Religious Shoppers Spend Less Money

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Although religion is a central aspect of life for many people across the globe, there is scant research on how religion affects one’s non-religious routines. Using both field and laboratory data, we find across four studies that religiosity curbs the money and time people spend on their grocery purchases.

[to cite]:

[url]:
http://www.acrwebsite.org/volumes/1024566/volumes/v45/NA-45

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Advances in Consumer Research
Volume 45, ©2017

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EXTENDED ABSTRACT

Four out of every five people in the United States are affiliated with a religion, according to a 2015 Pew Research Center study. Despite being a widespread part of American society, limited research has been conducted on how religion affects people’s routine, non-religious activities. In the present research, we examine whether religiosity affects the money and time people spend on their grocery purchases, which represent a major and frequent consumption activity.

We are surrounded by religious symbols and cues that remind us of religious values that guide our or others’ actions. Such symbols and cues, research has found, powerfully affect our behavior. For instance, reminders of God have been shown to influence the way people behave in risky domains such as skydiving (Chan, Tong, and Tan 2014; Kupor, Laurin, and Levav 2015). Thinking about God provides people with a sense of security, which induces greater risk taking as long as the risky behavior does not fall outside of one’s moral boundaries. Research has also found a link between religiosity and virtuous behavior. In fact, reminders of religion (such as the recalling the Ten Commandments) have been shown to reduce unethical behavior (Mazar, Amir, and Ariely 2008).

More relevant to the current topic, research has found that people with stronger religious beliefs exhibit less brand reliance (Shachar et al. 2011) and are less likely to engage in conspicuous consumption (Stillman et al. 2012) than those with weaker or no religious beliefs. In addition, being exposed to brands has been shown to reduce one’s commitment to religion (Cutright et al. 2014). These findings are consistent with the notion that religious thoughts lead to distancing oneself from materialism and unjustified spending. In many religions, overspending is perceived as an immoral behavior because it wastes resources. Being careful with one’s spending, instead, is commonly viewed as virtuous.

More generally, religious people have value systems that differ from those of less or non-religious people (Mokhli 2006), and they follow religious principles and values in their daily life. They tend to have greater concern for moral standards (Wiebe and Fleck 1980) and more traditional views (Wilkes, Buurnett, and Howell 1986), and they tend to be more conservative (Barton and Vaughan 1976) and satisfied with their lives (Wilkes et al. 1986) than less religious people. Building on this body of research, we argue that a higher degree of religiosity (either at the individual or community level) is associated with conservative shopping behavior, such that those high in religiosity spend less money on their purchases, make fewer unplanned purchases, and spend less time shopping. We also suggest that, more generally, religiosity affects people’s spending behavior, such that even being reminded of God makes people less likely to spend money. We maintain that this occurs due to the belief common to many religions that one should refrain from overspending time and money on consumption. These beliefs, which can be made salient not only by a religion’s tenets but more generally by priming religion, translates into real consumption behavior. We test our hypotheses in four studies using both field and lab data.

Study 1: Religiosity and Spending on Groceries at the County-Level

Every five years, the U.S. Census Bureau surveys businesses around the country as a part of the Economic Census and releases information on industry revenues and other relevant metrics, broken down to the county level. We collected the data on grocery store sales from the 2012 Economic Census. We obtained county-level data on religiosity from the Association of Religion Data Archives (ARDA), which conducted its most recent survey in 2010. Over 230 religious groups reporting more than 150 million adherents participated in the survey.

Our dependent variable is grocery store sales per store in a particular county. Our key independent variable is the number of religious adherents (per 1,000 population) reported for a county. In the regression model, we control for several county characteristics such as the log of population, the log of median income, and the log of median age.

Consistent with our prediction, the regression results reveal a negative relation between religiosity and grocery store sales ($b = -0.162$, $p < .05$). The estimated coefficient on religiosity suggests that a 20% increase in the number of religious adherents living in a county is associated with about a 3.2% decline in the county’s grocery store sales per store.

Study 2: Shoppers in More Religious Counties Spend Less Money on Their Purchases

This study uses data collected by the Point of Purchase Advertising International in 2011-2012. Shoppers at 35 different grocery stores across 10 states in the U.S. were randomly intercepted by interviewers as they entered the store and asked to complete pre- and post-shopping surveys in exchange of a $25 store gift card. 2,401 shoppers completed the survey (mean age = 46.4 years, mean income = $60,794, 75.2% female). As a part of the survey, participants were asked to provide their zip code for survey validation. We use this information to match each observation with the county-level religiosity data obtained from the ARDA. We have three dependent variables: (1) total money spent, (2) the number of unplanned items purchased, and (3) time spent shopping.

As in Study 1, the independent variable of interest is the log of the number of religious adherents (per 1,000 population) who live in the same county as the participant. Following previous research (e.g., Inman, Wiener, and Ferraro 2009), our regression models control for various shopper and shopping trip characteristics such as the log of shopper age and the log of shopping trip budget.

We excluded 500 observations without information on zip code because we cannot match these observations with the religiosity data. We further excluded 197 participants who participated in a simultaneous EEG-eye-tracking study and put on special equipment that monitored their activity during the entire shopping trip. Finally, we discarded 177 observations due to missing data on items purchased, shopping budget, income, or age. These exclusions yield a final sample with 1,527 observations.

Supporting our prediction, we find that county-level religiosity is negatively associated with participants’ total spending ($b = -0.168$, $p < .01$), unplanned purchases ($b = -0.135$, $p < .05$), and shopping time ($b = -0.199$, $p < .05$). The results imply that a 20% increase in the total number of religious adherents living in a county is associated with about a 3.4% decline in total spending, about a 2.7% decline in the number of unplanned items purchased, and about a 4% decline in time spent shopping.
Study 3: Individuals’ Religiosity and Their Willingness to Pay

We recruited participants from Amazon’s MTurk. 606 adults completed the study (mean age = 34.1 years, mean income = $47,739, 59.6% female).

This study employs a hypothetical grocery shopping scenario. We asked participants to imagine that they were going grocery shopping and planned to spend about $25 during their shopping trip. The shopping task consisted of two parts: (1) browsing and buying relatively typical grocery items, and (2) deciding how much to pay for an unplanned item toward the end of the shopping trip. Specifically, in the first part, participants picked an item among several options presented under seven different product categories (i.e., grapes, milk, eggs, frozen pizza, snacks, soda, and bread). To ensure that all participants spent the same amount of money prior to the unplanned shopping task (i.e., $24.50 in total), the price of each item in a given category was the same (e.g., red grapes, green grapes, and black grapes were all priced at $2 per pound).

After participants completed the first part of the task, we asked participants to imagine that they had come across a special issue of one of their favorite magazines as they were going to the cashier to pay for their purchases. Following Haws, Bearden, and Nenkov (2012), we measured participants’ willingness to pay (WTP) for the magazine by asking them to indicate whether they would purchase the magazine at different prices ranging from $0 to $8 with $0.50 increments. Upon completion of the shopping task, participants answered a set of demographic questions, which included a five-item religiosity scale adapted from Worthington et al.’s (2003) religious commitment inventory (α = .98). We excluded 11 participants who provided non-mono- tonic responses to the WTP question (e.g., a participant was not willing buy the magazine at $2.00 but would do so at $2.50). We further removed eight participants whose WTPs were greater than or equal to $7.50, as such values are more than three standard deviations above the mean (M = $2.50, SD = $1.63). These exclusions yield a final sample with 587 observations.

Supporting our prediction, we find a negative relation between participants’ religiosity and their WTP for the magazine (b = -.096, p < .05). Specifically, one standard deviation increase in religiosity is associated with a 5.41% decline in the average participant’s WTP. Note that our regression model controls for such variables as the participant’s age, gender, and education. Also, controlling for participants’ impulsivity did not alter our results.

Study 4: Religiosity Prime and Spending Behavior

We recruited participants from Amazon’s MTurk. 809 adults completed the study (mean age = 35.3 years, mean income = $52,250, 58.2% female).

This study uses the same shopping task employed in Study 3. To manipulate religiosity, we asked participants before they began shopping to watch a short video and rate the speaker in the video on various dimensions (e.g., the use of body language). Participants were randomly assigned to either the religiosity condition or the control condition. In the former condition, participants watched a video of a speaker discussing God’s presence. In the latter condition, they were shown a video of a speaker presenting oil painting tips.

After participants made their product choices and indicated their WTP for the magazine, we presented them with a three-item scale used to measure the extent to which they believed that buying the magazine would be a waste of money. The items included in the scale are “Buying the magazine would be wasting money,” “If I buy the magazine, that would be a wasteful consumption,” and “It would be irresponsible of me to spend money on the magazine” (1 = strongly disagree, 7 = strongly agree, α = .95). We averaged participants’ responses to these items and created a single measure of beliefs about wasting money. We use this measure as a potential mediator of the effect of religiosity prime on participants’ willingness to spend money on the magazine.

Among the participants, 35.2% indicated that they had no religion (116 were atheists and 169 were agnostic), 21.5% were Protestant, 15.7% were Catholic, 20.6% reported that they follow other religions, and 6.9% declined to answer. We excluded the participants with no religion from the analysis as the religiosity prime lacks relevance for them and thus may fail to generate the predicted effect. A manipulation check conducted with participants from the same subject population supports this view. Specifically, we measured participants’ feelings toward God using the following four items: “I feel God’s presence,” “I desire to be closer to God,” “I believe God watches over me and others,” and “One should seek God’s guidance when making decisions” (1 = strongly disagree, 5 = strongly agree, α = .98). Whereas the religiosity prime invoked stronger feelings toward God among participants with a religion (M = 3.89 vs. M = 3.58, t(272) = 2.40, p < .05), this was not the case among those with no religion (M = 1.54 vs. M = 1.49, t(125) = 0.36, n.s.).

Further, we excluded 15 participants who provided non-monotonic responses to the WTP question. We also removed 7 participants whose WTPs are more than three standard deviations above the mean. These exclusions resulted in a final sample with 502 observations.

As expected, participants in the religiosity condition were willing to spend 9.5% less on the magazine (M = $2.29, SD = $1.50) than those in the control condition (M = $2.53, SD = $1.50), t(500) = 1.85, p = .066, d = 0.16. We obtained consistent results in a multivariate setting with control variables. As an additional analysis, we also controlled for participants’ emotional states measured with a PANAS scale. Our results did not change.

Further, we tested whether participants’ feelings about wasting money mediates the effect of religiosity prime on their WTP for the magazine. When we included feelings about wasting money in the regression model, it predicted WTP for the magazine (b = -.489, p < .01). More important, after controlling for feelings about wasting money, the effect of the religiosity prime on WTP became statistically insignificant (b = -.141, p = .237). Supporting the mediation, the 95% bootstrapped confidence interval for the indirect effect of the religiosity prime on participants’ WTP for the magazine through feelings of wasting money does not contain zero (i.e., CI = [-0.254, -0.008]).

General Discussion

Although religion represents a key aspect of many people’s lives, little is known about how religion affects one’s non-religious routines. In the present research, we identify a frequent consumption activity that is influenced by religiosity: grocery shopping. Our evidence shows that religiosity curbs the money and time people spend on their grocery purchases. We find that people who live in more religious counties spend less money on groceries and less time shopping for groceries than those in less religious counties. Focusing on religiosity at the individual level yields parallel results: The more religious people are, the less willing they are to seize on purchase opportunities that arise during a shopping trip. This effect seems to be due to a common religious principle: it is wrong to waste one’s money and time on material things. Overspending and consuming...
more than one needs are typically unwelcomed behaviors in communities with strong religious ties.

An alternative hypothesis—that greater religiosity leads to higher spending—is not supported by our data sets. Nevertheless, anecdotal evidence suggests that some religious leaders and prominent figures in predominantly religious countries endorse lavish life styles. In such cases, religion may have a “licensing effect” on spending (e.g., “God has given me wealth and spending ability” or “I deserve better things because my religion makes me a better person”) that could be compounded by religion’s positive effect on risk taking (e.g., “God protects me, so I can take the risk of spending money”). We encourage future research to examine whether religion’s effect on spending is conditional on one’s social status and wealth.

REFERENCES