

The effects of religious identity on economic behavior

ERASMUS UNIVERSITY ROTTERDAM

Erasmus School of Economics

Department of Economics

Supervised by Frank Hubers

Mohammad Faizi Nazir

332687mn

332687mn@student.eur.nl

Contents

- 1. Introduction..... 3
- 2. Background..... 5
 - 2.1 Previous studies..... 5
 - 2.2 Economic behavior 7
- 3. Methodology 9
 - 3.1 Empirical model..... 9
 - 3.2 Experimental design 10
- 4. Data 14
- 5. Results 16
 - 5.1 Religion 16
 - 5.2 Religious identity 19
- 6. Conclusion 23
- Bibliography..... 25
- Appendix..... 28

1. Introduction

Max Weber argued in his study, 'the Protestant ethic and the rise of Capitalism', that the Protestant values encouraged capitalistic behavior. He noted that Calvinists, one of the Protestant groups dominant in the northern part of Western-Europe, believed that God had predetermined who would be saved and who would be damned. To find out who was saved and who was damned, they looked for clues that god might've given them. Worldly success seemed to be a large clue which was associated with being saved by god. Thus profit and material wealth were things that were endorsed by their own religion. This led the Calvinists to believe that more wealth and more profit, was a sign of virtue. It is this behavior that promoted the rise of Capitalism, because it rests on the same concepts. Most importantly, the main hypothesis of Weber's study is that religious affiliation influences the economic behavior of people.

It is important to note that although Weber's study was very influential, the evidence he provided to prove his hypothesis was merely anecdotal. He did not provide any statistical evidence for the relationship between religion and economic behavior. In the past decade many researchers have tried to provide evidence for a possible causal relationship between religion and (parts of) economic behavior.

One of the main problems when trying to establish the causal effect between religion and economic behavior is that the treatment is not exogenous. In the most ideal situation, a researcher would like to have two groups of people of the same size, of which he could make one group religious, and keep the other group non-religious. Doing this would make the treatment, religious affiliation, exogenous and that would allow him to make significant statements about the causality between religion and economic behavior. Considering the fact that this is practically impossible, most researchers mainly study associations between religion and economic behavior. However, since it is not clear why some people are religious and others are not, these studies cannot make clear statements about the actual effect of religion. In this study I will use another method to estimate the relationship between the two. I will make use of a concept that originated from psychology, which is known as 'priming'.

Priming allows researchers to create an exogenous treatment, which, when randomly assigned, enables researchers to make better statements about the causal relationship between certain variables. Priming assumes that people categorize themselves within certain (social) groups. One could be a male, a student, a basketball player, a Muslim and more, all at the same time. The intention of priming is to temporarily highlight one particular identity within a person. By highlighting an identity, researchers expect the respondents to behave more according to the norms of that group, which allows researchers to measure the behavioral effect of an identity.

The aim of this study is to investigate the relationship between religious identity and economic behavior through the use of priming. A study done by Benjamin, Choi and Fisher (2012) on the effect of religious identity and economic behavior also made use of priming. Because I find their overall methodology to be very strong, I will try to duplicate it as much as possible in this study.

There are two issues with most of the studies done on religion and economic behavior in my opinion. First of all there are very few studies that have considered Muslims in their samples. Considering the fact that the amount of Muslims is growing in the world, this is a very odd thing. Secondly, priming has gotten quite a load of criticism in recent times (Yong, 2012) One big criticism of priming is that other researchers aren't able to duplicate the results from several studies which made use of priming. Apparently priming doesn't give consistent results, even if everything else is kept nearly the same.

The two main goals for this study are as follows;

1. Investigate the causal relationship between religion and economic behavior by including Muslims in the sample next to the Christians and Jews. My main research question will be:

'What is the effect of religious identity on economic behavior?'

I have operationalized economic behavior into four different dimensions: Social trust, Risk preference, Time preference and Altruism.

2. Investigate the validity of priming. It makes sense that priming religious concepts should only influence people that associate themselves with a religious group. This means that religious priming should not have any effect on atheists, because they don't associate themselves with any religious group. Atheists will therefore serve as a placebo group in this study.

2. Background

2.1 Previous studies

There have been numerous studies investigating the relationship between religion and economic behavior. A distinction can be made depending on what type of method is used to investigate the relationship. One method is to use a measure of religion, together with some control variables, in a regression with economic behavior as the dependent variable. A very recent study of this type is of Noussair, Trautmann, van de Kuilen and Vellekoop (2012). This study investigated the relationship between religion and risk aversion, focusing on Protestants, Christians They found that Protestants were more risk averse than Catholics, and that the link between risk aversion and religion was driven by social aspects of church membership rather than by religious beliefs. A similar study was conducted focusing on the the difference in risk aversion between Christians and Muslims. (Bartke & Schwarzeb, 2008). The authors found that Muslims were more risk averse than Christians. One study was particularly interesting because the author hypothesized that the relationship between religion and risk aversion differed depending on the society (Miller, 2000). The author found evidence for a positive relationship between being religious and individual risk aversion in Western societies, but that same positive relationship wasn't found in the Eastern societies.

In 'Time preference, immigrant background and religion' the authors investigated the relationship between belonging to certain social groups, like the immigrant and the religious group, and an individual's time preference (H'Madoun & Nonneman, 2012). Their results suggested that religious people were more patient, on average. Chai, Gundaya, & Sherstyuk investigated whether there was a difference in time preference of the Christians and Muslims. They found no significant evidence for this.

A study examining the giving habits of Americans to charity organizations (Regnerus, Smith and Sikkink: 1998), found significant evidence of a positive relationship between religion and generosity. Chocran and Will (1995) provided further evidence for this relationship by looking at the effect of religion and religiosity on the generosity towards poor families.

The studies mentioned above look for associations between religion and economic behavior. This does not automatically imply however that there also is a causal relationship between two. There are many unobservable factors which explain why someone belongs to a certain religious group, and it is very difficult, if not impossible, to include all of those factors as control variables in the regression. Researchers have tried to solve the endogeneity through the use of an experimental method known as 'priming'. Priming enables the researcher to assign an exogenous treatment to a sample. If this

treatment is assigned randomly, this eliminates the endogeneity problem, thus allowing researchers to estimate the causal relationship between religion and economic behavior.

An example of such a study is 'Religious identity and economic behavior' (Benjamin, Choi, & Fisher, 2012). These authors estimated the effect of religious identity on economic behavior through the use of priming. Economic behavior was split up into the following five outcome variables: risk preference, time preference public goods contribution, trust and work ethic. The authors found Protestants increasing their public goods contribution when being religiously primed, and Catholics decreasing their contribution to public goods, expecting others to contribute less to public good, and become less risk averse. They also find Jews more strongly reciprocating as an employee in a bilateral labor market gift-exchange game. It is interesting to note that these authors find no effect on time preference and generosity when making use of priming. There is no other study done on the effect of religious identity on time preference, but there are some done on the effect of religious identity on generosity.

Another study that used priming in order to estimate causal effects of relation is the study conducted by Shariff and Norenzayan (2007), that investigated the effect of religious identity on generosity in a dictator game. This study found a significant positive effect of religious identity on generosity, while they found no significant evidence for this relationship with self reported measures of religiosity. This is very interesting because it shows that if somebody is saying that he belongs to a religious group, it doesn't have to mean that he really feels associated with it or behaves according to the norms of that religion. Ahmed and Salas (2011) provide more evidence for religious identity being positively related to generosity in a dictator game.

Horton, Rand and Zeckhauser (2010) and Ahmed and Salas(2011) looked at the effects of religious priming on cooperation and trust. They both find that religious identity has a positive effect on trust in a prisoner's dilemma. Interesting to mention is that Horton, Rand and Zeckhauser(2010) didn't conduct their experiment in a real laboratory, but in an online laboratory. They argue in their paper that these types of online experiments can be just as valid- internally and externally- as real life experiments and field experiments.

Hilary and Hui (2009) have looked at the effect of religious priming on risk aversion only. They randomly varied what type of text a participant had to read before doing the experiment. One text was religiously oriented while the other one wasn't. The authors found significant evidence for the religiously primed respondents being more risk averse than the control group.

2.2 Economic behavior

This study intends to investigate the effect of religion on economic behavior. There are four dimensions of economic behavior which I will be focusing on in this study. I will provide a brief explanation of the four different concepts.

Trust

Trust is the '*propensity of people in a society to cooperate to produce socially efficient outcomes and to avoid inefficient non-cooperative traps such as that in the prisoner's dilemma.*' (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1997)

Trust is an important economic concept. Almost all economic relationships depend heavily on trust. We have to trust people and their moves, because it is very difficult and inefficient to contract every move of theirs. Nowadays with products being bought and sold online, trust is an even more important ingredient of economic transactions (Bolton & Ockenfels, 2008). Without trust, economic transactions would take place with much difficulty. People would be trying to contract as much as possible, thus increasing transactions costs which would lead to inefficient prices in the economy.

Trust also influences investments (Bottazzi, Da Rin, & Hellmann, 2011). Without any trust people would hesitantly invest in (new) companies, which would hinder their production. It would also make it harder for people to start up new companies because of the difficulty in getting external financing. Eventually production would decline, innovation would slow down (Nooteboom, 2010) and economic growth would decline as well.

Risk preference

Risk preference is the amount of risk a person prefers. A person can be risk seeking which means that he enjoys taking risks. On the other hand, risk averse people are the ones that dislike risk. Lastly, risk neutral people are indifferent between taking risks or not. They don't like risk, but they don't dislike it either.

Risk preference is an important concept in economics. A person's risk preference determines the types of investments one will make (Lintner, 1965). Stocks of new companies are mostly very risky, but they also carry a great promise for the future. If all people were risk averse, then it would be very hard for new companies to get external financing. If nobody would be willing to invest in them, then it would become very hard and unattractive to start up a new business. Fewer investments would lead to less production, less innovation and eventually a smaller economic growth.

Time preference

Time preference defines the willingness of a person to delay consumption. People can have a positive time preference which means that they are relatively impatient. The present has more value for this person than the future. A negative time preference means that people are relatively patient. They are willing to wait for the more valuable future. Finally, having a neutral time preference means that one is indifferent between waiting or not.

Time preference is an important concept in economics. A person's time preference determines if he is willing to accumulate capital for the future or consume all today. Accumulating capital can be interpreted in a very broad sense. It can be relevant in somebody's decision to keep on studying or not. (Golsteyn, Grönqvist, & Lindahl, 2013). If a majority of people would decide not to study, the supply of high quality human capital would start to decline. Eventually this would hinder production of certain companies that depend on high quality workers, because of less supply of those employees and those employees also becoming more expensive.

Accumulating capital can also mean the simple saving of money for the future. If people would decide to use up all their money in the present, then investments would decline as well (Lerner, 1938). Fewer investments in the economy would make production decline, which would have a negative impact on economic growth.

Altruism

Altruism shows us how caring and generous one is with regard to others. Most economic models assume rational agents that only act for their own self-interest. In practice we see that this is not always true. People also act for the benefit of others, like giving tips to waitresses, returning something to lost and found and giving alms to the poor.

3. Methodology

3.1 Empirical model

The main relationship I want to examine in this study is the relationship between religious identity and economic behavior. I want to look into any causal relationship that exists between these two variables. Different methods are employed to investigate this relationship, and I will highlight two methods in this study.

$$(1) \quad Y_i = \beta_0 + \beta_1 Religion + \beta_i X_{ij} + \varepsilon_i$$

Equation 1 aims to measure the causal relationship between religion and economic behavior through keeping the control variables constant, while changing only the 'religion' variable. This should uncover any relationship between the two variables, if there is any.

This model only measures association between both variables and not the effect of religion on economic behavior. Because there are many unobservable factors which explain why somebody belongs to a certain religion, this model suffers from endogeneity. This means that the independent variables are correlated with the residuals, which thus violates a crucial assumption of OLS. This can lead to wrongly estimated coefficients, which could lead to a wrongly interpreted relationship. The endogeneity problem could be solved if it was possible to include all those unobservable variables in the regression as control variables, but that is nearly impossible. To be able to make a good causal claim, I need a model that doesn't suffer from endogeneity and only includes exogenous variables. That is why I turned to the experimental method.

In the experimental method, an ideal situation would be for the researcher to have two groups of people to which he would randomly assign a treatment. In this case the treatment would be religion. He would randomly make people religious in his sample, which would assure him of the treatment, religion, being exogenous. Obviously this is a very impractical and unethical thing to do, so researchers looked on for other ways to create an exogenous variation in the sample. Eventually they came across a technique used in psychology which is called priming.

According to Benjamin, Choi and Strickland (2010), the basic idea behind priming is that it increases the affiliation with a social group. This in turn leads behavior to shift towards the norms of that group. By comparing primed and unprimed behavior, it is thus possible to say something about the norms of that particular social group and their effect on steady state behavior (unprimed behavior).

As an instrument, priming has its limitations according to Benjamin, Choi and Strickland (2010);

1. Priming effect's magnitude might differ across people.

2. Priming will not reveal social category effects that operate exclusively through z_0 rather than through z_c .

This can be understood by looking at an example, which is taken from Benjamin, Choi and Fisher(2012), of being Korean and the taste for spicy food. This taste for spicy food has developed itself mainly through the constant exposure to the Korean social group, but it is not a norm of the group. So there is a social group effect which leads to the taste for spicy food, but it isn't because of the norms of the group, z_c . Priming is only useful in measuring the behavioral effect of the norms of the group, which means it is not so useful in this case.

3. There will be no difference between primed and unprimed behavior in domains where the choice situation itself functions as a strong social prime.

It is important to realize from the last two points that if a null priming effect is found that doesn't have to mean that there is no effect of the social group on behavior. There might be a social group effect, but it might be operating through z_0 (not through the norms of the group), or the situation itself functioned as a strong prime. This leads there to be no difference between the treatment and control group.

By incorporating priming in my model, I got to the following equation;

$$(2) \quad Y_i = \beta_0 + \beta_1 \text{Priming} + \varepsilon_i$$

The variable 'Priming' is a dummy variable which is 1 for the group which got the religious prime and 0 for the control group. If I assign the priming randomly to my sample, then that eliminates the endogeneity problem.

In recent times, priming has received much criticism (Yong, 2012). The main criticism being that priming doesn't deliver consistent results in multiple studies. That is why I also perform a robustness check on my model, which I will do by including atheists in my sample. As I explained above, priming aims to activate certain identities within people, and in my case I want to activate the religious identity. Logically it should mean that the religious priming should have no effect on atheists, because they don't have a religious identity. I will use the atheist group as robustnesscheck in which the priming serves as a placebo.

3.2 Experimental design

I decided to make an online survey which was distributed through e-mail. Important is the fact that I did not pay out my respondents in any way. It was also quite important for me to withhold the real purpose of my study from the respondents, because that could've weakened the priming effect and it could've lead to a stereotype effect. If the respondents had known that the study was about

religion and economic behavior, then they would've been consciously thinking about it. That could've possibly led to biased answers on the survey, which I wanted to prevent. The real survey that was sent out can be found in the appendix in an English version, and here I will outline the setup of the survey.

1. Sample characteristics

In this first section I asked six questions which were meant to uncover the characteristics of the respondents. These were questions about their gender, age, education, parent's education, association with specific countries and their religious beliefs. The question about their religious beliefs was the most important question in this section, because their answer on this question decided if the respondent belonged to the target group or not. This question had the following answering options;

- a) Protestant Christian
- b) Roman Catholic
- c) Jewish
- d) Muslim
- e) Other
- f) Atheist/ Agnostic

If the respondent appeared to have 'other' religious beliefs, then he would be redirected to the last page of the survey because he didn't belong to the target group. Also, the purpose of six questions was so that the respondents that do get eliminated don't know on the basis of which question(s) that had happened. This was to prevent any respondent finding out that my study focused on the effect of religious identity on economic behavior.

2. Sentence unscrambling task

The respondents that did belong to the target group went on to the sentence unscrambling task. There were two sets of 10 sentences which were randomly assigned to the respondents. One set contained five religious target words, which represented the religious priming, and the other set contained only neutral target words, which represented no treatment. In picking out the religious target words, I tried to stay as close to Benjamin, Choi and Fisher's (2012) selection as I could. The five sentences with religious target words that had to be unscrambled were the following;

That dessert is heavenly (fast)

Prophets predict the future (salt)

It is a holy book (banana)

We pray for you (house)

Thank god for everything (pen)

In the brackets I listed the wrong word that had to be removed in order for the respondent to make a correct sentence. The neutral sentences can be found in the appendix.

I also put on a timer of 20 seconds on each sentence that had to be unscrambled. The reason for this was so that the respondents would not look too closely to the words in the sentence, thus preventing them to find out that the study was about religion or something related.

3. Public goods game

After the sentence unscrambling, the respondents arrived at the public goods game. Here they would see a written explanation in which it was stated that he/she was allotted to a group of 4 persons who got €1 each. Now the group members, including the respondent, could donate any amount in increment of €0,05 to a group account, which represented the public good. The respondent was made aware of the fact that any amount that was donated in the group account, would later be doubled and then distributed evenly among the group members. Also, the subject could, hypothetically, keep any money that he/she did not donate to the group account.

After this information, the respondents had to answer the question about how much they expected the other group members to donate on average into the group account. This was the measure for trust. The next question was what amount they were willing to put in the group account themselves, which was a measure for the public goods contribution.

The reason for me to use the public goods game to measure the public goods contribution and trust of my respondents is because there is existing evidence that suggests that behavior in laboratory public good games is associated with contributions to the public goods outside of the laboratory. (Fehr & Leibbrandt, 2008) (Laury & Taylor, 2008)

4. Risk preference

Next up was the risk preference game. Here the respondents had to make twelve binary choices between a certain amount and a higher uncertain amount. This game was played to measure the respondents risk preference.

The risk preference game is a good way to measure the risk preference of people outside of this game, which can influence smoking, drinking and other risk related behavior. (Benjamin, Choi, & Fisher, 2012) (Barsky, Juster, Kimball, & Shapiro, 1997) (Guiso, Sapienza, & Zingales, 2003) (Dohmen, Falk, Huffman, Sunde, Schupp, & Wagner, 2005) (Sahm, 2007)

5. Time preference

After the risk preference game was the time preference game. Here the respondent had to make six binary choices between receiving an amount of money now or a higher amount of money after one week, and six binary choices between receiving an amount of money after one week or a higher amount of money after two weeks. This game was a measure for the time preference of the respondents.

This approach to measuring time preference is a standard one, and similar measures can predict variation in discounting-related behavior, outside of this game, like drug addiction, smoking, gambling and more. (Benjamin, Choi, & Fisher, 2012) (Fuchs, 1982), (Bickel, Odum, & Madden, 1999) (Kirby, Petry, & Bickel, 1999) (Petry & Casarella, 1999) (Kirby & Petry, 2004) (Shapiro, 2005)

6. Altruism

Last of the games was the dictator game. In this game the respondents were hypothetically given €1, and they were asked to choose which amount they would be willing to give to another total stranger that had received nothing. This was a measure for generosity/altruism.

I used the dictator game as a measure for generosity because Benz and Meier (2008) found that generosity in a dictator game is positively correlated with charitable giving outside the laboratory.

7. Happiness & trust

The respondents were also asked some questions about their overall happiness and trust.

8. Post-survey question

There was one post-survey question. This question was to find out if the respondents knew what the study was about.

4. Data

The data I used for this study was gathered through the use of the online survey. The data consists of people only in the Netherlands, with different religious backgrounds. Table 1 shows the summary statistics for this dataset. A t-test was used to compare both the control and the treatment group with each other.

Table 1: Summary statistics

	Control	Treatment	Independent samples T-test p-value
age	30,2	30,67	0,837
years of completed education	16,53	16,75	0,572
female	0,45	0,51	0,547
religious	0,55	0,52	0,752
migrant	0,29	0,30	0,776
dutch	0,84	0,82	0,959

Table 1 suggests that there is no significant difference between the averages of the variables of the control and treatment group. This is an indication that the treatment was properly randomized.

Outcome variables

There is basically one variable, economic behavior, which can be split up into four outcome variables. These four variables will be trust, risk preference, time preference and altruism.

The outcome variable for trust will be the average amount an individual expects his group members to donate into the public goods account. Public goods contribution will also be measured in this case, and the outcome variable for this will be the amount an individual is willing to put into the public goods account. Both of these measures will be taken from the public goods contribution game.

The outcome variable for risk preference will be the minimum risk premium. This is the expected return offered by the gamble in excess of the risk-free return. For example, if $X = \$2.40$ is the smallest X for which a subject would choose to gamble for a 50 percent chance of receiving X rather than accept a sure $\$1$, then the minimum risk premium is $(2.40 \times 0.5 - 1)/1 = 0.20$.

For time preference, the outcome variable will be the minimum gross interest rate that the subject requires to choose the later payment. Say for example one is willing to wait when receiving €11,50 next week instead of €10 now, then the minimum interest rate would be calculated as follows; $(€11,50/€10)-1 = 0,15$. It denotes the minimum interest rate a person requires before he makes the decision to wait.

The outcome variable for altruism denotes how much a person is willing to donate to the other party in a dictator game. This is a measure for the generosity of the respondent.

The independent variable

The main independent variable is a dummy variable for priming. This variable will take on the value 1 in the case of a person who belonged to the treatment group, and it will take on the value 0 for a person who belonged to the control group. Table 2 shows the distribution in the sample of treated and non treated people within the different religious groups

Table 2: Distribution of treatment within religious groups

	Not primed	Primed
Protestant Christians	16	15
Roman Catholics	4	8
Muslims	8	12
Atheists	23	32
Total	51	67

Other variables

The other variables that I used functioned as control variables. I was interested in specific characteristics of my sample.

I wanted to know how educated the respondents in my sample were, which is why I included the variable 'Years of completed education'. This is an ordinal variable which denotes how much years one has spent to achieve a certain education level.

Also interesting for me was to know if the respondent is a migrant or not, which is why I included the variable 'Migrant'. This is a dummy variable which takes on the value 1 for somebody who has either one or both parents born in a foreign country, which is the definition of a migrant.

I also included a gender variable named 'Female'. It takes on the value 1 for a female and the value 0 for a male.

Lastly I included age, which is an interval variable denoting the age of the respondent. This is useful in seeing the age difference between my sample.

5. Results

This chapter will contain the results of my analysis. I will be estimating the two different equations that I mentioned in chapter 3. I will list both equations here once again, because I will be referring to them throughout this chapter;

$$(1) \quad Y_i = \beta_0 + \beta_1 Religion + \beta_i X_{ij} + \varepsilon_i$$

$$(2) \quad Y_i = \beta_0 + \beta_1 Priming + \varepsilon_i$$

5.1 Religion

First I will be estimating Equation 1, without any control variables. In Table 3 you will find the five different outcome variables listed in the top row. Each of them represents one dimension of economic behavior. The independent variable is religion, which is a dummy for belonging to the religious group or not, and it can be found in the first row. It takes on the value 1 for a person belonging to a religious group, and it takes on the value 0 for an atheist.

Table 3: Religious group vs. Atheist group no controls

N=118						
	Trust	Pbgoods	Risk preference	Time preference	Altruism	
Religion	-0,075 (0,054)	-0,099 (0,063)	0,13** (0,060)	0,107** (0,052)	0,088* (0,052)	
Controls	No	No	No	No	No	
R ²	0,017	0,021	0,039	0,034	0,025	

* =significant at the 10% level **=significant at the 5% level ***=significant at the 1% level

From Table 3 it can be seen that religion seems to have a significant effect on peoples risk preference, time preference and altruism. Religious people want a 0,13 higher minimum risk premium on average, which suggests that religious people are more risk averse compared to atheists. Religious people also demand a 0,107 higher minimum interest rate, which suggests that being religious makes one more impatient. Finally, religious people seem to be willing to give 0,088 more, on average, in a dictator game. This suggests that being religious is associated with being more generous.

Next I decided to estimate Equation 1 again, but this time with control variables included. The reason for including control variables is to make the model more specific.

The top row in table 4 will contain the outcome variables, which each represents the different dimensions of economic behavior. The independent variable is a dummy for being religious or not. It takes on the value 1 for a religious person and the value 0 for an atheist.

Table 4: Religious group vs. Atheist group controls

N=118

	Trust	Pbgoods	Risk preference	Time preference	Altruism
Religion	-0,059 (0,056)	-0,09 (0,066)	0,113* (0,060)	0,073 (0,054)	0,09* (0,054)
Controls	Yes	Yes	Yes	Yes	Yes
R ²	0,046	0,07	0,153	0,1	0,051

*=significant at the 10% level **=significant at the 5% level ***=significant at the 1% level

From table 4 it seems that religion has a significant effect on risk preference and altruism. In table 3 religion seemed to have a positive effect on time preference, which was counter intuitive. Current literature suggested there to be a negative relationship between religion and time preference. It is interesting to note, that by including control variables, that counter intuitive effect has disappeared. It might have been a spurious relationship which has disappeared because of the model being more specific.

Religious people seem to want a 0,113 higher minimum risk premium on average, which suggests that religious people are more risk averse compared to atheists. This is the same result that was found without control variables. Religious people also seem to be willing to give 0,09 cents more, on average, in a dictator game. This suggests that religious people are more generous compared to atheists. This result was also found without including control variables in Equation 1.

From the above results it seems that there is an association between being religious, risk preference, time preference and altruism. It is also interesting to see which specific religious group has an effect on which dimension of economic behavior. That is why I will be looking at the Christians, Muslims and atheists separately.

I will be estimating Equation 1 once more, but this time I will be splitting up the religion variable into two separate variables. Christian is a dummy variable for being Protestant Christian or Roman Catholic, and Muslim is a dummy variable for being Muslim. Atheists will function as the base category. These independent variables can be found in the first column of Table 5. The outcome variables will be the different dimensions of economic behavior, listed in the top row of Table 5.

Table 5: Christians, Muslims and Atheists without controls

N=118

	Trust	Pbgoods	Risk preference	Time preference	Altruism
Christian	-0,056 (0,059)	-0,095 (0,070)	0,119* (0,067)	0,048 (0,057)	0,104* (0,057)
Muslim	-0,117 (0,076)	-0,107 (0,090)	0,155* (0,086)	0,234** (0,073)	0,055 (0,073)
Controls	No	No	No	No	No
R ²	0,022	0,021	0,04	0,083	0,028

* =significant at the 10% level **=significant at the 5% level ***=significant at the 1% level

From table 5 it can be seen that being Christian has a significant positive effect on risk preference and altruism, while being Muslim has a significant positive effect on risk preference and time preference. Christians seem to want a 0,119 higher minimum risk premium, on average. Also, they seem to be willing to give 0,104 cents more, on average, in a dictator game. These results suggest that being Christian is associated with being more risk averse and more generous, compared to atheists.

From table 5 it seems that Muslims want a 0,115 higher risk premium and a 0,234 higher minimum interest rate, on average. These results suggest that being Muslim is associated with being more risk averse and also more impatient, when compared to atheists. It is strange that being Muslim is associated with more impatience when compared to atheists. Current literature suggests a different relationship, where being religious is associated with more patience.

Now I will be estimating Equation 1 once again, with the split up religion variable in Christians and Muslims. Only now, I will also be including control variables to make the model more specific.

Once again the independent variables will be Christian and Muslim which are listed in the first column of Table 6, together with some control variables. The outcome variable will be some dimension of economic behavior, which is listed in the top row of Table 6.

Table 6: Christians, Muslims and Atheist with controls

N=118

	Trust	Pbgoods	Risk preference	Time preference	Altruism
Christian	-0,064 (0,060)	-0,104 (0,070)	0,096 (0,064)	0,054 (0,057)	0,099* (0,058)
Muslim	-0,04 (0,098)	-0,033 (0,115)	0,177* (0,106)	0,147 (0,094)	0,055 (0,095)
Controls	Yes	Yes	Yes	Yes	Yes
R ²	0,047	0,073	0,158	0,107	0,053

* =significant at the 10% level **=significant at the 5% level ***=significant at the 1% level

The results from table 6 suggest that being Christian is associated with being more altruistic compared to atheists, and being Muslim is associated with being more risk averse compared to atheists. Christians in my sample seem to be willing to give 0,099 cents more, on average, in a dictator game. Muslims in my sample seem to want a 0,177 higher minimum risk premium, on average. Interesting to see once again is that the association of being Muslim and time preference seems to have disappeared. This is probably due to the model being more specific because of the added control variables.

When I looked at only the religious versus non religious sample in Equation 1 with controls, I found an effect of religion on risk preference and altruism. By dissecting the religion variable into Christians and Muslims, with atheists as the base category, I was able to see where both effects originated from. Muslims seem to be more risk averse compared to atheists, while Christians seem to be more generous than atheists.

All of the above results are the ones gotten by estimating Equation 1. Considering the fact that I'm interested in the effect of religion on economic behavior, Equation 1 doesn't fulfill my purpose. Estimating Equation 1 is a way of only looking at the association between religion and economic behavior, while I'm more interested in a (causal) effect. That is why I decided to use priming in the equation instead of religion, which led me to Equation 2.

5.2 Religious identity

Now I will be estimating Equation 2, which will show the effects of religious priming on economic behavior.

First I will be estimating Equation 2 for the religious group. In Table 7 I have included priming as an independent variable, which can be found in the first column. The outcome variable will be some dimension of economic behavior which can be found in the first row of Table 7.

Table 7: Religious group without controls

N=63

	Trust	Pbgoods	Risk preference	Time preference	Altruism
Priming	0,046 (0,069)	-0,011 (0,076)	0,066 (0,095)	0,038 (0,084)	-0,011 (0,076)
Controls	No	No	No	No	No
R ²	0,007	0,000	0,008	0,003	0,000

* =significant at the 10% level **=significant at the 5% level ***=significant at the 1% level

There seems to be no significant effect of priming on economic behavior within the religious group.

Now I will be estimating Equation 2 for the religious group once again, but this time with control variables included so that the model becomes more specific. The independent variable in Table 8 will be priming, which will be in the first column. The outcome variable will be some dimension of economic behavior which can be found in the first row of Table 8.

Table 8: Religious group with controls

N=63

	Trust	Pbgoods	Risk preference	Time preference	Altruism
Priming	0,034 (0,034)	0,127 (0,080)	0,047 (0,096)	0,082 (0,080)	-0,004 (0,077)
Controls	Yes	Yes	Yes	Yes	Yes
R ²	0,045	0,134	0,089	0,178	0,077

* =significant at the 10% level **=significant at the 5% level ***=significant at the 1% level

The religious priming still seems to have no significant effect on economic behavior within the religious group. This is a strange result, because I expected religious people to act upon the religious priming because of their association with a religious group.

Now I will estimate Equation 2 for the atheist group. This is to see if priming seems to influence the economic behavior of atheists. In Table 9 the independent variable will be priming, which can be

found in the first column. The outcome variable will be some dimension of economic behavior, which can be found in the first row of Table 9.

Table 9: Atheist group without controls

N=55

	Trust	Pbgoods	Risk preference	Time preference	Altruism
Priming	-0,23*** (0,080)	-0,143 (0,100)	0,17** (0,069)	0,019 (0,062)	-0,062 (0,070)
Controls	No	No	No	No	No
R ²	0,136	0,037	0,103	0,002	0,014

* =significant at the 10% level **=significant at the 5% level ***=significant at the 1% level

There seems to be a significant effect of priming on trust and risk preference within the atheist group. Because of the religious priming, the atheists in my sample seem to expect on average, that others will give 0,23 cents less in a public goods game. Also, they seem to want a 0,17 higher minimum risk premium. Apparently because of the religious priming, atheists start to trust other people less and also become more risk averse. This is a strange result considering the fact that atheists don't associate themselves with any religious group.

It is possible that I've found spurious relationships, which can be eliminated by specifying the model further. That is why I will be estimating Equation 2 for the atheist group once more, but this time with control variables included. Priming will be the independent variable in Table 10, which can be found in the first column. The outcome variable will be some dimension of economic behavior which can be found in the first row of Table 10.

Table 10: Atheist group with control variables

N=55

	Trust	Pbgoods	Risk preference	Time preference	Altruism
Priming	-0,225*** (0,082)	-0,128 (0,102)	0,154** (0,062)	0,029 (0,065)	-0,056 (0,073)
Controls	Yes	Yes	Yes	Yes	Yes
R ²	0,187	0,113	0,358	0,031	0,057

* =significant at the 10% level **=significant at the 5% level ***=significant at the 1% level

There still seems to be a relationship between priming, trust and risk preference within the atheist group. Apparently because of the religious priming, atheists expect others to give 0,225 less, on average, in a public goods game. Also, they want a 0,154 higher minimum risk premium. These

results suggest that because of the religious priming, atheist in my sample trust others less and become more risk averse.

Priming seems to have an effect on economic behavior within the atheist group, but not within the religious group. It is possible that there was a priming effect within the religious group, but the effect was eliminated because I combined the religious groups together. That is why I estimated Equation 2 for the individual Christian and Muslim group. The results can be found in the Appendix. The results suggest that there is no significant effect of priming on economic behavior within any of the religious groups.

6. Conclusion

This study was done to investigate the relationship between religion and economic behavior. I made use of two different methods of investigating this relationship, which is shown by Equations 1 and 2. Equation 1 was a way to investigate the association between religion and economic behavior, which was not the purpose of my study. My main purpose was to see if there was any (causal) effect of religion on economic behavior. This was achieved through the use of priming, which is shown in Equation 2.

In my data I find two interesting things. First of all, I find no effect of religion on economic behavior within the religious group of my data. This can mean that religious identity does not have any effect on economic behavior, which explains why I wasn't able to find one. Or, religious identity does have an effect on economic behavior, but I wasn't able to find one because of the small sample. Lastly, it is also possible that religious identity does have an effect on economic behavior but priming isn't the right instrument to uncover the effect.

Also mentioned by Benjamin, Choi and Strickland(2010), is the possibility of the choice situation itself functioning as a strong prime. That can cause there to be no difference between the control and treatment group. In my study it is very unlikely that this has been the case, because I consciously tried to prevent it. There were no such questions in the survey which acted as religious primes. There could've been such a case in the time preference game if interest rates were mentioned. This would function as a strong prime for Muslims perhaps, because interest rates are forbidden in Islam. But I did not make any explicit mention of interest rates.

The second interesting finding was that religious identity appeared to have an effect on economic behavior within the atheist group. From my results it seemed that, when primed with religious concepts, the atheists trusted others less and also became more risk averse. These findings are strange, because religious priming should have no effect on atheists at all. The reason for that is because priming should lead to more affiliation with a particular group, which then influences a person's behavior towards that group's norms. Considering the fact that atheists don't associate themselves with any religious group, it should mean that the religious priming should have no effect on them at all. The fact that I did find an effect of the religious priming on the economic behavior of atheists can be interpreted from two different points of view.

One point of view can be to assume that there is nothing inherently wrong with the priming concept. It works just the way it is intended to. If I assume that, then my finding on atheists can be explained as an error. Maybe because my sample is too small, I found an effect that wasn't really there.

The second point of view is to assume that there is some inherent flaw in the priming concept. It is possible that there are some assumptions that are made which are not correct, or maybe that the whole concept of priming works differently than expected. According to Benjamin, Choi and Strickland(2010) priming aims to increase the affiliation with a particular social group, which then would shift the behavior towards the norms of that social group. With atheists, this does not seem plausible. Atheists don't have any affiliation with a religious group, so priming should have no effect on them. The fact that I do observe an effect might mean that priming is activating something other than the affiliation with a social group. Priming might just be influencing the emotional state of people. If atheists hear something about religion, that might trigger a negative emotional state within them. It is possible that atheists are more negatively inclined towards religion, which explains why they choose not to follow any religion. The religious priming then triggers some negative emotional state within the atheists in my sample, which then explains why they start to trust other people less and also become more risk averse.

The main thing to learn from this study is to be more cautious about the use of priming. Looking at the criticism priming already has received from other researchers, together with the results I find in this study, I do believe that priming should be looked at with more scrutiny. Is it really a good way to identify the norms of a social group, or is it an instrument that is just activating emotions? Further study should be done on the concept of priming to find out its specific function.

Bibliography

- Ahmed, A., & Salas, O. (2011). Implicit influences of Christian religious representations on dictator and prisoner's dilemma game decisions. *The Journal of Socio-Economics* , 40 (3), 242-246.
- Barsky, R. B., Juster, F. T., Kimball, M. S., & Shapiro, M. D. (1997). Preference Parameters and Behavioral Heterogeneity: An Experimental Approach in the Health and Retirement Study. *Quarterly Journal of Economics* , 112 (2), 537-579.
- Bartke, S., & Schwarzeb, R. (2008). Risk-Averse by Nation or by Religion? *SOEPpaper No. 131* , 2-16.
- Benjamin, D. J., Choi, J. J., & Fisher, G. (2012). Religious Identity and Economic Behavior. *Working paper* .
- Benjamin, D. J., Choi, J. J., & Strickland, A. J. (2012). Social Identity and preferences. *American Economic Review* , 100 (4), 1913-1928.
- Benz, M., & Meier, S. (2008). Do People Behave in Experiments as in the Field?—Evidence from Donations. *Experimental Economics* , 11, 268-281.
- Bickel, W. K., Odum, A. L., & Madden, G. J. (1999). Impulsivity and Cigarette Smoking: Delay Discounting in Current, Never, and Ex-Smokers. *Psychopharmacology* , 146 (4), 447-454.
- Bolton, G. E., & Ockenfels, A. (2008). The Limits of Trust in Economic Transactions - Investigations of Perfect Reputation Systems. *Working paper* .
- Bottazzi, L., Da Rin, M., & Hellmann, T. F. (2011). The Importance of Trust for Investment: Evidence from Venture Capital.
- Chai, S.-K., Gundaya, D., & Sherstyuk, E. (n.d.). Does Religion and Ethnic Identity influence Social Preferences? Evidence from Field Experiments in the Philippines.
- Dohmen, T., Falk, A., Huffman, D., Sunde, U., Schupp, J., & Wagner, G. G. (2005). Individual Risk Attitudes: New Evidence from a Large, Representative, Experimentally-Validated Survey. *IZA Discussion Paper No. 1730*.
- Fehr, E., & Leibbrandt, A. (2008). Cooperativeness and Impatience in the Tragedy of. *IZA Discussion Paper No. 3625* .
- Frank, R. H. (2008). *Microeconomics and behavior*. McGraw Hill.
- Fuchs, V. (1982). Time Preference and Health: An Exploratory Study." *Economic Aspects of Health* , 93-120.
- Golsteyn, B. H., Grönqvist, H., & Lindahl, L. (2013). Time Preferences and Lifetime Outcomes. *IZA DP No. 7165* .
- Guiso, L., Sapienza, P., & Zingales, L. (2003). People's Opium? Religion and Economic Attitudes. *Journal of Monetary Economics* , 6 (6), 225-282.

- Hess, D. W. (2012). The Impact of Religiosity on Personal Financial Decisions. *Journal of religion and society* , 14, 1-13.
- Hilary, G., & Hui, K. (2009). Does religion matter in corporate decision making in America? *Journal of Financial Economics* , 93, 455-473.
- H'Madoun, M., & Nonneman, W. (2012). Time preference, immigrant background and religion.
- Horton, J. J., Rand, D. G., & Zeckhauser, R. J. (2011). The online laboratory: conducting experiments in a real labor market. *Experimental Economics* , 14 (3), 399-425.
- Kirby, K. N., & Petry, N. M. (2004). Heroin and Cocaine Abusers Have Higher Discount Rates for Delayed Rewards than Alcoholics or Non-Drug-Using Controls. *Addiction* , 99 (4), pp. 461-471.
- Kirby, K. N., Petry, N. M., & Bickel, W. K. (1999). Heroin Addicts Have Higher Discount Rates for Delayed Rewards than Non-Drug-Using Controls. *Journal of* , 128 (1), 78-87.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishney, R. W. (1997). Trust in Large Organizations. *American Economic Review* , 87.
- Laury, S. K., & Taylor, L. O. (2008). Altruism Spillovers: Are Behaviors in Context-Free Experiments Predictive of Altruism Toward a Naturally Occurring Public Good? . *Journal of Economic Behavior and Organization* , 65, 9-29.
- Lerner, A. P. (1938). Savings equals investment. *The Quarterly Journal of Economics* , 52 (2), 297-309.
- Lintner, J. (1965). The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets. *The review of economics and statistics* , 47 (1).
- Miller, A. S. (2000). Going to hell in Asia: The relationship between risk and religion in a cross cultural setting. *Review of religious research; volume* , 42 (1), 5-18.
- Nooteboom, B. (2010). Trust and innovation.
- Noussair, C., Trautmann, S., van de Kuilen, G., & Vellekoop, N. (2012). Risk aversion and religion. *Working paper* , 1-20.
- Petry, N. M., & Casarella, T. (1999). Excessive Discounting of Delayed Rewards in Substance Abusers with Gambling Problems. . *Drug and Alcohol Dependence* , 56 (1-2), pp. 25-32.
- Regnerus, M., Smith, C., & Sikkink, D. (1998). Who gives to the poor? The influence of religious tradition and political location on the personal generosity of Americans toward the poor. *Journal for the scientific study of religion* , 37 (3), 481-493.
- Sahm, C. R. (2007). Stability of Risk Preference. 66.
- Shapiro, J. M. (2005). Is There a Daily Discount Rate? Evidence from the Food Stamp Nutrition Cycle. *Journal of Public Economics* , 89 (2-3), 303-325.
- Shariff, A. F., & Norenzayan, A. (2007). God Is Watching You : Priming God Concepts Increases Prosocial Behavior in an Anonymous Economic game. *Psychological Science* , 18, 803-809.

Weber, M. (1905). *The Protestant Ethic and the Spirit of Capitalism*.

Will, J. A., & Cochran, J. K. (1995). God Helps Those Who Help Themselves?: The Effects of Religious Affiliation, Religiosity, and Deservedness on Generosity Toward the Poor. *Sociology of Religion*, 56 (3), 327-338.

Yong, E. (2012, October 3). *Nobel laureate challenges psychologists to clean up their act*. Retrieved June 2013, from Nature: <http://www.nature.com/>

Appendix

Appendix 1: Effects of Priming within the Christian and Muslim group

Table 11: Christians

N=43

	Trust	Pbgoods	Risk preference	Time preference	Altruism
Priming	0,086 (0,087)	0,14 (0,093)	-0,086 (0,115)	-0,035 (0,100)	-0,011 (0,089)
Controls	No	No	No	No	No
R ²	0,023	0,052	0,013	0,003	0,000

*=significant at the 10% level **=significant at the 5% level ***=significant at the 1% level

There seems to be no significant effect of priming on economic behavior within the Christian group.

Table 12: Muslims

N=20

	Trust	Pbgoods	Risk preference	Time preference	Altruism
Priming	-0,031 (0,113)	0,121 (0,160)	0,400 (0,152)	0,167 (0,138)	-0,004 (0,151)
Controls	No	No	No	No	No
R ²	0,004	0,031	0,278	0,075	0,000

*=significant at the 10% level **=significant at the 5% level ***=significant at the 1% level

Also, there seems to be no significant effect of priming on economic behavior within the Muslim group.

Appendix 2: Online survey (english version)

Thank you very much for participating in this study!

This study is being done by the Erasmus university of Rotterdam and it is about the economic behavior of people. We will be researching this by playing some games with you. You will get a written explanation for each game, which tells you how the game is supposed to played.

First however, we will be asking you a couple of questions so we can determine if you belong to the target group.

1. What is your gender?
 - a. Male
 - b. Female
2. What is your age?
3. To what ethnicity or ethnicities do you feel you belong to?
(multiple answers possible)
 - a. Dutch

- b. Moroccan
- c. Turkish
- d. Surinam
- e. Other
- 4. Are both of your parents born in the Netherlands?
 - a. Yes, both of my parents are born in the Netherlands
 - b. No, one of my parents is born in a foreign country
 - c. No, both of my parents are born in a foreign country
- 5. To which religious group do you feel you belong to?
 - a. Protestant Christian
 - b. Roman Catholic
 - c. Islamic
 - d. Jewish
 - e. Other
 - f. Atheïst/ Agnost
- 6. What is the highest level of education you have completed?
 - a. Primary school
 - b. VMBO(MAVO/MULO/VBO)
 - c. HAVO/VWO
 - d. MBO
 - e. HBO
 - f. University

Sentence unscrambling

It is decided at random if a person gets the control group sentences or the treatment group sentences to unscramble.

Control Group sentences:

De piano is groot(gaan)
 Ik eet vandaag patat(schrijven)
 Het regent al weken(muts)
 Succes met je examen(thee)
 Dat toetje is heerlijk(rekening)
 Economen voorspellen de toekomst(saxofoon)
 Dat boek is mooi(douchen)
 Drink je water op(stoel)
 Wij duimen voor jou(broek)
 Bedank moeder voor alles(regenboog)

Treatment Group sentences

De piano is groot(gaan)
 Het regent al weken(schrijven)
 Ik eet vandaag patat(muts)
 Succes met je examen(thee)
 Dat toetje is hemels(snel)
 Profeten voorspellen de toekomst(zout)
 Dat boek is heilig(banaan)
 Drink je water op(stoel)

Wij bidden voor jou(huis)
Bedank god voor alles(pen)

We will now play a game.

You will be playing this game with three opponents. Each player will receive 1 euro.

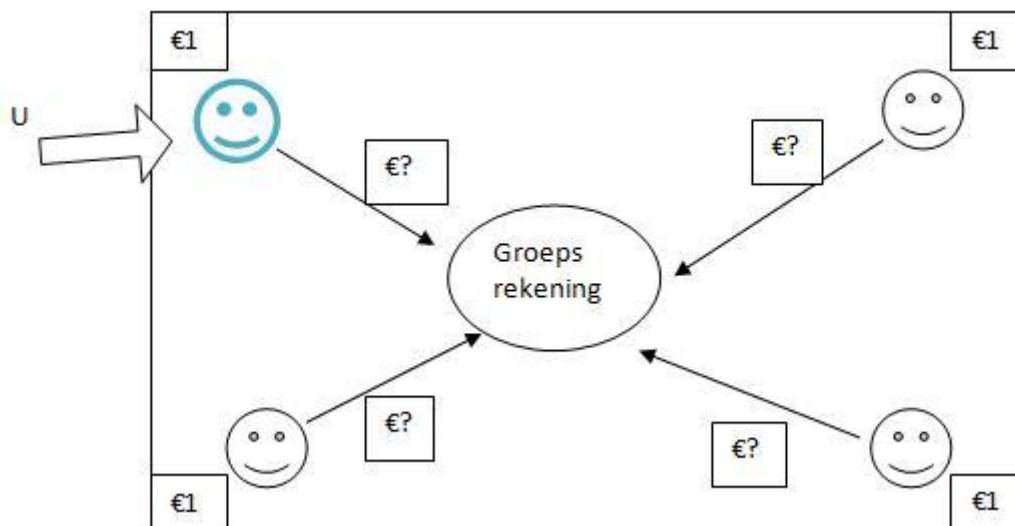
Each player gets the opportunity to donate (a part of) his money into the group account. The money that the players decide not to donate into the group account, is money that the players can keep for themselves. The players don't know how much the other players donate into the group account.

After every player has made the decision of what amount to donate into the group account, then the total money in the group account will be counted. The total amount of money in the group account will be doubled en divided fairly among the four players.

Example

You receive €1, and you decide to donate 50 cents into the group account. You will then have 50 cents left for yourself.

Assume that your opponents also decide to donate 50 cents each into the group account. The total amount in the group account then will be 2 euro. This amount will be doubled to 4 euro and will be equally divided among the four players. Every player will thus receive 1 euro. You still had 50 cent which you did not donate. At the end of the game you will then have €1,50.



1. What amount do you expect your opponents will donate into the Group account, on average?
0 cent
5 cent
10 cent
15 cent
20 cent
25 cent
30 cent
35 cent

40 cent
45 cent
50 cent
55 cent
60 cent
65 cent
70 cent
75 cent
80 cent
85 cent
90 cent
95 cent
100 cent

2. What amount would you donate into the Group account?

0 cent
5 cent
10 cent
15 cent
20 cent
25 cent
30 cent
35 cent
40 cent
45 cent
50 cent
55 cent
60 cent
65 cent
70 cent
75 cent
80 cent
85 cent
90 cent
95 cent
100 cent

With the next questions you will be choosing one of two amounts of money. Here you will have the choice between receiving 1 euro with 100% certainty, or a higher amount of money with a 50% chance.

The higher amount is tempting of course, but do watch out: the chance for receiving this amount is just 50%. That means that there is also a 50% chance of receiving nothing.

Example

You have to choose between 1 euro for sure or a 50% chance on receiving 2 euro. You decide to choose for the chance to receive 2 euro. Now we will throw up a coin. If the coin lands heads side up, you will receive 2 euro. If the coin lands tails side up, you will receive nothing.

1. What do you prefer?
 - a. 1 euro with certainty
 - b. €1,60 with a 50% chance

2. What do you prefer?
 - a. 1 euro with certainty
 - b. €2,00 with a 50% chance

3. What do you prefer?
 - a. 1 euro with certainty
 - b. €2,40 with a 50% chance

4. What do you prefer?
 - a. 1 euro with certainty
 - b. €2,80 with a 50% chance

5. What do you prefer?
 - a. 1 euro with certainty
 - b. €3,20 with a 50% chance

6. What do you prefer?
 - a. 1 euro with certainty
 - b. €3,60 with a 50% chance

7. What do you prefer?
 - a. 100 euro with certainty
 - b. €160 with a 50% chance

8. What do you prefer?
 - a. 100 euro with certainty
 - b. €200 with a 50% chance

9. What do you prefer?
 - a. 100 euro with certainty
 - b. €240 with a 50% chance

10. What do you prefer?
 - a. 100 euro with certainty
 - b. €280 with a 50% chance

11. What do you prefer?
 - a. 100 euro with certainty
 - b. €320 with a 50% chance

12. What do you prefer?
 - a. 100 euro with certainty
 - b. 360 euro with a 50% chance

Game 3

With the next 12 questions you will have to choose between an amount of money that you receive now or a higher amount of money which you will receive in the future.

1. What do you prefer?
 - a. €10 now
 - b. €10,50 next week

2. What do you prefer?
 - a. 10 euro now
 - b. €11,30 next week

3. What do you prefer?
 - c. 10 euro now
 - d. €12,10 next week

4. What do you prefer?
 - e. 10 euro now
 - f. €12,90 next week

5. What do you prefer?
 - g. 10 euro now
 - h. €13,70 next week

6. What do you prefer?
 - i. 10 euro now
 - j. 14,50 next week

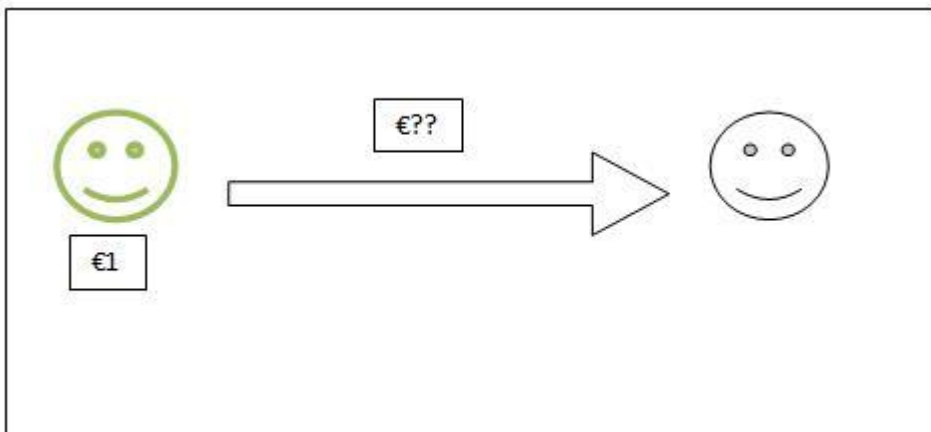
7. What do you prefer?
 - k. 10 euro next week
 - l. €10,50 in two weeks

8. What do you prefer?
 - m. 10 euro next week
 - n. €11,30 in two weeks

9. What do you prefer?
 - o. 10 euro next week
 - p. €12,10 in two weeks

10. What do you prefer?
q. 10 euro next week
r. €12,90 in two weeks
11. What do you prefer?
s. 10 euro next week
t. €13,70 in two weeks
12. What do you prefer?
u. 10 euro next week
v. €14,50 in two weeks

Now we will be playing one last game. This game will be played with two players. Player 1 will receive 1 euro from us; player 2 will receive nothing. Player 1 now has the possibility to donate an amount of his money to player 2.



What amount would you be willing to give to player 2?

- 0 cent
- 5 cent
- 10 cent
- 15 cent
- 20 cent
- 25 cent
- 30 cent
- 35 cent
- 40 cent
- 45 cent
- 50 cent
- 55 cent
- 60 cent
- 65 cent
- 70 cent
- 75 cent
- 80 cent
- 85 cent
- 90 cent

95 cent
100 cent

We thank you for filling out the questionnaire. You have almost reached the end of this survey. We now only have one last question for you.

What do you think the goal of this study is?

If you don't know it, you don't have to fill this in.