary beliefs and values that ethnic, religious and social groups transmit fairly unchanged from generation to generation"(23).

[5] In keeping with this definition of culture and prior research, I focus on the religiosity of an area as a proxy for community cultural values and test whether these values affect the personal financial choices of the people who live in the community. In the rest of the paper, I develop the hypothesis and research design, discuss the data and methodology utilized in the study, show the descriptive statistics and the results of the tests that link religiosity to personal finance decisions, and offer my conclusions.

Hypothesis Development and Research Design

[6] As previously noted, there is ample evidence in the literature supporting a positive relationship between religiosity and ethical behavior and between religiosity and risk aversion at the firm as well as individual level. Although, the focus of this study is to establish a link between religiosity and personal financial behavior, the two previously established relationships may provide a theoretical underpinning for the focus of this study. An explanation for the religiosity and ethical behavior correlation could be the pervasive

teachings on personal ethical behavior in both the Jewish and Christian Bibles and the Muslim Quran. For example, "You shall not steal; you shall not deal falsely; you shall not lie to one another" (Leviticus 19:11); "A false balance is an abomination to the Lord, but a just weight is his delight" (Proverbs 11:1); "Learn to do good; seek justice, correct oppression; bring justice to the fatherless, plead the widow's cause" (Isaiah 1:17; all scripture from the English Standard Version of the Bible). Examples in the Quran that speak to ethical behavior are: "Let not your wealth divert you from the remembrance of Allah" (63:9); and "Woe to every slanderer who amasses wealth and considers it a provision against mishap" (104:1, 2).

[7] As to the theory that might explain the correlation between religiosity and risk aversion and resultant lower levels of debt and other measures of financial distress, Hilary and Hui suggest that anxiety may play a key role in explaining this relationship. They cite Miller and Hoffman and Miller who note that many classic studies of religion (Homans; Malinowski) emphasize a link between religion and the fear of uncertainty. The classic studies suggest that religion is sought by risk-averse individuals who are trying to reduce the anxiety about risk and uncertainty in their lives.

[8] Also, Christian and Islamic scriptures espouse prudence and speak against carrying debt. For example, "The wicked borrows but does not pay back, but the righteous is generous and gives" (Psalms 37:21); "Pay to all what is owed to them: taxes to whom taxes are owed, revenue to whom revenue is owed, respect to whom respect is owed. Owe no one anything, except to love each other, for the one who loves another has fulfilled the law" (Romans 13:7, 8). The Quran states, "If the debtor is in distress, then let there be postponement until he is in ease" (2:280).

[9] Given that religious individuals are more ethically inclined and risk averse, I argue that people located in areas in which the population is more religious should therefore be more ethically inclined and risk averse. From this, I then argue that higher ethical behavior and higher risk aversion should be reflected in personal financial decisions, resulting in higher credit scores and lower levels of credit card debt, foreclosures, and bankruptcy. The null hypothesis is that there is no relationship between religiosity and the dependent variables. Although the hypotheses are stated as one-sided, a two-tailed test is appropriate in this study to test for the possibility of a relationship in both directions. These expectations are stated formally in the following hypotheses:

H1: All else equal, individuals located in areas with strong religious social norms are expected to carry lower levels of credit card debt.

H2: All else equal, individuals located in areas with strong religious social norms are expected to have fewer credit cards.

H3: All else equal, individuals located in areas with strong religious social norms are expected to have higher credit scores.

H4: All else equal, individuals located in areas with strong religious social norms are expected to have lower levels of foreclosures.

H5: All else equal, individuals located in areas with strong religious social norms are expected to have lower levels of personal bankruptcies.

Data and Methodology

[10] The following section describes the data and methodology utilized to test these hypotheses. To measure the strength of religious social norms, I use a database similar to that utilized by McGuire et al. This database contains information on over 610,000 responses to interviews conducted in the United States by the Gallup organization during 2008 and 2009. Using a process developed by McGuire et al., the measure of religiosity for this study is based on responses to the following three questions relating to religion asked by Gallop: (1) are you affiliated with a particular religion?; (2) is religion important in your daily life?; and (3) do you attend religious services weekly? The strength of each county's religious social norm is estimated based on the percentage of randomly selected adults residing in the county who responded affirmatively to each of the three questions. Factor analysis is then used to combine the three dimensions of religiosity into one measure of the overall religiosity of each county. Finally, the counties are grouped into Metropolitan Statistical Areas (MSAs) and aggregated into an MSA-level score of religiosity. Although religiosity score data is available on over 200 MSAs, I identify 120 unique MSAs for which data is available on several dependent variables discussed in the next paragraph.

[11] The dependent variables used in this study to represent personal financial behavior are credit scores, credit card balances, credit cards per individual, foreclosures, and bankruptcies. Each of these is a proxy for financial distress and/or poor financial decision making on the part of individuals. The credit score variable is comprised of VantageScores for the year 2010 obtained from Experian Information Solutions. The data used are the average VantageScore for individuals in each of 120 unique MSAs used in the study. VantageScore is the name of a credit rating product that is produced by three major credit bureaus (Equifax, Experian, and TransUnion) and indicates the likelihood that an individual will be timely on loan payments and is based on factors such as payment history, credit utilization, credit balances, and length of credit history.

[12] Experian also provided the 2010 data for bank card balances and credit cards per individual in each of the 120 MSAs. The bank card balance figure is the average balance held by individuals on all bank cards in their possession. The credit cards per individual figure are the number of credit cards possessed by individuals holding at least one bank card. Foreclosure data for each of the 120 MSAs was provided by Realty Trac and indicates the foreclosures per capita on personal residences in each MSA during the year 2010. Finally, bankruptcy data was provided by the American Bankruptcy Institute and indicates the number of personal bankruptcy per capita in each of the 120 MSAs for the year 2010.

[13] This study utilizes data from the year 2010 for 120 unique MSAs for which a religiosity measure is available as well as the necessary dependent variable as described above. Due to the relatively small sample size it is possible that a few outliers are driving the relationship between religion and economic behavior. After inspecting the data, no outlier problems were found. To test for the influence of religiosity on personal financial behavior, the following model is used:

$$\text{Dependent Variable} = \beta_0 + \beta_1 \text{ Religiosity} + \beta_2 \text{ Population} + \beta_3 \text{ Income} + \beta_4 \text{ Education} + \beta_5 \text{ Politics} + \beta_6 \text{ Age} + \beta_7 \text{ Minority} + \varepsilon$$

Variables are defined as follows:

Dependent Variables	Defined in detail above
Religiosity	A measure of the strength of each MSA's religious social norms, derived from 3 data points as described above
Population	The U.S. Census Bureau's estimate of population for each MSA (in millions)
Income	The U.S. Census Bureau's estimate of the medium household income in each MSA (in ten thousands)
Education	The percentage of the adult population in each MSA with a college degree from responses to the Gallup data
Politics	The percentage of the adult population in each MSA that is affiliated with the Republican party, from Gallup data
Age	Average age of residents in each MSA, from Gallup data
Minority	The percentage of racial minorities in each MSA, from Gallup data

[14] The model includes controls for demographic characteristics that have been shown to be correlated with religious participation and could be correlated with the dependent variables. The control variables are each MSA's population, median household income, education level, political affiliation, age, and racial composition. The purpose is to ensure that the religiosity measure captures the effect of religious participation, as opposed to simply being correlated with the other demographic characteristics. I have no strong predictions concerning the effect of these control variables, although I expect that income, education level, and age will be negatively associated with personal debt levels, bankruptcies, and foreclosures and positively associated with credit score levels.

Descriptive Statistics and Results

[15] Table 1 compares the top and bottom 10 Metropolitan Statistical Areas (MSAs) based on the composite measure of religiosity derived from the Gallup data. Except for Salt Lake City, all of the top 10 most religious MSAs are located in the South and Southeastern United States. The least religious MSA in the sample is San Francisco, and the other bottom 10 are also located on the west coast of the United States as well as Honolulu and Las Vegas.

[16] Table 2 presents the univariate descriptive statistics for the MSA-level demographic variables (Population, Income, Education, Politics, Age, Minority). The data shows that the average MSA in this sample is a population of 1,675,000, a mean household income of $64,830 per year, close to 46 percent college graduates, approximately 28 percent affiliated with the Republican Party, average age of about 49, and average minority population of

about 24 percent. Except for population, all of the means and medians of the variables are relatively close.

Table 1. Comparison of the Top and Bottom Ten MSAs as Ranked by the Average Religiosity Scores Derived from the Three Gallup Measures

Most Religious	Least Religious
1 Salt lake City, UT	111 Los Angeles, CA
2 Jackson, MS	112 Honolulu, HI
3 Birmingham, AL	113 Las Vegas, NV
4 Baton Rouge, LA	114 San Diego, CA
5 Memphis, TN	115 Boston, MA
6 Greenville, S.C.	116 Portland, OR
7 Nashville, TN	117 Seattle, WA
8 Oklahoma City, OK	118 San Jose, CA
9 Dallas, TX	119 Madison, WI
10 Atlanta, GA	120 San Francisco, CA

*Table 2. Univariate Descriptive Statistics**

Variable	Mean	Std Dev	Median
Credit Scores	741.54	118.86	734.53
Card Balances	4153.7	372.94	4263.4
Cards/Individual	2.37	.418	2.23
Foreclosures	.0018	.00045	.0019
Bankruptcies	5.87	1.24	5.95
Rel_Affiliation	84.31	5.27	85.18
Rel_Important	65.13	10.83	66.39
Rel_Weekly	34.65	7.18	34.32
Population	1.675	2.14	0.78
Income	6.483	1.18	6.15
Education	45.87	8.72	45.27
Politics	28.16	6.58	29.33
Age	49.33	2.79	50.18
Minority	23.81	11.43	21.64

*Comparisons in Table 2 are based on the sample of 120 Metropolitan Statistical Areas (MSAs) for which there is sufficient data to include them in subsequent tests. Credit Scores is the VantageScore for individuals in each MSA. Card Balances is the dollar balance held by individuals on all bankcards in their possession in each MSA. Cards/Individual is the

number of credit cards held per individual in each MSA. Foreclosures are the foreclosures per capita on personal residences in each MSA. Bankruptcies are the number of personal bankruptcies per capita in each MSA. Rel Affiliation is the proportion of Gallup respondents in each MSA that indicate they are affiliated with a religion. Rel Important is the proportion of Gallup respondents in each MSA that indicate religion is important in their life. Rel Weekly is the proportion of Gallup respondents in each MSA that indicate they attend religious services at least weekly. Population is the estimate of population in each MSA. Income is the estimate of the medium household income in each MSA. Education is the percentage of the adult population with a college degree in each MSA. Politics is the percentage of the adult population that is affiliated with the Republican Party in each MSA. Age is the average age of residents in each MSA. Minority is the percentage of racial minorities in each MSA.

[17] Table 3 presents the correlations between the previously defined demographic characteristics of the MSAs that are possible determinants of religious participation at the individual level. They are population, income, education, politics, age, and minority. The data shows low correlations between religiosity and the demographic variables, thus minimizing the multicollinearity problem; correlations among the demographic variables are also low.

Table 3. Correlations between Demographic Characteristics of the MSAs

	Rel	Pop	Inc	Edu	Pol	Age	Min
Religiosity	1.00						
Population	-0.11	1.00					
Income	-0.07	0.14	1.00				
Education	-0.05	0.19	0.37	1.00			
Politics	0.14	-0.10	0.05	0.03	1.00		
Age	-0.06	0.07	0.18	0.28	0.04	1.00	
Minority	-0.13	0.24	-0.08	-0.12	-0.16	-0.06	1.00

[18] Table 4 presents the correlations between Religiosity and the five variables measuring personal financial behavior (Credit scores, Card balances, Number of cards, Foreclosures, and Bankruptcies). Except for number of cards, the results confirm my hypotheses that high religiosity is negatively correlated with card balances, foreclosures, and bankruptcies and positively correlated with credit scores. Individuals located in more religious SMAs appear to take fewer financial risks as evidenced by lower credit card balances and higher credit scores along with fewer foreclosures and bankruptcies. In addition, the dependent variables are not highly correlated. This suggests that these measures capture different dimensions of personal financial behavior and mitigates the risk that the results may be due to an omitted variable in any given regression. Multivariate tests are also used to provide more reliable inferences about the relationship among the variables.

Table 4. Correlation between Religiosity and Dependant Variable Indicating Personal Financial Behavior

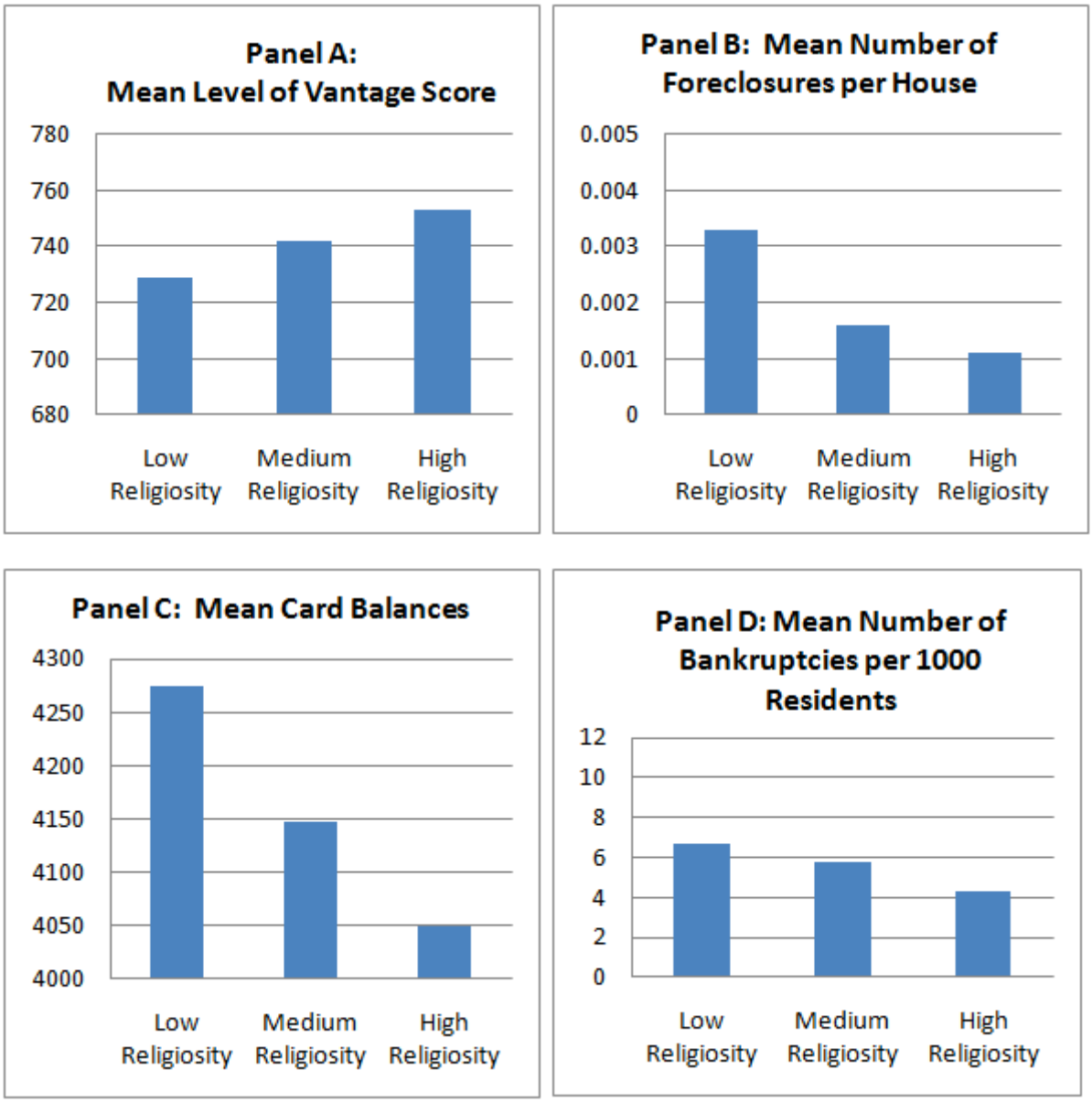
Variable	(1)	(2)	(3)	(4)	(5)	(6)
(1) Religiosity	1.00					
(2) Credit Scores	0.09	1.00				
(3) Card balances	-0.15	-0.11	1.00			
(4) No. of Cards	0.05	0.18	0.06	1.00		
(5) Foreclosures	-0.21	-0.24	0.08	0.05	1.00	
(6) Bankruptcies	-0.12	-0.16	0.14	0.12	0.15	1.00

[19] Figure 1 presents another univariate test of the hypothesis that religiosity mitigates risky personal financial behavior. The results are similar to those found in Table 4. In this test, four of the dependent variables samples are partitioned into terciles based on the MSA-level religiosity metric previously defined. I then compute the mean levels of vantage scores, foreclosures per house, card balances, and bankruptcies per 1,000 residents. Figure 1 shows a clear pattern. Individuals residing in MSAs with a low level of religiosity demonstrate personal financial behavior that would more likely be considered risky. For the vantage score, card balance, foreclosure, and bankruptcy measures, a monotonic increase in the evidence of risky behavior is found as religiosity declines. These are only univariate tests, but they are indicative of a general pattern in the data that suggests at least a strong unconditional correlation between religiosity and risky personal financial behavior.

[20] Table 5 presents the results of several multivariate tests that investigate the relationship between religiosity and personal financial behavior. The five models in Table 5 use OLS regression with credit scores, card balances, number of cards, foreclosures, and bankruptcies as the dependent variables representing personal financial behavior. In the first model, a significant positive relationship is found between Religiosity and Credit Scores after controlling for the population, income, education level, political affiliation, age, and racial composition of each MSA. More specifically, the results show that a one standard deviation increase in the measure of religiosity is associated with a 15 percent increase in credit scores.

[21] In the second, fourth, and fifth models, a significant negative relationship is found between Religiosity and Card Balances, Foreclosures, and Bankruptcies also controlling for various demographic variables. And, the economic magnitude is also significant in that a one standard deviation increase in the measure of religiosity is associated with a 9 percent reduction in card balances, a 12 percent reduction in foreclosures, and a 16 percent reduction in bankruptcies. These findings corroborate the univariate results reported in Table 4 and support the hypotheses made earlier in this study that individuals located in areas with strong religious social norms are expected to carry lower levels of credit card debt and have higher credit scores and fewer foreclosures and bankruptcies. The only hypothesis not supported is the one where it was expected that higher religiosity would lead to fewer numbers of cards per individual.

Figure 1. The Effect of Religion on Personal Financial Behavior



[22] Although the relationship between religiosity and foreclosures came out as hypothesized, it is recognized that a foreclosure may be due to factors other than whether an individual is acting ethically or unethically. Foreclosures may be the result of a number of factors that are not under the complete control of the individual, such as local housing markets, neighborhood change, lending policies, and local politics.

[23] Looking at the control variables across the different estimation tests, the results are generally consistent with expectations. Income, education, and age are consistently and positively associated with credit scores and negatively associated with foreclosures and bankruptcies. And, in models one, four, and five a number of these associations are

statistically significant. Except for minority, the other demographic variables have a significantly less consistent effect across the estimation procedures and in most cases have no statistical significance. The R-square is reasonably high in the different regressions generally in the 20% to 30% range. Also, since Table 3 shows low correlations between Religiosity and the demographic variables, potential multicollinearity problems should be minimal.

Table 5. Religiosity and Personal Financial Behavior

Variables	Dependent Variables				
	(1)	(2)	(3)	(4)	(5)
	Credit Scores	Card Balances	Number of Cards	Foreclosures	Bankruptcies
Religiosity	1.82***	-2.13***	0.24*	-2.37***	-1.81**
	(3.77)	(3.68)	(1.72)	(-3.48)	(-2.21)
Population	0.297	0.177	0.339	-0.228*	-0.541*
	(0.73)	(0.35)	(0.42)	(-1.82)	(-1.68)
Income	0.472*	0.655	0.311	-0.287**	-0.541*
	(1.89)	(0.71)	(0.35)	(-2.52)	(1.83)
Education	0.083**	0.132	0.073	-0.062	-0.112*
	(2.12)	(0.82)	(0.44)	(-0.93)	(-1.89)
Politics	0.499	-1.27*	0.219	-0.421	0.262
	(1.29)	(-1.93)	(0.40)	(-0.28)	(0.31)
Age	0.127*	0.083	0.152	-0.161**	-0.074
	(1.98)	(0.61)	(0.39)	(2.57)	(-0.82)
Minority	-0.152**	0.084	0.043	0.079*	0.119
	(2.68)	(0.81)	(0.37)	(2.13)	(1.28)
Observations	120	120	120	120	120
R-square	0.28	0.31	0.21	0.17	0.22

Two-tailed t-statistics are reported in parentheses below coefficient estimates.
***, **, * indicate statistical significance at the 1%, 5%, and 10% level

Conclusion

[24] Prior research has shown that firms located in areas of high religiosity exhibit managerial behavior that is less risky and more ethical in areas such as investment choice, capital structure, and financial reporting. This study extends this line of research and investigates the influence of religious social norms on personal financial behavior as indicated by credit scores, credit card balances, foreclosures, and bankruptcies. The expectation is that individuals located in areas of strong religious norms will be more risk averse and ethical in their personal financial matters and thus have higher credit scores, carry less card debt, and have fewer foreclosures and bankruptcies.

[25] Using a measure of religiosity extracted from interviews conducted by the Gallup organization, the results of this study confirm these expectations. Specifically, after controlling for several demographic variables, the results show a significant positive relationship between religiosity and credit scores and significant negative relationships between religiosity and credit card balances, foreclosures, and bankruptcies.

[26] This study makes several contributions. The primary contribution to the literature is the finding that religiosity is associated with personal financial decisions thus extending the extensive literature on the influence of religion on personal behavior. This study also extends the growing body of literature that links religiosity to managerial behavior, bringing the effects of risk aversion and business ethics to the level of personal financial decisions. Finally, this study adds to the theoretical framework supporting a link between religiosity and personal financial behavior. Thus, this study should be of interest to financial advisors, investors, and other participants in the personal financial services industry.

Bibliography

Bainbridge, William S.

1989 "The Religious Ecology of Deviance." *American Sociology Review* 54: 288-95.

Baxamusa, Mufaddal, and Abu Jalal

2010 "Does Religion Affect Capital Structure?" Working paper, University of St. Thomas and Suffolk University.

Cialdini, Robert B., and Noah J. Goldstein

2004 "Social Influence: Compliance and Conformity." *Annual Review of Psychology* 55: 591-621.

Cochran, John K., and Ronald L. Akers

1989 "Beyond Hellfire: an Exploration of the Variable Effects of Religiosity on Adolescent Marijuana and Alcohol Use." *Journal of Research in Crime and Delinquency* 26: 198-225.

Conroy, Stephan J., and Tisha L. N. Emerson

2004 "Business Ethics and Religion: Religiosity as a Predictor of Ethical Awareness Among Students." *Journal of Business Ethics* 50, 4: 383-96.

Diaz, Joseph D.

2000 "Religion and Gambling in Sin-City: a Statistical Analysis of the Relationship Between Religion and Gambling Patterns in Las Vegas Residents." *Social Science Journal* 37: 453-58.

Dyreng, Scott D., William J. Mayew, and Chris D. Williams

2010 "Religious Social Norms and Corporate Financial Reporting." Working paper, Duke University and The University of Michigan.

Grullon, Gustavo, George Kanatas, and James Weston

2010 "Religion and Corporate (Mis)Behavior." Working paper, Rice University.

Guiso, Luigi, Paola Sapienza, and Luigi Zingales

2006 "Does Culture Affect Economic Outcomes?" *Journal of Economic Perspectives* 20: 23-48.

Heaton, Tim B., and Edith Pratt

1990 "The Effects of Religious Homogamy on Marital Satisfaction and Stability." *Journal of Family Issues* 11: 191-207.

Hilary, Gilles, and Kai W. Hui

2009 "Does Religion Matter in Corporate Decision Making in America?" *Journal of Financial Economics* 93: 455-73.

Homans, George

1941 "Anxiety and Ritual: The Theories of Malinowski and Radcliffe-Brown." *American Anthropologist* 43: 164-72.

Iannaccone, Laurence

1998 "Introduction to the Economics of Religion." *Journal of Economic Literature* 36: 1465-96.

Kennedy, Ellen J., and Leigh Lawton

1998 "Religiousness and Business Ethics." *Journal of Business Ethics* 17, 2: 163-75.

Lehrer, Evelyn L

2004 "Religion as a Determinant of Economic and Demographic Behavior in the United States." *Population and Development Review* 30, 4: 707-26.

Lehrer, Evelyn L., and Carmel Chiswick

1993 "Religion as a Determinant of Marital Stability." *Demography* 30: 385-404.

Longenecker, Justin G., Joseph A. McKinney, and Carlos W. Moore

2004 "Religious Intensity, Evangelical Christianity, and Business Ethics: An Empirical Study." *Journal of Business Ethics* 55, 4: 373-86.

Malinowski, Bronislaw

1925 "Magic, Science and Religion." Pp. 19-94 in *Science, Religion and Reality*. Edited by James Needham. New York: Macmillan.

McGuire, Sean T., Thomas C. Omer, and Nathan Y. Sharp

2010 "The Impact of Religion on Financial Reporting Irregularities." Working paper, Texas A&M University.

Miller, Allen S.

2000 "Going to Hell in Asia: the Relationship Between Risk and Religion in a Cross-Cultural Setting." *Review of Religious Research* 40: 5-18.

Miller, Allen S., and John P. Hoffman

1995 "Risk and Religion: an Explanation of Gender Differences in Religiosity." *Journal for the Scientific Study of Religion* 34: 63-75.

Osoba, Brian J.

2003 "Risk Preferences and the Practice of Religion: Evidence From Panel Data." Working paper, West Virginia University.

Sunstein, Cass R.

1996 "Social Norms and Social Rules." *Columbia Law Review* 96, 4: 903-68.

Weber, Max

1905 *The Protestant Ethic and the Spirit of Capitalism*. London: Allen & Unwin.