RISK PREFERENCES AND GENDER DIFFERENCES IN RELIGIOUSNESS: EVIDENCE FROM THE WORLD VALUES SURVEY

JEREMY FREESE
UNIVERSITY OF WISCONSIN-MADISON

REVIEW OF RELIGIOUS RESEARCH 2004, VOLUME 46:1, PAGES 88-91

Gender differences in risk preferences have been proposed to explain a large part of the widespread gender difference in religiousness. Using the same data and models that were used for a recent test of more general claims about the relationship between risk preference and religiousness, this study tests the more specific, but more provocative, idea that risk preferences account for a substantial portion of the gender difference in religiousness. The data are from the 1990-3 World Values Survey for the United States and Italy. Across four indicators of religiousness, analyses reveal no substantially consequential or statistically significant change in the estimated effect of gender on religiousness when risk preferences are added to regression models. In other words, while the data do support the notion that risk preferences are related to religiousness, they give no indication that this relationship accounts for the observed gender difference in religiousness.

A clever and intriguing recent hypothesis in the sociology of religion is the idea that irreligiousness is analogous to other forms of risk-taking and so variation in risk preferences play an important role in understanding variation in religiousness. This conjecture, both in its original (Miller and Hoffman 1995) and subsequent (Miller and Stark 2002) formulations, has been regarded as a strong candidate for explaining the greater religiousness of women in many regions of the world. In data on American high school seniors, Miller and Hoffman (1995) found that a measure of "adventure seeking" (which they use as a proxy for "risk preference") accounted for about 40% of the gender difference in religiosity.

Miller (2000) offered an elaboration of the risk preference theory through an application that compares several countries in the 1990-93 World Values Survey (hereafter WVS). The paper reported that risk preferences was associated with religiousness only in the examined countries whose predominant religious tradition emphasizes religious exclusivity, which was predicted by the theory. At the same time, Miller (2000) also notes that the study addresses some of the methodological weaknesses of the original Miller and Hoffman (1995) study. Importantly, in addition to not relying on only data from high school students, the data also contained a seemingly superior measure of risk preference.

The availability of this better measure suggests an excellent opportunity for further examination of the more provocative thesis that risk preferences account for a substantial part of the gender difference in religiosity, using the same models and data as Miller (2000) and the same analytic strategy of Miller and Hoffman (1995). The WVS models estimated by Miller (2000) can be first estimated excluding the risk preference measure. Then, the risk preference measure may be included and the magnitude of change in the relationship between gender and religiousness may be measured. The availability of a superior measure of the

key theoretical concept of risk preference in the WVS data suggests that, if anything, one might reasonably expect *stronger* results than the original Miller and Hoffman study. That is, if a weaker measure of risk preference was responsible for resolving almost half of the gender difference, then it seems at least conceivable that a superior measure of risk preference might resolve most or all of it. This brief note reports the results of this test for the United States and Italy, the two predominantly Christian nations examined in Miller (2000).[1]

RESULTS

The WVS is a well-known study designed to facilitate cross-national comparison and employs random or quota sampling designs in each of its participant nations. Again, even without considering its cross-national component, one might expect these data to provide a superior test than that used in the original Miller and Hoffman (1995) paper, because the

Table 1.
Gender differences in religious participation in the United States and Italy (1990-93 World Values Survey)

	Model *without* risk preference	Model *with* risk preference	% change	N
United States				
Attendance at religious services	.270 (.113)	.252 (.113)	6.7%	1429
Importance of religion if one's life	.198 (.048)	.187 (.047)	4.5%	1431
R finds comfort and strength in religion	.399 (.137)	.365 (.139)	8.5%	1383
R reports affiliation with a religious denomination	.299 (.130)	.292 (.130)	2.3%	1438
Italy				
Attendance at religious services	.649 (.101)	.658 (.101)	-1.3%	1380
Importance of religion if one's life	.357 (.051)	.361 (.051)	-1.1%	1390
R finds comfort and strength in religion	.846 (.128)	.864 (.130)	-2.1%	1274
R reports affiliation with a religious denomination	.561 (.153)	.571 (.154)	-1.8%	1397

Models also include controls for age, education, and income. All gender coefficients are significant at least at $p < .05$. No changes in coefficients across models are significant.

data used by Miller and Hoffman consisted exclusively of high school seniors rather than a general population sample of adults. Risk preference on the WVS was measured on a 10-point scale where 1 indicates the belief that "one should be cautious about making major changes" and 10 is "you will never achieve much in life unless you act boldly." Miller (2000) argued that this was a "better assessment" of the key theoretical concept than the risk preference measure used by Miller and Hoffman (1995) because the latter focused more exclusively on adventure-seeking than on providing a "broad attitude toward risk."

Again, following Miller (2000), the test here examines four dependent variables. Attendance on religious services is measured on a 7-point scale from practically never to more than once a week. The importance of religion in individuals' lives is measured on a 4-point scale ranging from not at all important to very important. Membership in some religious denomination is measured as a dichotomous variable, as is whether the respondent reported finding comfort and strength in religion. Controls are included for age, education (as measured by the age at which the respondent left school), and income (as in Miller [2000]). Ordinary least squares regression was used for the attendance and importance variables, while logistic regression was used for the denomination and comfort variables. While I might have otherwise made different measurement or modeling decisions from Miller (2000), I stick to them here because those decisions have been considered adequate in subsequent work citing Miller (2000) in support of the more general risk preferences model (e.g., Miller and Stark 2002).[2]

For each of the four independent variables, Table 1 reports first the regression coefficient for females for a model in which the risk preference measure is excluded. Then, the same coefficient is reported for a model that adds the risk preference variable. Finally, the column on the right provides for the percentage attenuation of the gender coefficient between the two models. Recall that Miller and Hoffman (1995) found an attenuation of about 40 percent and that, in principle, superior measurement of the key independent variable should result in an even greater attenuation.

Results are provided for both the United States and Italy. As shown in the table, in no case does the attenuation in the gender coefficient approach the magnitude of that observed by Miller and Hoffman (1995). For the United States, the attenuation across models is never larger than 8.5%. In Italy, the percentage change is negative for all four dependent variables, meaning that the gender difference actually *increases* slightly when the measure of risk preference is included. In all the models for both countries, a significant gender difference (at least $p < .05$) is observed, with women being more religious (however measured) than men.

DISCUSSION

On the face of it, the foregoing would seem to refute the idea that differential risk preferences explain much of the long observed gender difference in religiousness. The null results are somewhat startling in that they use the same data and models that have previously been cited in support of the more general risk preference thesis. As other evidence has been presented in support of the risk preference explanation of gender differences, this research note does not purport to stand as a "falsification" of the theory; however, the results would seem to demand explanation and suggest strongly that additional scrutiny may be warranted.

An obvious way of explaining away the results is to propose that perhaps the measure of risk preference used was not appropriate, the arguments of Miller (2000) notwithstand-

ing. At the very least, this would suggest that the results of Miller (2000) perhaps should be likewise discounted for evaluating the more general theory: the same measure cannot be good when it supports a theory and bad when it does not. A more satisfying evaluation of the adequacy of any specific measure for testing the theory is made more difficult because the developing literature on risk-related dispositions and religiousness has featured somewhat imprecise conceptualization—the key independent variable has sometimes seemed to shift between risk preferences as an economist would use the term, risk assessment, capacity for self-regulation, and conformity to social norms (Freese and Montgomery 2004). In any case, the results call into question the extent to which the puzzle of widespread gender differences in religious participation really has been solved.

ACKNOWLEDGEMENTS

I thank James Montgomery for several instructive conversations that resulted in the writing of this paper. Direct all correspondence to Jeremy Freese, Department of Sociology, University of Wisconsin-Madison, Madison, WI, 53706.

NOTES

[1] Miller (2000) also reports significant results for risk preference for Turkey, the Muslim nation examined. However, even without controlling risk preference, females did not report significantly greater religiousness for any of the four measures studied, and the sign of the gender coefficient was only in the proper direction for one of the four measures. Since risk preference can only explain the greater religiosity of females where it exists, analyses for Turkey are not reported here. In all instances, adding risk preferences to the model had little effect on the gender coefficient.

2 As is common in quantitative secondary analyses, despite repeating the analyses as described in the methods section, small results in the coefficients between this study and Miller (2000) exist. The results are identical in terms of the significance of the coefficients, however, and there is no reason to think these differences would affect in any way the substantive conclusions of this paper. My attempt at replication for Turkey does indicate that the sign of the gender coefficient for church attendance in Miller [2000: 12] should be reversed, with males there reporting higher levels of church attendance than females.

REFERENCES

Freese, Jeremy and James Montgomery. 2004. "Are Gender Differences in Religiousness Due to Differential Risk Preferences?" Unpublished manuscript, University of Wisconsin-Madison.

Miller, Alan S and John P. Hoffmann. 1995. "Risk and Religion: An Explanation of Gender Differences in Religiosity." *Journal for the Scientific Study of Religion* 34:63-75.

Miller, Alan S. 2000. "Going to Hell in Asia: The Relationship between Risk and Religion in a Cross Cultural Setting." *Review of Religious Research* 42:5-18.

Miller, Alan S and Rodney Stark. 2002. "Gender and Religiousness: Can Socialization Explanations Be Saved?" *American Journal of Sociology* 107:1399-1423.