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TITTEL:

Debt and religion: are religious people more debt averse and have high willingness to pay their debts off?

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Abstract

Religion has always played an important role in lifestyle of many people. Recently many scholars have started to focus on interconnections between religion and different economic aspects. This thesis is an attempt to define whether religion (through religious beliefs, prayer and other religious behaviors) has an influence on young people's attitudes toward debts and their willingness to pay off their debts.

It was learned an interesting fact, that religious young people (who feel themselves religious, pray, etc) were more debt-averse and had a higher willingness to pay off their debts in comparison to those, who did not consider themselves as religious people, never prayed etc, or in other words, non-religious people. Moreover, results from the current study shows that Islamic people tend to be more debt averse and more "debt responsible" (have higher willingness to pay debts off) rather than Christians.

Keywords: religion, culture, debt, attitude toward debts, willingness to pay debts off, default rate

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1. Problem statement

More and more scholars are attempting to include such factor as religion in the analysis of different economic aspects. At first glance it seems strange. Nevertheless, it has already been proved that religion as a part of culture, may influence people's attitudes and economics as a whole.

This paper addresses such important economic aspect as people's attitude toward debts, since "debt" as a phenomenon has become a norm for many people today - people often have the need for money that they do not have.

Many scholars and researches have conducted studies in this field in attempt to identify why people get into debts. Strange enough they actually ignored such institute as religion as a factor affecting people's attitude toward debts and willingness to pay their debts off.

The study's aim is to investigate whether religious people (who believe in God, in life after death, pray etc) are more debt averse and have high willingness to pay their debts off i.e. whether religion (through religious beliefs, prayer and other religious behaviors) has an influence on it. The target audience (young people, up to 35 years old) was not chosen accidentally. Young people are the drivers of progress i.e. it is important to study their economical behavior.

Since there are only few researches touching upon religion and it influence on people's attitudes toward debts, the present study may contribute a new approach to this field.

2. Literature review

The paper is outlined as follows. In Part 2 the reader is presented with a theory of how religion affects economics and such a form of economic behavior as peoples' attitudes toward debts, in particular. Part 3 describes research methodology and procedure while Part 4, the analysis, presents results of the research. Part 5 provides conclusions based upon the carried research.

2.1. Factors affecting economic growth: Religion?

> *It will not perhaps surprise people that economists have something to say about the economics of religion, since economists believe they have something to say about everything; what is surprising is that religion has something to say about economics."*

Deirdre N. McCloskey, University of Illinois, Chicago

If a group of people were asked to enumerate the factors affecting economic growth, no doubt they would offer different versions, and possibly express the same opinion using different words. Some people would say that these factors are human and natural resources, quality of education, and medicine care. Others would insist on labor, capital or technological progress as the main factors. And of course, all of them would be right. The point is that the likelihood that someone would suggest, for example, such factor as religion as a possible factor is quite low. Indeed, it is not common to take into consideration such factors as religion, level of cultural development, language, and other cultural characteristics, when it comes to measurement of people's economic behaviors, the economic growth of a specific country or region as a whole. Nevertheless, these factors also matter.

Even though religious influence is often neglected in economic researches, the situation has been changing over time. In the past century, more and more scholars have been using conventional methods of economic analysis to examine the way in which religion relates to society and economy in particular.

2.1.1. Max Weber

The first steps in this direction were done by Max Weber, a German sociologist, economist, and politician. In the book *The Protestant Ethic and the 'Spirit' of Capitalism* (1904, 1905)[1] he suggests that religion and economics are closely connected. The book introduces the idea that culture (in the form of the protestant ethic) is better adapted to fit capitalism. Weber found out that the most successful people in Germany at that time (populated by both Protestants and Catholics) were the Protestants. Moreover, the most rapidly developing countries were Protestant, such as USA, the Netherlands, and England. Robin Grier in his study (1997) also proves Weber's hypothesis that Protestantism is positively related to economic growth.

If we look through the researches on this topic conducted so far, we will see that some of them confirm the influence of religion on the economic growth (Weber, 1905; Grier,1997; Barro and McCleary; 2003, Harrison, 2006; Kumar, Page and Spalt, 2011) and ones which completely refute that fact (Lewis 1955; Wonsub Eum, 2011).

2.1.2. Barro and McCleary

One of the reasons why scholars exclude religion from their economic theories is that religion is hard to be measured. "People's thoughts such as how much they find themselves as religious persons cannot be included in calculations, partly because their answers may be too subjective, partly because the results are often not in numbers" (Eum, 2011, p.5). Nevertheless, Robert J. Barro and Rachel M. McCleary (2003), a husband-and-wife team based at Harvard, found the way to measure people's attitude toward religion. They use three variables: monthly church attendance, belief in hell, and belief in heaven to measure people's religiosity. In more recent research (Barro and McCleary, 2002) the authors investigated the fact that religiosity declines overall with economic development. The authors show that these measures of religiosity are positively related to the level of education and children in the family while negatively related to urbanization. Also increase in these religious beliefs (in hell, heaven and after life) may stimulate economic growth. The other findings presented by Barro&McCleary (2003) research include the fact that in two countries with similar rates of populations' belief in heaven and hell, the one in which church attendance is greater would have slower economic growth.

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[1] Translated into English by Talcott Parsons in 1930

Barro and McCleary (2003) suppose that the more intense religious beliefs may stimulate growth because "they help to sustain aspects of individual behavior that enhance productivity" (Barro and McCleary, 2003, p. 37).

Nevertheless, Wonsub Eum (2011) and the Nobel Prize laureate W. Arthur Lewis (1955) are among the few scholars who expressed their skepticism that religious beliefs had any significant influence on economic behavior. Wonsub Eum (2011) refuted Barro&McCleary's theory by proving in his research papers that difference in religiousness does not have a significant influence on economic growth.

2.1.3. Lawrence E. Harrison

Lawrence E. Harrison, the Senior Research Fellow and Adjunct Lecturer at the Fletcher School at Tufts University, suggests that the reasons why some countries are more developed than others, lie in the cultural differences of these countries. He maintains that some cultural characteristics favor modernization while others are obstacles to economic growth[2]. In his book *The central liberal truth: how politics can change a culture and save it from itself* (Harrison, 2006) he notes that, for example, such factor as "geography, including climate and resource endowment, also matters, not only in its direct impact on economic development but also through it influence on culture" (Harrison, 2006, p.2).

The title of the book refers to the famous Daniel P. Moynihan's statement [3] *"The central conservative truth is that it is culture, not politics that determines the success of a society. The central liberal truth is that politics can change the culture and save it from itself"*. Harrison suggests defining "culture" not as literature, art, and music, but as the body of values, beliefs, and attitudes that members of a society share. In Harrison's opinion, culture is powerfully influenced by religion.

It is worth noting that Lawrence E. Harrison was not the first scholar to suggest regarding *culture* as an essential component which influences people's lifestyle and the economic situation within a country in general. In his book (Harrison, 2006) he refers to the work of the Argentinean journalist and writer Mariano Grondona, who had developed a model, or a typology of progress-prone and progress-resistant societies. The typology comprised a list of cultural factors that

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[2] Ya. Shokola. Cultural Code and Progress. Papers of the round table in St. Petersburg with Lawrence E. Harrison (in Russian). http://www.opec.ru/1295413.html
[3] Daniel Patrick Moynihan was an American politician and sociologist (1927-2003)

influence economic progress. In the typology cultures that are favorable to economic development are contrasted with the ones that resist it. Harrison supplemented Grondona's typology with his own aspects, so that the final version of the typology consists of 25 factors (Appendix A). For each of the 25 parameters there are mirror-images in attitudes. The factors are broken down into four groups: worldview factors, values and virtues, economic behavior, and social behavior. A nation's dominant religion in accordance with Harrison's typology is one important factor.

On the basis of this typology Harrison carried his own research. He examined economic performance of 117 countries, with a population of 1 million or more people each. The majority of these countries identify with one of the six global religions: Protestantism, Catholicism, Orthodoxy, Islam, Buddhism, Hinduism, Judaism, and Confucianism. He ranked each of the countries with respect to 10 indicators. The data are presented in both weighted and unweighted averages with separate calculations for Protestant, Catholic, and Confucian countries in the First World. Arab countries are grouped separately (Appendix B). Some of the main conclusions which he draws from it are the following:

- Protestant, Hewish, and Confucian societies do better than Catholic, Orthodox Christian, and Islamic societies.

- Confucianism has been far more conductive to modernization than Buddhism, Islam, or Hinduism.

- Catholicism is less conductive to progress than Protestantism

- The Nordic countries (such as Norway, Sweden, Island, Finland, and Denmark), which have a Lutheran background, have been champions of progress.

Lutheranism is a source of much of the Nordic value system that has produced extensive welfare programs, high educational levels and high quality entrepreneurship (Harrison, 2006).

The economic success of the Nordic societies and Protestant societies in general, suggests that Weber was right and cultural factors may influence economic growth.

2.1.4. Gallup Global Report

Gallup Global Reports[4] conducted a survey in 114 countries in 2009. The survey showed that religion continues to play an important role in many people's lives worldwide. The outcome of the survey evaluation is that each of the most religious countries is relatively poor, with a per-capita GDP below $5,000 (Crabtree, 2010). Citizens of these countries answered mostly *Yes* (99%) to the question "*Is religion an important part of your daily life*" (Appendix C)[5]. Bangladesh, Niger, Yemen, Indonesia are among them. Citizens of such Scandinavian countries as Sweden and Denmark answered mostly *No* (about 80%) to this question[6].

2.1.5. Other studies

Some scholars examined other aspects that can be in some way explained by religion, such as risk preference (Miller and Hoffmann, 1995), corporate decisions (Hilary and Hui, 2010), gambling (Kumar, Page and Spalt,2011), health (Lars et al, 1989; Levin, 1994; Lee, Newberg, 2005), or happiness (Ellison, 1991; Steiner, Leinert, Frey, 2010; Mochon et al, 2010; Cohen-Zada, Sander, 2012), attitudes toward debts or borrowing (Berggren 1997; Guiso, Sapienza, Zingales, 2003; Baele, Farooq, Ongena, 2011)[7].

Health

In Ellison (1991) members of Protestant churches report substantially greater life satisfaction rather than unaffiliated respondents. Levin (1994) found out that believe in God (for all denominations) affects people's health positively. Larson together with other scholars (1989) chose to examine how religion affects men's blood pleasure. They came to a conclusion that frequent "attenders" of religious services have lower blood pleasure suggesting that both religious attitudes and involvement may have positive effects on cardiovascular hemodynamic. Lee and Newberg (2005) made an overall critical analysis of researches regarding religion and its influence on people's health.

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[4] www.gallup.com
[5] This question was included in the main questionnaire of the current research.
[6] The present research showed that those who answered *No* to the question "Is religion an important part of your daily life" gave also answers that suggest that they believe in God, pray etc. Thereby this question in isolation cannot be a reliable way to measure respondents' religiosity.
[7] These researches are examined more carefully in the next chapters,

Happiness

Cohen-Zada, Sander (2010) showed that church attendance has a significant positive effect on happiness. The same results were obtained by Steiner, Leinert, Frey (2010). In addition they found out that Protestants are much happier than Catholics. Mochon, Norton and Ariely (2010) documented the benefits of religious involvement. The authors proved that fervent believers benefit from their involvement, while, on the other hand, atheist and agnostics are happier than those with weak believes. Gruber (2005) also investigated the benefits of religious involvement. So, higher level of religious involvement may lead to higher levels of education and income, lower levels of welfare receipt and disability, higher levels of marriage, and lower levels of divorce.

Risk preference

Miller and Hoffmann (1995) examined connection between risk preference and religiousness. They suggested that in some situations women are more religious than man because it can be seen as a certain kind of risk taking to be less religious.

Corporate decisions

Hilary and Hui (2010) examined the influence of community religion on corporate decisions. The scholars found that firms located in US counties with high levels of religiosity tend to exhibit lower risk exposure. Kumar, Page and Spalt (2011) showed that religious beliefs, through their influence on gambling attitudes, may also impact corporate decisions, investors' portfolio choices, and stock returns.

2.1.6. Summary

Given the above-mentioned information it is hard to believe that in the 21st century there are still scholars who deny religion's impact on people's life and on the world economy in general. Therefore economists should pay more attention to religion as an important factor affecting economics.

2.2. Religion and debt

This study is dedicated to examination of the connection between young people's religiosity and their attitudes toward debts and willingness to pay their debts off. Before elaborating on the role religiosity plays in people's attitude toward debts and their willingness to pay their debts off, it is important to define the main terms we are going to use: religion and debt.

This part provides also review of the researches relevant to the present study.

2.2.1. Definitions of the main terms

Religion

Actually, it is difficult to provide a comprehensive definition of the word religion, since everyone has their own understanding of this word. At the same time this word can mean nothing for some people.

Some argue that there is no such thing as religion – there is only culture. Jonathan Zittell Smith, a historian of religions, supports this idea.

Daniel L. Pals, professor of the University of Miami, USA, in his book "Eight theories of religion" (2006) has collected different views on the theory of religion. The author refers to the studies of such scholars as Karl Marks, Edward B. Tylor, James G. Frazer, Émile Durkheim, Sigmund Freud, Max Weber, and others. The book attempts to answer the questions: what is the origin of religion and what is its function?

A good example of a narrow definition of religion is the common attempt to define it as "belief in God". But according to Tylor, the English anthropologist (1832 –1917), religion cannot be simply defined as "belief in God". This definition is suitable for Christians but it excludes those who are religious but believe in other gods than Christians. So he proposes to use the definition "religion is a belief in spiritual beings". Devoted people would say that they believe in a spiritual being such, as God or Allah, because that being actually speaks to them, supernaturally, e.g. through the Bible or the Quran (Pals, 2006).

According to the Dictionary of Philosophy of Religion, the most popular definition of religion is that "religion is a tradition, such as Judaism, Christianity, Islam, Hinduism, or Buddhism, or those traditions like them" (2010, p. 196).

When it comes to the etymology of this word, the origin of "religion" is the Latin word *religare* meaning "to bind fast".

Other dictionary definitions of "religion":[8]

1. Barns & Noble (Cambridge) Encyclopedia (1990):

   "...no single definition will suffice to encompass the varied sets of traditions, practices, and ideas which constitute different religions."

2. The Concise Oxford Dictionary (1990):

   "Human recognition of superhuman controlling power and especially of a personal God entitled to obedience"

Since there are so many definitions of this concept, we will use a combination of the two following explanations of the term religion in the present research:

1. Religion is the *belief* in and worship of a superhuman controlling power, especially a personal God or gods[9].

2. Religion is a collection of cultural systems, belief systems, and worldviews that relate humanity to spirituality and, sometimes, to moral values[10].

The four world's largest world religious groups are Christianity, Islam, Buddhism and Hinduism. These religious groups are estimated to account for between 5 and 7 billion people.

Debt

Psychology of debt has three aspects: reasons why people get into debt; behavioral and psychological phenomena associated with being in debt; and how people can be helped out of debt. These three aspects suggest that debt is not only a psychological phenomenon. It is a form of *economic behavior* (Mewse, Lea, Wrapson, 2010).

The word debt means owing something (basically money) with an obligation to pay it back. According to the Oxford Dictionaries, debt is a sum of money that is owed or due[11].

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[8] http://www.religioustolerance.org
[9] Online Oxford dictionaries http://oxforddictionaries.com
[10] From Wikipedia, the free encyclopedia www.wikipedia.org/

There are many reasons why people get into debts. Some of them are scarce savings, gambling, poor money management, unemployment, diseases etc. It seems that people are very vulnerable to debts. Over the last 20 years debt has become an integral part of people's lifestyle. As people keep on spending they find themselves swimming in the pool of debt. Scholars have already started to examine why people get into debts (Davies& Lea, 1995; Boddington & Kemp, 1999; Lea, Webley & Bellamy, 2001; Penman and McNeill, 2008; Zhang & Kemp, 2009; Mewse, Lea, Wrapson, 2010).

Students' attitudes towards debts

Studies devoted to students' attitudes toward debts are perhaps the most frequent. Davies and Lea (1995) have developed a scale to measure UK student's attitude toward debts. This scale was used in the later researches, including the present one. They concluded that students having higher debt level are more tolerant to debts. Boddington & Kemp (1999) suggested that acquisitions of debts increase tolerance rather than vice versa.

Lea, Webley & Bellamy (2001) considered not only the undergraduate students' views but also the views of prospective students, finding that prospective students were relatively avoidant or intolerant of debt. Penman and McNeill (2008) examined the purchase habits of a group of young consumers in regard to non-essential consumption and use of debt. The young people showed a relaxed attitude to debt and consumer purchasing.

Examining New Zeeland students' attitudes toward debts, Zhang & Kemp (2009) found out that students' debts grew in proportion to the length of their studies. Also they proved an interesting thing, that students with higher debt levels were as happy as those with no debt.

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[11] Online Oxford dictionaries http://oxforddictionaries.com

2.2.2. Religion and attitude toward debt

This part provides review of the studies that have been done so far in order to outline the connection of "religion and debt".

The Bible's and the Quran's view

Different religions seem to have similar approaches toward debts. Let's consider the viewpoints of two of them, which are the most popular ones in Norway.

Generally the Bible neither forbids getting into debts nor encourages it, only saying that the borrower becomes slave to the lender (Proverbs 22:7). That may mean that those who live in accordance with the Holy Bible may be debt avoidant. When it comes to paying debts off, the Bible says that "we are required to pay back what we borrowed" (Psalm 37:21, Ecclesiastes 5:4) thereby pointing that debts should be paid off in time.

Islam neither prohibits loans and borrowing money. But there are some regulations when it comes to borrowing money like e.g. prohibition of interest rates and other regulations coming from the Quran. At the same time, "God will help followers to pay back obligations" meaning that Muslims are also encouraged to pay back their obligations. When it comes to borrowing money and paying it back, some people have no intention of repaying it. Islam prohibits such intentions and insists on fair deals in all situations (Salahi, 2011).

Literature review

There is only a few studies concerning religion (religiosity or religion beliefs) and its influence on such economic behavior as people's attitudes toward debts (Berggren 1997; Guiso, Sapienza, Zingales, 2003; Baele, Farooq, Ongena, 2011).

Berggren (1997) examined religion's affects on human behavior and on non-payment of debts in particular in 1990s in Sweden. The author argued that Christian religious involvement influences non-payment. Protestant Christians can be expected to be less inclined not to pay their debts.

Italian scholars, Guiso, Sapienza, Zingales (2007) found that "on average, religious beliefs are associated with ''good'' economic attitudes" (Guiso, Sapienza, Zingales, 2007, p. 225). Particularly, religiosity is associated with a higher emphasis on thrift and a greater sense of individual responsibility.

According to Baele, Farooq, Ongena's research (2010) religion may play a role on people's attitude toward debts. The scholars maintain that pious Muslims default less on Islamic loans rather than on conventional ones[12].

The ECMC Group Foundation (Horn et al, 2002) has conducted a research in order to define whether *cultural* attitudes toward borrowing money affect student loan taking. The authors of the research found out that there are differences among ethnic groups in attitudes toward borrowing money, but they appear to be socio-economic, not ethnic.

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[12] This research is examined more carefully in the next chapter,

2.3. Being debt responsible

Generally, for someone, it can be a pleasure to enjoy borrowed money now and pay it back later. Nevertheless, thinking about borrowing money, people must consider repayments of this money and other consequences (interest rates, deadlines, etc).

Being debt responsible means that a person is responsible for his/her debt and debt's payoff without making excuses or trying to find easy ways to avoid paying the debt off (Beating Broke, 2009).

There are some indicators of people's "debt responsibility". Loans default rate and Non-performing loans rate (NPL) are among them.

Default rate indicates the number borrowers who fail to remain current on their loans. It is defined as percentage of loans that are late in payments by 90 days or more (in some definitions – by 30 days or more). To be more precise, the default rate index is a ratio of the number of loans that are late in payments and the total number of loans.

Non-performing loans rate (NPL) indicates the sum of money which the debtors are at least 90 days late in repaying of. A nonperforming loan is either in default or close to being in default. NPL rate is a ratio of the sum of money in non-performing loans and the total lending.

The difference between the two indexes is that the default rate is the number of loans while the NPL rate is the sum of loaned money.

The information about default rate is used by lenders to determine their risk exposure and the economists to evaluate the health of the overall economy[13].

The next paragraphs of Part 2.3 provide examples based on these indexes.

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[13] www.investopedia.com

2.3.1. Pious Muslims are less likely to default on loans

One of the most interesting and unique researches connecting to religion and people's attitudes toward debts, is about both Islamic and conventional loans. The research is unique because the authors argue that no one has received such results yet.

Several scholars (Baele, Farooq, Ongena, 2010) have conducted a research study on Islamic and conventional (non-Islamic) loans. To be more precise, both types of banking (Islamic and conventional) were compared in terms of *loan default rates*. The main outcome of this research is that Islamic loans are less likely to default than conventional ones, suggesting that religion, either through individual piousness or network effect, may play a role in the default rate level.

The dataset covers all the loans that were outstanding in Pakistan during the period from 2006 till 2008 (about 150 000 loans). Pakistan is one of few countries in the world where both types of banking are coexisting. Bahrain, Iran, Malaysia, UAE, Sudan, Pakistan are the countries with the highest number of Islamic banks.

Speaking about the differences between the Islamic banking and the conventional type of banking it is important to mention that Islamic banking is consistent with the Shari'ah low. The main principles are either directly based on the Quran, the sacred book of Islam, or on the Islamic jurisprudence that is being developed by Islamic scholars. The key difference is the fact that interest (riba) is prohibited in Islamic banking. Nevertheless, they are not acting as religious institutions. Like other banks they are profit-maximizing institutions. But they attract religious people: if a Muslim lives in accordance with the Quaran, he or she cannot use services prohibited by It[14].

Thereby, religious Muslims choose Islamic banking and obtain Islamic loans. This type of loans is less likely to default rather than a conventional one. Moreover Islamic loans are less likely to default during Ramadan (the holy holiday and the Islamic month of fasting), meaning at the same time that religious people default less on their loans.

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[14] There are however some exceptions

2.3.2. Are Norwegian citizens responsible when it comes to debts?

Little research of this topic has been conducted at this stage. According to Harrison's researches (Harrison, 2006)[15], Norwegians as citizens of one of the Nordic countries should be "responsible" when it comes to debts, since Lutheranism is a source of much of the Nordic value system. That means that in this context Norway should have a relatively low level of NPLs.

According to the information obtained from the website of the Government of Norway[16], the *non-performing loans (NPL)* levels for Norwegian and Swedish banks in 2008, 2009 were the lowest ones in comparison to the same indexes for such countries as Greece and Ireland (Figure 1).
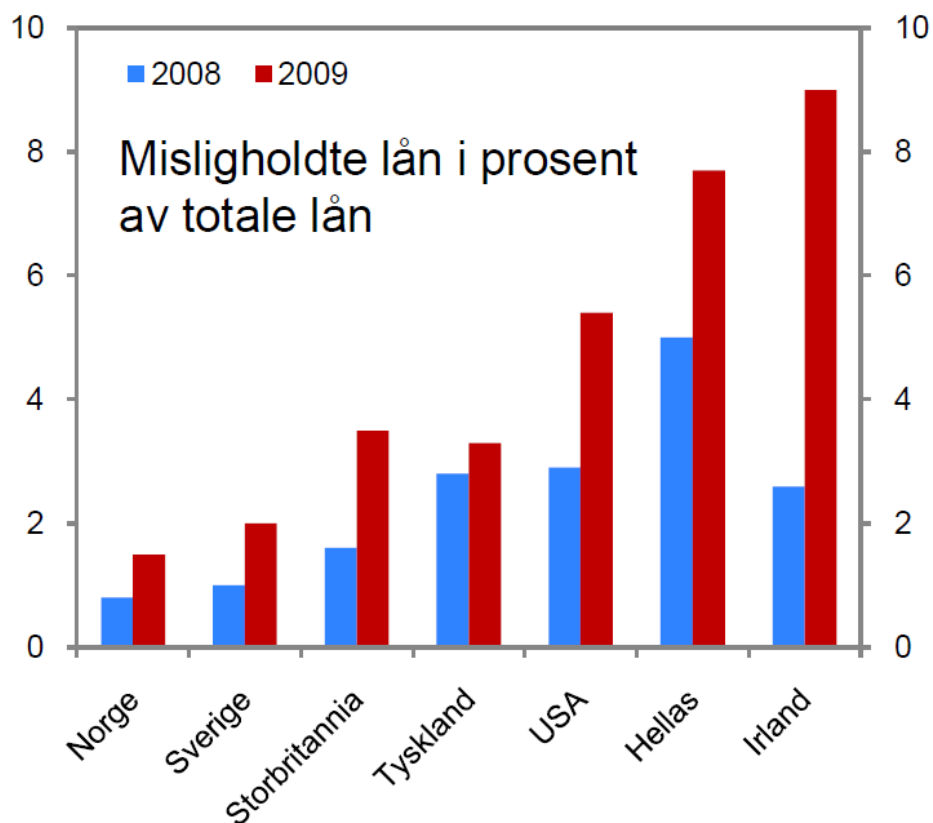
Figure 1. Non-performing loans (NPLs) as a percentage of gross lending[17]

USA, UK and Germany have higher NPL rates but they are still low (up to 6%). Nevertheless, it can be noticed, that one of the highest NPL rate is observed in Greece, a country with Orthodox background. Harrison summarized in his book that "the most advanced Orthodox Christian country, Greece, was the poorest of the European Union members prior to the 2004 accessions"

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[15] See p.8
[16] www.regjeringen.no
[17] Translation: Norge – Norway, Sverige – Sweden, Storbritannia – UK, Tyskland – Germany, Hellas – Greece

(Harrison, 2006, p.95). And we see that his theory (that Protestant countries do better than other) may be confirmed here too. Thereby, countries mainly with the Protestant background: Norway, Sweden, UK, US, Germany[18] have the lowest rate of NPLs, which means a good performance.

Relying on his findings and without taking other facts in consideration, we can expect that Norwegians are generally responsible when it comes to debts and that the religion (Lutheranism), through the system of values, may have influence on it.

It should be mentioned that this is just a hypothesis and needs strong corroborations!

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[18] Harrison classifies Germany as Protestant (Harrison, 2006, p.91)

3. Hypothesis and research methodology

3.1. Hypothesis

Intuitively it seems that religious people should be more responsible when it comes to debts (are not late in debt payments etc), since they try to "live right" in the way the God (or Allah) accepts[19]. For instance, pious Muslims, choosing Islamic loans, default less on their loans in comparison to Muslims that choose conventional banking (Baele, Farooq, Ongena's research, 2011)[20].

This study is aimed at checking whether religious people are "debt avoidant" (or debt averse) and have a high level of "willingness to pay off" their debts.

3.2. Research methodology

The online survey method was chosen for the method of this study. The sample (N=102) was collected using a popular and user-friendly online survey tool[21]. The data were collected in Norway in May, 2012.

3.2.1. Participants

Since the target audience is young religious people, the survey link has been sent directly to religious young people [22] (those who attend churches, often pray, read the Bible or the Quran etc). Also, the information about the survey was published in some religious groups in the social network[23] (both Islamic and Christians). At the same time, in order to attract other young people (not religious), the survey link was shared among the Norwegian students.

3.2.2. Questionnaire

There has not been yet conducted such a survey, aiming at religiosity measurement, debt attitude measurement, and assessment of the willingness to pay debts off at the same time, thereby the survey was developed from the scratch.

The survey consist of 18 questions, including nominal, ordinal and scale format.

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[19] In case of Christianity, or Islam, for example
[20] See p. 20
[21] www.surveymonkey.com
[22] To the author's friends and friend of friends
[23] www.facebook.com

The first part of the survey consists of the demographic-type questions (questions 1 to 5), including country, gender, age, marital status, occupation (Table 6, Part 1).

Measurement of religiosity

With regard to religiosity (religiousness, piety), there are no clear standards as to what aspects should be measured. Is it core values, beliefs, formal membership, or practice? An American researcher Charles Glock (1968) described *five* dimensions of religiosity: belief, practice, experience, knowledge and consequences (Furseth&Repstad, 2006). Nevertheless, it has become conventional to focus on the *three* aspects of religious commitment, such as belief, practice and affiliation.

Belief in God and in an afterlife is fundamental to most religious. Prayer and services attendance may also indicate people's religious involvement. But on the other hand, "attendance" has different meanings in different religious contexts. For example, Roman Catholics are required to attend church weekly, while Anglicans are not (McAndrew&Voas, 2011). At the same time, some Muslim societies don't encourage attending the mosques by women. Since it was expected that representatives of other religion denominations (not only Christianity) would submit the survey answers, the question concerning the attendance of churches, mosques, or other religious services, was not included in the present survey.

Barro and McCleary in their research (2006) used monthly church attendance, belief in hell, and belief in heaven to measure people's religiosity. Other scholars used four items to assess the religiosity, e.g. church attendance, importance of religious values, confidence in religious values, and self-perceived religiousness (Wilkes, Burnett, and Howell, 1986).

The second part of the survey includes 7 questions (questions 6 to 12) measuring people's religious involvement, or level of religiosity (Table 6, Part 2). The first two questions are about religious affiliation:

- To which religious denomination do you belong? (Christianity (all denominations), Islam, other, none)

- Do you belong to any church, denomination, or religious community? (yes, no)

The idea to have the question "Is religion an important part of your daily life? (yes, no)" comes from the Gallup Global Reports' research conducted in 2009 (Crabtree, 2010). It is expected, according to the Gallup survey results, that Norwegians answer mostly *No*[24].

The fourth question "How religious you feel you are? (Very religious, Moderately religious, Slightly religious, Not at all religious, or Anti-religious)" comes from the Wilkes, Burnett, and Howell's research (1986).

The last questions (10-12) concerning measurement of people's level of religiosity were first asked by Rohrbaugh & Jessor research (1975). To be more precise, it includes the questions touching *Ritual religiosity* (prayer) and *Theological religiosity* (belief in God, belief in life after death).

Measuring attitudes toward debts

Part 3 consists of the questions measuring people's attitudes toward debts (questions 13 (1-8)) and peoples' willingness to pay debts off (questions 13 (9,10), 14 -18) .

Question 13 has 10 mini-items, taken from Davies and Lea's scale (1995). The original scale consists of 14 questions. Only certain items of the Davies and Lea's scale are relevant for the present survey, so our scale has only 8 items. The first eight items can be split into two groups: 4 "pro-debt" items and 4 "anti-debt" items (Tables 1,2). The last two items are used to measure people's willingness to pay. Participants were asked to rate each of the 10 items on a five-point scale, where 5 corresponds to – "strongly agree", 1 – "strongly disagree".

Q13-1	You should always save up first before buying something
Q13-4	Once you are in debt it is very difficult to get out of it
Q13-7	Being in debts is basically wrong
Q13-8	I go into debts only in urgent case

Table 1. Debt attitude (anti-debt items)

Q13-2	Debt is a normal part of today's lifestyle
Q13-3	It is OK to be in debt if you can pay it off
Q13-5	It is better to have something now and to pay for it later
Q13-6	Life is too short to think about debts

Table 2. Debt attitude (pro-debt items)

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[24] See p.12

Measuring willingness to pay debts off

The following two items of question 13, taken from Davies and Lea's questionnaires are used here as a measures of respondents' willingness to pay their debts off (table 3).

Q13-9	There is no excuse for not paying for debts
Q13-10	When it comes to debts I always pay them off in time

Table 3. Willingness to pay debts off

Questions 14 to18 also deal with people's willingness to pay debts off. They were created by brain-storming[25], since no researches that could help on this stage have been identified (Appendix D, Part 3).

There are 4 "situation" questions: "one last year left" (question 14), "lottery" (question 15), "invoice" (question 16), and "lunch" (question 18).

Question 17 is a statement "It is acceptable for students to be late in debt payments but it is not true about people holding permanent job positions". The respondents are asked to choose from 1 if they are strongly disagreeing to 5 – strongly agreeing.

3.2.3. Pre-test

It should be mentioned that before the final survey had been shared, a pre-test was conducted (the survey was submitted by 10 respondents). The pre-test showed the weaknesses of the first version of the survey. It was also identified that such direct questions as "do you always pay your debts in time?" are not the proper ones because the respondents answer these questions almost 100% positively: "yes, we do". Therefore the final questions were created in the form of certain situations in order for the answers not to be spontaneous.

Nevertheless, the question-situation number 16 ("invoice"), proved useless when it comes to identifying how "religious variables" affect willingness to pay the invoice since almost 90% of the respondent answered that they would pay the invoice today, ignoring other answers.

3.2.4. Procedure

Young people's attitudes toward debts and willingness to pay their debts off were measured using the qualitative analysis (non-parametric tests analysis). The independent variables are religion-related variables such as "importance of religion, beliefs about God, prayer, belief in life

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[25] With help of four UiS students. The idea for one of the questions belongs to my supervisor.

after death, and feeling religiosity", while dependent variables are "debt attitude related" variables and "willingness to pay" related variables (Figure 2).
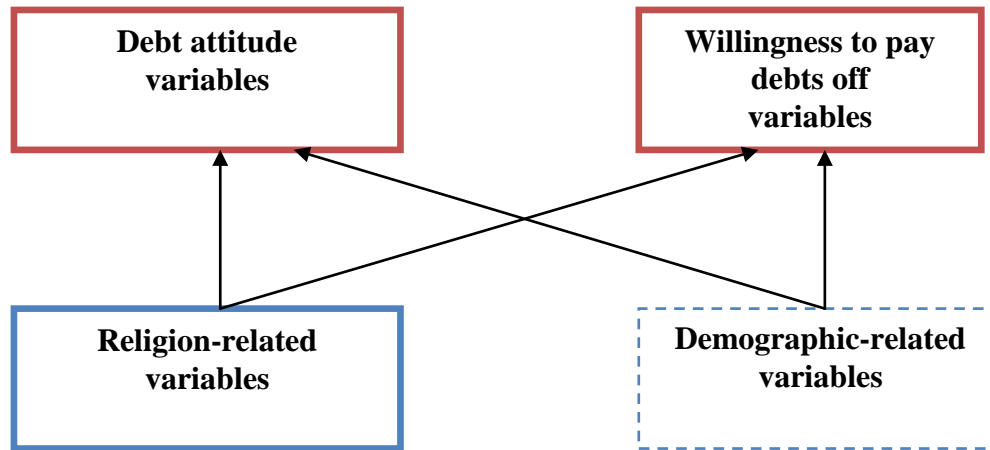
Figure 2. Analysis approach

Independent variables:

Religion-related variables:

- "Importance of religion" (Is religion an important part of your daily life?)

- "Feeling religious" (How religious you feel you are?)

- "Prayer" (Which of the following best describes your practice of prayer or religion meditation?)

- "Belief in God" (Which of the following statements comes closest to your belief about God?)

- "Belief in immortal" (Which of the following statements comes closest to your belief about life after death (immortal)?

Demographic-related variables:

- Gender
- Age
- Marital status
- Occupation

Dependent variables:

Attitude toward debts scale:

- Anti-debt items
- Pro-debt items

Respondents were asked to answer question 13 (the 10 items) by rating the items from "5" (strongly agree) to "1" (strongly disagree). For convenience, in order to obtain a unified scale, the answers covering "pro-debt items" were converted without losing the data and meaning the way as they were asked to rank the "pro-debt" items from "1" (strongly agree) to "5" (strongly disagree). The developed "attitude toward debts" scale shows young people's debt attitude: the higher the score, the higher the "debt avoidance" rate.

Willingness to pay debts off:

- wtp " (willingness to pay debts off, items 9,10 from question 13)
- "one year left" (from question 14)
- "lottery" (from question 15)
- "invoice"(from question 16)
- "lunch" (from question 18)

3.2.5. IT programmers

Data were analyzed using SPSS for Windows (PASW Statistic 18) and MS Office Excel 2007.

4. Data analysis

4.1. Overall analysis

102 young people have submitted the survey (51 male and 51 female respondents). Generally, the respondents are young people aged up to 40 years. The majority, 82% of all respondents, are young people aged from 21 to 30 (Figure 3).
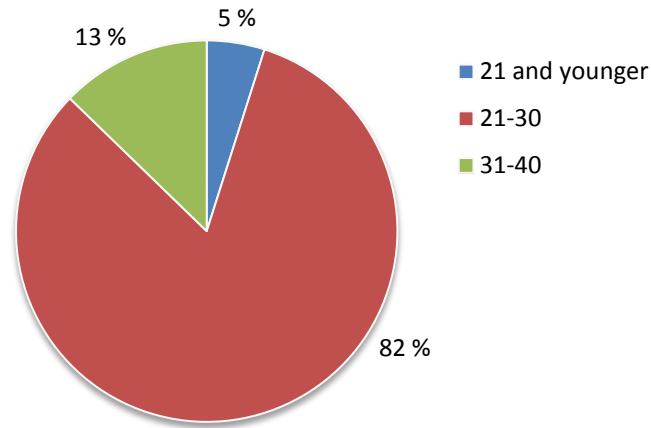
Figure 3. Age

Half of the respondents are single while another half are married, in a relationship, or partnership. The respondents are mostly students (72%), while the proportions of employed and unemployed are 23% and 5% correspondingly (Figure 4).
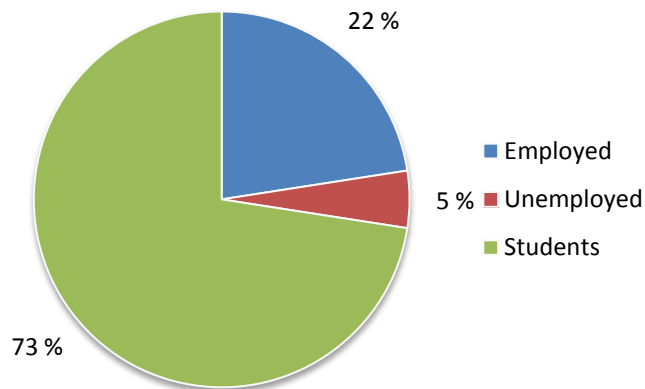
Figure 4. Occupation

When it comes to religious denominations, the majority of respondents are Christians (denominations were not specified in the survey) with 47% of respondents. Almost a quarter (23 %) is those who don't belong to any religious denominations. The third group is Muslims (22% of the respondents) and there are 8 % of respondents who belongs to other religious denominations (Figure 5).
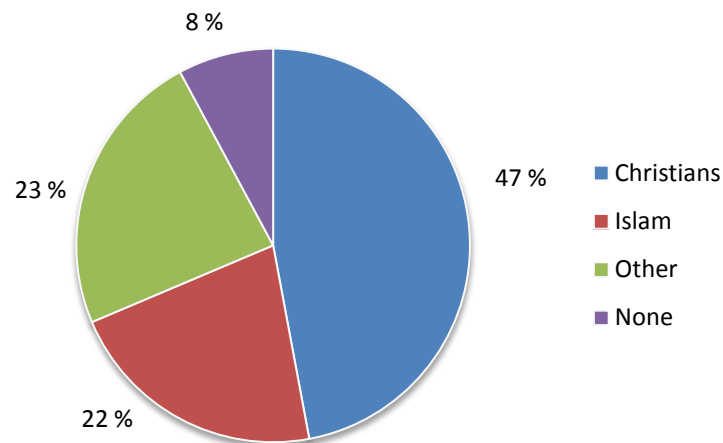
Figure 5. Religion denominations

The respondents were questioned about whether religion is an important part of their daily life. The majority answered *No* (59%). Referring to the Gallup survey, Norwegians are expected to answer mostly *No*[26]. The further analysis showed that some of those who answered this question as *No*, gave also answers that suggest that they believe in God, pray etc. Therefore this question in isolation cannot say for sure whether the person is religious or not. Some Norwegian students commented this as they don't really feel themselves as religious people, even though they attend the church some times, pray or believe in God. Church attendance for Norwegians is more about tradition rather than religious involvement. About 91% of Muslims and less than half (42%) of Christians answered that religion is an important part of their daily life.

This is how the respondents define feelings about their religiosity: 14 % of the respondents feel they are very religious, 27 % are moderately religious, the majority (31 %) is slightly religious, and 20 % are not at all religious. In addition there are people (8%) who defined themselves as anti-religious (Figure 6).

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[26] See p.12, 24.
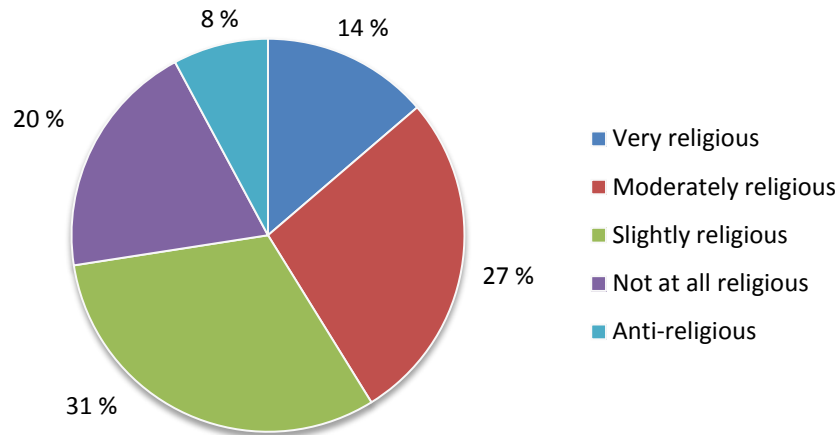
Figure 6. Feelings about religiosity

At this stage it can be suggested that the target audience is covered: there are religious and non-religious people who had submitted the survey. Therefore it is possible to run the analysis in order to define whether religious people[27] are debt averse and have a higher willingness to pay their debts off in comparison to non-religious ones.

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[27] In the present research: those who define themselves as religious people, who believe in God, in afterlife (immortal), or pray etc.

4.2. Religious people's attitude toward debts and it measurement

The analysis of people's debt attitudes is based on the modified Davies and lea scale (1995). The present research's scale consists of 8 items related to young people's attitude toward debts (question 13, 1-8).

4.2.1. Algorithm

The present analysis consists of the following steps:

Step 1. Define variables (Figure 7):

Independent variables: **Religion-related variables**	Dependent variables: **Debt attitude scale, 8 items**
1. Beliefs in God 2. Prayer 3. Beliefs in immortal 4. Importance of religion 5. Feeling religious	var 1 var 2 var3 … var7 var8
Demographic variables	
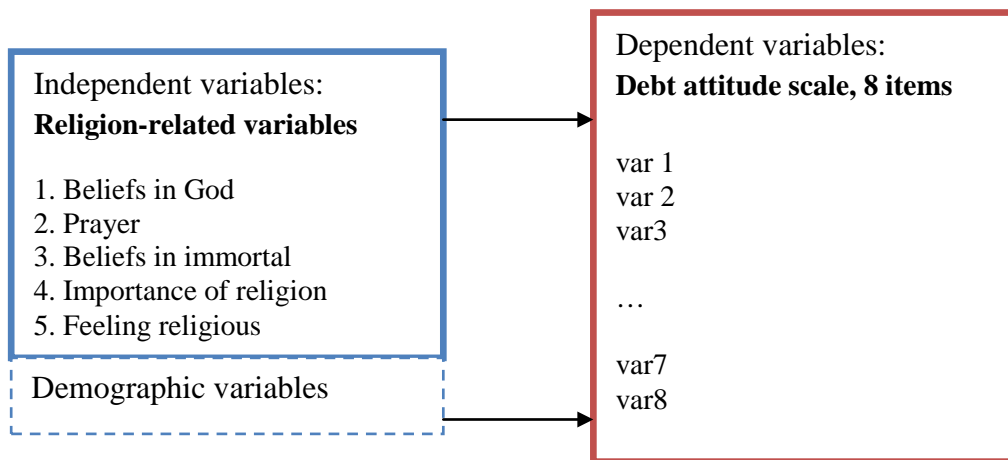
Figure 7. Variables definitions

Step 2. Check the reliability of our new scale (Cronbach's alpha).

Step 3. Compute in SPSS a new variable "debt attitude" from the debt attitude scale:

Debt attitude variable = (var1 + var2 + var3 + var4 + var5 + var6 + var7 + var8)/8

Step 4. Run in SPSS a "compare means" analysis for each of religion-related variables and debt attitude variable. Plot the graphs.

Step 5. Run a non-parametric Mann-Whitney (or Kruskal-Wallis) test in order to define whether the results obtained during Step 3 are significant.

Step 6. Sum up

4.2.2. Variables' definition

There are 5 religion-related questions defined as the most important ones in the present study (independent). The dependent variable (debt attitude) is rating (ordinal), and hence a non-parametric test is appropriate in this case - the Mann-Whitney U test for two samples of Kruskal-

Wallis test for more than two samples (the nonparametric counterpart of an independent measures t-test).

4.2.3. Reliability

It was obtained in the present study the Cronbach's alpha[28] of 0,73 (Table 3) suggesting that the items in our new scale have an "acceptable" consistency. The Cronbach's alpha from a sample of UK students founded by Davies and Lea (1995) equals 0,79.

Reliability Statistics

Cronbach's Alpha	N of Items
.731	8

Table 4. Cronbach's alpha

4.2.4. "Compare means" analysis

The "compare means" analysis was run at this stage. The procedure measures an average attitude toward debts for different groups of answers. For this purpose a new variable was created: the 8 debt-related items were used to compute our new variable - "debt attitude" in SPSS. A higher level of means (closer to 5) indicates more debt aversion (as it is shown in *Step3*).

The overall analysis of the answers shows that those who define themselves as religious people (consider religion as important part of their daily life, pray, and feel very religious) seems to be more debt averse (the level of debt aversion is higher). Also it was found that Islamic respondents are more debt averse than Christian respondents. All of these results are statistically significant.

Religion-related variables

Those people who consider that religion plays an important part in their life are 7% more debt averse (mean=3,35; SD=0,75) than other respondents (mean=3,10; SD=0,63), answering *No* (Figure 8)[29].

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[28] Cronbach's alpha is the coefficient of reliability, and measures how well each individual item in a scale correlates with the sum of the remaining items.
[29] The vertical numbers (average means) on the Axis Y of all the charts show the level of debt aversion: large numbers of means indicate more agreements with the items in the scale i.e. high debt aversion (scale from 1 to 5).

Is religion an important part of your daily life?
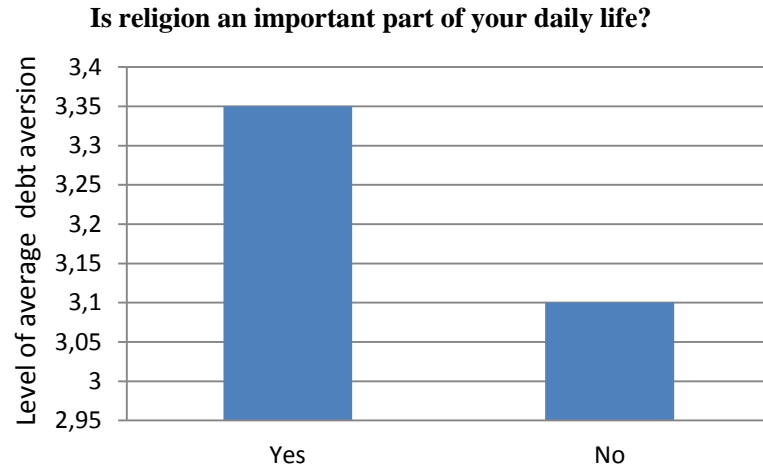
Figure 8. Importance of religion

People, feeling themselves as very religious (mean=3,61; SD=0,66), appeared to be more debt averse than not at all religious people (mean=3,01; SD=0,60), Figure 9.

How religious you feel you are?
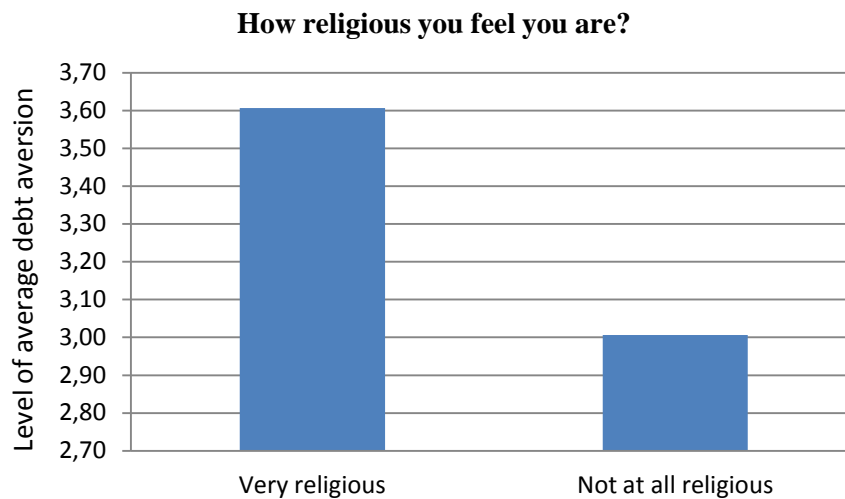
Figure 9. Feeling religious (for two groups)

The next religion-related variables are "prayer", "beliefs in God", and "believes in afterlife". People, who use to pray every day i.e. prayer is a regular part of their life (mean=3,37; SD=0,81) are more debt averse than those who never pray (mean=3,22; SD=0,60), Figure 10.

Practice of prayer or religious meditation
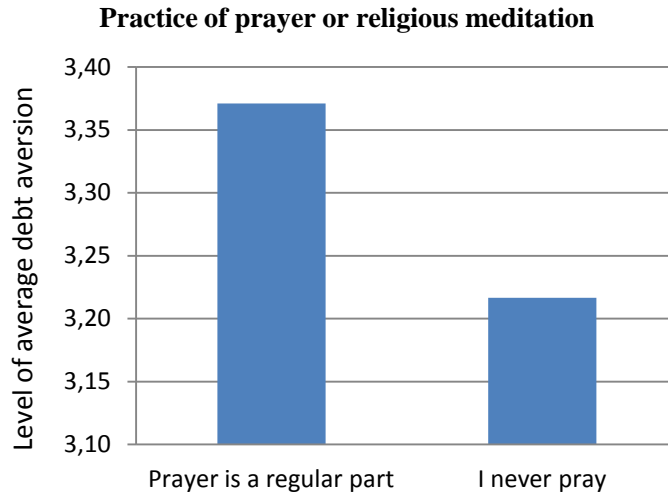
Figure 10. Prayer

When it comes to religious beliefs (in God or afterlife), those who believe in God (mean=3,25; SD=0,80) are more debt averse than non-believers (mean=3,14; SD=0,64), Figure 11.

Which of the following comes closest to your belief about God?
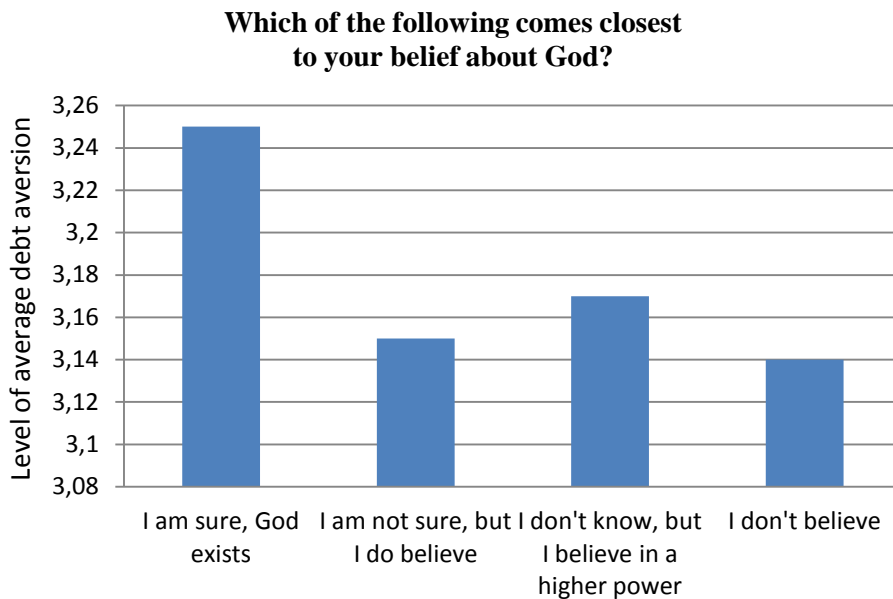
Figure 11. Beliefs in God

In the situation of "believing in after life" the difference in answers between those who believe in afterlife and those who do not, is not obvious.

Islamic people (mean=3,41; SD=0,67) showed a higher level of debt aversion (11% more debt averse) in comparison to Christians (3,04; SD=0,70). It should be mentioned that among those who identify themselves as Christians, there are people who do not believe in God, afterlife and do not pray and who do not count religion as an important part of their daily life. It can be

suggested that this happens because the fact that Norwegian young people use to identify themselves as Christians, meaning a traditional or national aspect, because Lutheranism (as a Christianity denomination) is a State religion[30] but not a "true" religion.

Demographic-related variables

It was also found that female respondents (mean=3,25) are 3 % more debt averse rather than man (mean=3,14). Interestingly, employed people (mean=3,47; SD=0,64) are about 10% more debt averse in comparison to students (mean=3,11; SD=0,69).

4.2.5. Significance

The next important step of the analysis is to check whether the results obtained are significant. As it was mentioned, the non-parametric tests would be used on this stage. Wilcoxon-Mann-Whitney U test was chosen to measure whether the differences between answers obtained from the respondents are statistically significant. Kruskal-Wallis[31] test measures the same but for more than two samples. However, not all the results are statistically significant. Table 4 summarizes the information gathered from the SPSS analysis (Appendix E, Appendix F) i.e. which results are statistically significant: a p-value is lower than the significant level α[32].

Variables	Answers	Test	Sign.	p-value, α
1) Importance of religion	Yes/No	Wilcoxon-Mann Whitney	**yes**	0,037<0,050 (5%)
2) Feeling religious	Very religious/Not at all religious	Wilcoxon-Mann Whitney	**yes**	0,018<0,050 (5%)
3) Prayer	From "always pray" to "never pray"	Kruskal-Wallis	**yes**	0,075<0,100 (10%)
4) Beliefs in God	Believe/ Don't believe	Wilcoxon-Mann Whitney	no	
5) Beliefs in immortal	Believe/ Don't believe	Wilcoxon-Mann Whitney	no	
6) Religious denomination	Christianity/ Islam	Wilcoxon-Mann Whitney	**yes**	0,036<0,050 (5%)
7) Occupation	Employed/ Students	Wilcoxon-Mann Whitney	**yes**	0,038<0,050 (5%)
8) Gender	Male/ Female	Wilcoxon-Mann Whitney	no	

Table 5. Non-parametric tests' results

4.2.6. Sum up

It can be suggested that there is a sufficient evidence at the 0.05 level of significance to conclude that those respondents who consider religion as important part of their life and feel themselves very religious are more debt averse than those who feel not at all religious and do not consider religion important. Also at the same level of significance it can be concluded that Islamic respondents are more debt averse than Christian ones. Unfortunately, we cannot make the same

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[30] Before May 2012

[31] Wilcoxon-Mann Whitney and Kruskal-Wallis tests: when dependent variables are either ordinal or interval.

[32] That means that the null hypothesis (there are no differences) is rejected.

conclusions about such variables as beliefs in God and beliefs in immortal, since the tests showed that there is no significant difference between attitudes toward debts of those who believe in God, or immortal (in afterlife) and those who do not.

Wilcoxon-Mann Whitney test was run for the variable "prayer" (for two samples: those who always pray and those who never pray), but the p-value appeared to be 0,236. Nevertheless, Kruskal-Wallis test (for all the answers i.e. for more than two independent samples) allows to conclude that at the 0,1 level of significance that there are differences between average debt attitude of those who always pray, pray sometimes (when I want, during formal ceremonies etc) and never pray (Figure 12). Those who pray regularly tend to be more debt averse, than those who pray rarely or never pray.
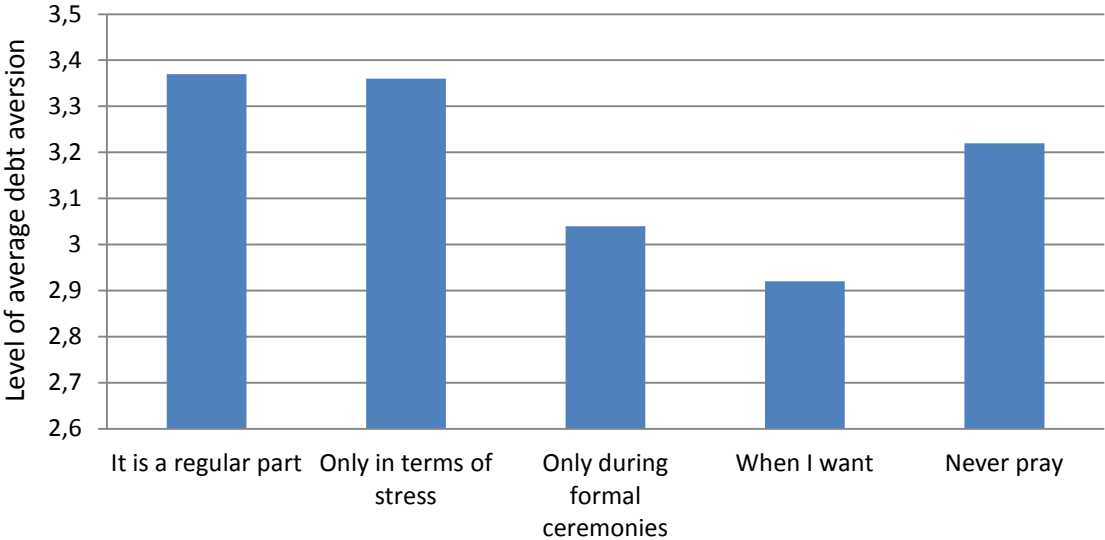
It is also statistically significant (5%) that employed people are more debt averse than students. However, difference between male and female debt aversion is not statistically significant.

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[33] The vertical numbers (average means) on the axis Y of the chart show the level of debt aversion: large numbers of means indicate more agreements with the items in the scale i.e. high debt aversion (scale from 1 to 5).

4.3. Religious people's willingness to pay debts off

This part is aimed to monitor how different groups of the respondent (depending on their religious views, gender, marital status etc) answered the questions from Part III of the survey (Appendix D). This is how young people's "willingness to pay debts off" is measured.

4.3.1. Algorithm

The analysis of religious people's willingness to pay their debts off or in other words "non-payments" (Berggren, 1997) has the following algorithm:

Step 1. Define variables

Step 2. Make cross tabulation analysis in SPSS for each of dependent variables in order to analyze categorical data.

Step 3. Run Chi square test (χ^2)[34] in order to check the significance of the results obtained.

Step 4. Sum up

4.3.2. Definitions of variables

This part deals with the religious-related variables and demographic variables as independent once and dependent variables such as "wtp " (willingness to pay debts off, items 9,10 from question 13), "lottery", "one year left", "invoice", and "lunch" (Figure 13). The dependent variables are all categorical.
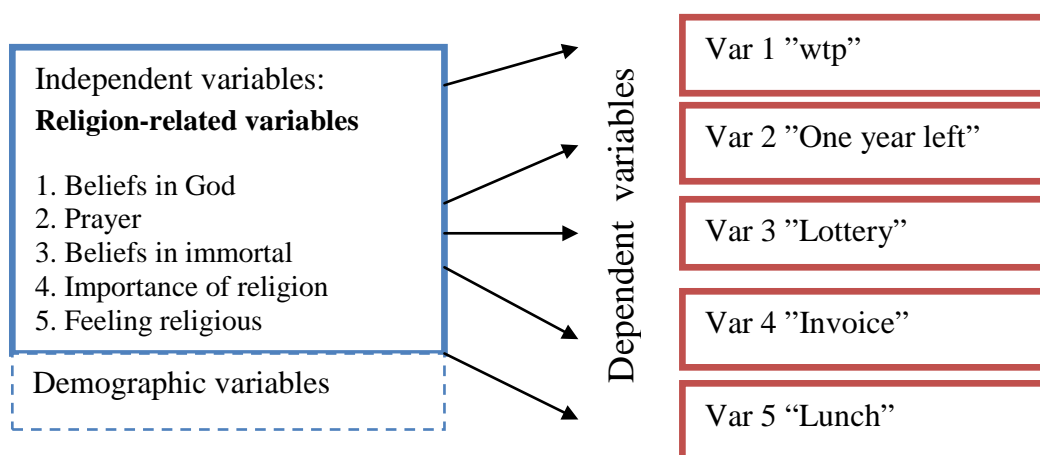
Figure 13. Variables definition

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[34] A chi square (*X²*) statistic is used to investigate whether distributions of categorical variables differ from one another.

4.3.3. Cross-tabulation analysis and Chi-Square test

Variable 1 "wtp"

Variable "wtp" or "willingness to pay debts off" was created by using the items 9,10 from question 13 (Table 3):

$$wtp = (var9 + var10)/2.$$

The same procedure as in the debt attitude analysis was repeated here. However, variable "wtp" does not give any significant results.

Variable 2 "One year left"

This variable represents question14 of the survey (Appendix D, part 3.1). The aim of this question was to put a respondent in an unusual, an extreme situation. Answer 3 (to pay the money back to the bank, at least partially) indicates respondents' willingness to pay dents off.

Figure 14 shows that in the situation "one year to live" 73,8 % of those who consider religion as an important part of their daily life (variable "*importance of religion*"), chose the answer 3 "pay the money back to the bank (at least partially), while only 38,3 % of those for whom religion does not play an important role in their life, would use these money for debt payment.
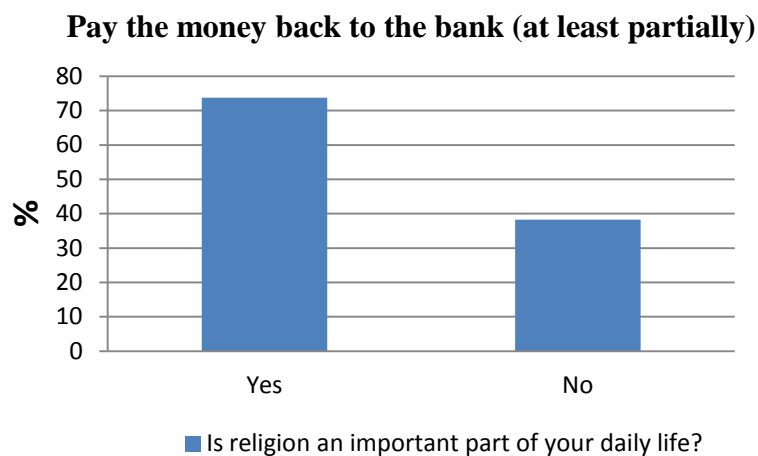
Figure 14. Last year to live/ Importance of religion

The Chi-Square test (Tables 6,7) indicates that difference in the answers is significant: $\chi^2 (3) = 15.522$, p-value = 0,001 ($\alpha = 0,001$).

			Importance of religion		
			no	yes	Total
One year left	1	Count	28	5	33
		% within religimport	46.7%	11.9%	32.4%
	2	Count	6	3	9
		% within religimport	10.0%	7.1%	8.8%
	3 *	Count	23	31	54
		% within religimport	**38.3%**	**73.8%**	52.9%
	4	Count	3	3	6
		% within religimport	5.0%	7.1%	5.9%
Total		Count	60	42	102
		% within religimport	100.0%	100.0%	100.0%

Table 6. Cross tabulation for variable "one year left" and variable "importance of religion"

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	**15.522[a]**	**3**	**.001**
Likelihood Ratio	16.692	3	.001
Linear-by-Linear Association	13.814	1	.000
N of Valid Cases	102		

Table 7. Chi-Square test for variable "one year left" and variable "importance of religion"

At the 10 % level of significance (χ^2 (12) = 19.985, p-value = 0,067) we can conclude that 78,6 % of those who consider themselves as very religious ("*feeling religious*" variable) and 40 % of "not at all religious" respondents would prefer to use these money for paying off the debt to the bank, at least partially (Tables 8,9).

3. Pay the money back to the bank, at least partially	Feeling religious					
	very religious	moderately religious	slightly religious	not at all religious	anti-religious	Total
Count	11	20	11	8	4	54
% within feeling religious	**78.6%**	71.4%	34.4%	**40.0%**	50.0%	52.9%

Table 8. Cross tabulation for answer 3 and variable "feeling religious"

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	**19.985**[a]	**12**	**.067**
Likelihood Ratio	23.955	12	.021
Linear-by-Linear Association	8.569	1	.003
N of Valid Cases	102		

a. 13 cells (65,0%) have expected count less than 5. The minimum expected count is ,47.

Table 9. Chi-Square for answer 3 and variable "feeling religious"

After repeating these steps for other independent variables the following summary table was created (Table 10).

Variables	Answers	Chi-Square	Sign.	p-value, α
1) Importance of religion	Yes/No	$\chi^2 (3) = 15.522$	**yes**	0,001; 0,1%
2) Feeling religious	Very religious/Not at all religious	$\chi^2 (12) = 19.985$	**yes**	0,067; 10%
3) Prayer	From "always pray" to "never pray"	$\chi^2 (12) = 26.885$	**yes**	0,008; 2,5%
4) Beliefs in God	Believe/ Don't believe	$\chi^2 (9) = 21.039$	**yes**	0,012; 2,5%
5) Beliefs in immortal	Believe/ Don't believe	$\chi^2 (9) = 23.826$	**yes**	0,005; 0,5%
6) Religious denomination	Christianity/ Islam	$\chi^2 (3) = 6.296$	**yes**	0,098; 10%
7) Occupation	Employed/ Students	$\chi^2 (9) = 40.555$	**yes**	0,000; >99%
8) Gender	Male/ Female	$\chi^2 (3) = 6.296$	**yes**	0,098; 10%

Table 10. Summary table for dependent variable 2 "one year left" and independent variables

We can maintain that:

- 84 % of those respondents who pray and only 47% of those who do not pray chose answer 3 – to pay the money back to the bank, at least partially (at the 2,5 % level of significance).

- 72,7 % of those respondents who believe that God exists and only 52,6 % of those who do not believe chose the answer 3 (at the 2,5 % level of significance).

- 89,3 % of those who believe in immortal (afterlife) and only 25% of those who do not believe choose the answer 3 (at the 0,5 % level of significance).

- 95,5 % of all Islamic respondents and only 45,8 % of Christian respondents chose the answer 3 (p-value = 0,000; the most significant result).

- 62,7 % of male respondents and only 43,1 % of female respondents chose the answer 3 (at the 10 % level of significance).

The results show that the majority of religious respondents (those who believe in God, in afterlife, who pray, feel very religious) would prefer to remain without debts i.e. they have higher willingness to pay their debts off than non-religious respondents. The most significant

result is that Islamic respondents have a higher willingness to pay their debts off than Christian respondents.

Variable 3 "Lottery"

Variable 3 "Lottery" represents question 15. However there are not either obvious or significant results.

Variable 4 "Invoice"

Answer 1 "pay the invoice today" of question 16 says about respondent's willingness to pay their debts off i.e. they prefer to get rid of the unpaid invoice (it can be considered as debt) without delay. The results show that the majority of those who consider religion as important part of their life, feel very religious, and always pray would choose answer 1. However these results are not statistically significant ($\chi^2 > 0,1$).

Variable 5 "Lunch"

This variable represents question 18 of the survey. Answer 2 "give the money to your colleague and remain hungry" says about respondent's willingness to pay their debts off, meaning that more "debt responsible "respondents would prioritize paying off the debt (100 NOK) to the colleague. After the cross tabulation analysis and Chi-Square test the following results were obtained (Table 11):

Variables	Answers	Chi-Square	Sign.	p-value, α
1) Importance of religion	Yes/No	$\chi^2 (1) = 9.326$	**yes**	0,002; 0,5%
2) Feeling religious	Very religious/Not at all religious		no	
3) Prayer	From "always pray" to "never pray"	$\chi^2 (4) = 11.890$	**yes**	0,018; 2,5%
4) Beliefs in God	Believe/ Don't believe	$\chi^2 (3) = 8.805$	**yes**	0,032; 5%
5) Beliefs in immortal	Believe/ Don't believe	$\chi^2 (3) = 7.240$	**yes**	0,065; 10%
6) Religious denomination	Christianity/ Islam		no	
7) Occupation	Employed/ Students	$\chi^2 (2) = 5.841$	**yes**	0,054; 10%
8) Gender	Male/ Female		no	
9) Age	20 or younger to 31-40		no	

Table 11. Cross tabulation and Chi-Square for variable 5 "lunch" and independent variables

That means that:

- 69% of those who consider religion as important part and only 38,3 % of those who do not count religion important, choose answer 2 "give the money to your colleague and remain hungry" (at the 0,5 % level of significance).

- 67% of those respondents who pray regularly and only 36,7 % of those respondents who never pray chose answer 2 (at the 2,5 % level of significance).

- About 66 % of those who are sure that God exists and only 52,6 % of those who do not believe in God chose answer 2 (at the 5 % level of significance).

- About 69 % of those who believe in immortal (afterlife) and only 50 % of those who do not believe in it chose answer 2 (at the 10 % level of significance).

- 56,5 % of employed people and only 46 % of students chose answer 2 (at the 10 % level of significance).

4.3.4. Sum up

It could be suggested that in this case religious respondents (who consider religion as important part, pray regularly, who believe in God, and in afterlife) are more debt responsible i.e. have higher willingness to pay their debts off than non-religious respondents. Also employed respondents tend to have higher willingness to pay debts off than students.

4.4. Discussion

Limitation

Some of the most important limitations of this study are as follows:

There has not been yet conducted such a survey, aiming at religiosity measurement, debt attitude measurement, and assessment of the willingness to pay debts off at the same time, thereby it was created almost from scratch. Therefore there is a possibility that not all the questions used in the survey serve their functions i.e. measure debts attitude or willingness to pay debts off properly.

The survey was written in English, not in Norwegian, which could lead to misunderstandings of the information in the survey. In addition, the number of respondents is not so high enough to draw solid conclusions.

Religion and attitude toward debts

This study investigated that (based on the new attitude toward debt scale) religious respondents i.e religious young people (those who feel themselves religious, pray regularly, consider religious as important part of their daily life) are more debt averse than non-religious young people. This phenomenon could be explained by the fact that religious people, living in accordance with their religions, would feel uncomfortable if they would not be able to pay back their debts. Therefore, it is better for them to keep off from debts rather than to be in debt and knowing that there are problems with paying them back.

It was found that young Muslims tend to be more debt averse than Christians. If it is considered that debt taking is a risky action, according to Bartke and Schwarze (2008) research, Muslims also demonstrated higher risk-aversion.

In addition it was also found that employed people were more debt averse than students. It makes sense, since employed people value money more than students. Also they tend to put more effort in order to earn while many students (especially in Norway) do not work and use loans.

Willingness to pay debts off

Based on the two situations "one year left" and "lunch", it was investigated that religious young people i.e. those who viewed religion as important part of their daily life, who prayed regularly, who believed in God and in immortality, had higher willingness to pay off their debts rather than non-religious respondents. The cases ("one year left" and "lunch") showed that religious young people would prefer to remain without debts. It could be interpreted as it seems to be

important for them to be honest in front of God (Allah)[35] (situation "one year left") , in front of the colleague (situation "lunch"). Therefore, it can be suggested that religious people have higher moral values than non-religious people i.e. they have more reasons to pay their debts in time i.e. higher willingness to pay their debts off.

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[35] In case of Islam or Christianity, for example

5. Conclusion

This paper analyses religious and non-religious young people's attitude toward debts and willingness to pay their debts off. The main findings are that religious young people tend to be more debt averse and have higher willingness to pay their debts off, meaning that religion (through religious beliefs, practice of praying etc) may influence people's economic behaviors. It is also detected that Muslims (Islamic respondents) are more debt averse than non-Muslims.

It can be useful to know these facts, because it could be applied not only to young people but other age groups as well. The generalization on correlation between willingness to pay off the debt and being religious could be also used as mediator between public services and people, for example, by knowing this, bank managers can adopt their loan-granting strategies for religious and non-religious people.

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Appendix A

Typology of Progress-Prone and Progress-Resistant Cultures
(Based on the original structure of Mariano Grondona with inputs from Irakli Chkonia, Lawrence Harrison, Matteo Marini, and Ronald Inglehart)

Factor	Progress-Prone Culture	Progress-Resistant Culture
WORLDVIEW		
1. Religion	Nurtures rationality, achievement; promotes material pursuits; focus on this world; pragmatism	Nurtures irrationality; inhibits material pursuits; focus on the other world; utopianism
2. Destiny	I can influence my destiny for the better.	Fatalism, resignation, sorcery
3. Time orientation	Future focus promotes planning, punctuality, deferred gratification	Present or past focus discourages planning, punctuality, saving
4. Wealth	Product of human creativity, expandible (positive sum)	What exists (zero-sum)
5. Knowledge	Practical, verifiable; facts matter	Abstract, theoretical, cosmological, not verifiable; debate matters
VALUES, VIRTUES		
6. Ethical code	Rigorous within realistic norms; feeds trust	Elastic, wide gap twixt utopian norms and behavior=mistrust
7. The lesser virtues	A job well done, tidiness, courtesy, punctuality matter	Lesser virtues unimportant; love, justice, courage matter
8. Education	Indispensable; promotes autonomy, heterodoxy, dissent, creativity	Less priority; promotes dependency, orthodoxy
ECONOMIC BEHAVIOR		
9. Work/achievement	Live to work: work leads to wealth	Work to live: work doesn't lead to wealth; work is for the poor
10. Frugality	The mother of investment and prosperity	A threat to equality
11. Entrepreneurship	Investment and creativity	Rent-seeking
12. Risk propensity	Moderate	Low; occasional adventures
13. Competition	Leads to excellence	Aggression; A threat to equality--and privilege
14. Innovation	Open; rapid adaptation	Suspicious; slow adaptation
15. Advancement	Merit, achievement	Family, patron, connections
SOCIAL BEHAVIOR		
16. Rule of law/corruption	Reasonably law abiding; corruption is prosecuted	Money, connections matter; corruption is tolerated

17. Radius of identification and trust	Stronger identification with the broader society	Stronger identification with the narrow community
18. Family	The idea of "family" extends to the broader society	The family is a fortress against the broader society
19. Association (social capital)	Trust, identification breed cooperation, affiliation, participation	Mistrust breeds excessive individualism, anomie
20. The individual/the group	Emphasizes the individual but not excessively	Emphasizes the collectivity
21. Authority	Dispersed: checks and balances, consensus	Centralized: unfettered, often arbitrary
22. Role of elites	Responsibility to society	Power and rent seeking; exploitative
23. Church-state relations	Secularized; wall between church and state	Religion plays major role in civic sphere
24. Gender relationships	If not a reality, equality at least not inconsistent with value system	Women subordinated to men in most dimensions of life
25. Fertility	The number of children should depend on the family's capacity to raise and educate them	Children are the gifts of God; they are an economic asset

Appendix B

Religion summary

Category/Country	Religion[a]	Population[b]	UN Index[c]	Literacy[d]	Female Lit.[e]
Total	Protestant	530			
Weighted Average	Protestant		9.2	99%	99%
Unweighted Average	Protestant		18.8	99%	99%
1st World Wtd. Avg.	Protestant		8.5	99%	99%
1st World Average	Protestant		9.2	99%	99%
Israel	Jewish	6	22	96%	94%
Total	Catholic	904			
Weighted Average	Catholic		58.3	86%	88%
Unweighted Average	Catholic		63	88%	86%
1st World Wtd. Avg.	Catholic		17.4	99%	99%
1st World Average	Catholic		17.3	98%	98%
Total	Orthodox	262			
Weighted Average	Orthodox		58.9	99%	99%
Unweighted Average	Orthodox		62.6	99%	99%
Total	Confucian	1491			
Weighted Average	Confucian		77.8	86%	79%
Unweighted Average	Confucian		34.6	93%	90%
1st World Wtd. Avg.	Confucian		14.5	99%	98%
1st World Average	Confucian		21.5	96%	94%
Total	Buddhist	146			
Weighted Average	Buddhist		92.2	86%	83%
Unweighted Average	Buddhist		42.2	70%	67%
Total	Islam	1122			
Weighted Average	Islam		111.9	65%	54%
Unweighted Average	Islam		105.5	66%	54%
Total	Arab countries	252			
Weighted Average	Arab countries		103.3	64%	51%
Unweighted Average	Arab countries		91.8	68%	58%
Total	Islam: non-Arab	870			
Weighted Average	Islam: non-Arab		114.8	65%	56%
Unweighted Average	Islam: non-Arab		116.6	64%	51%
Total	Hindu	1041			
Weighted Average	Hindu		115	57%	45%
Unweighted Average	Hindu		115	57%	45%

[a]50% or more of population; [b]In millions, source: World Bank, World Bank Development Report 2002; [c]UN Human Development Index 2001, most advanced is 1, least 162; [d]UN Human Development Report 2001; [e]UN Human Development Report 2001; [f]UNDP total fertility rate 1995–2000; [g]Freedom House 2001 Survey, assesses political rights and civil liberties, best = 2, worst = 14; [h]Date of start of democratic continuity; [i]IBRD, World

Religion summary

Fertility[f]	Freedom Total[g]	Dem. Date[h]	Per Cap. GDP[i]	GINI[j]	Trust[k]	Corruption[l]
1.8	2.3	1826	$29,784	36.8	42%	14.9
1.7	2.5	1877	$22,373	32.3	46%	14
1.8	2.3	1826	$30,062	36.8	42%	14.7
1.6	2.5	1852	$26,340	31.4	50%	9.1
2.9	4	1948	$19,320	35.5		16
2.6	5.5	1940	$ 9,358	45.6	16%	45.6
2.9	5.4	1969	$ 9,366	42	22%	45.7
1.4	2.7	1927	$22,890	30.4	24%	24.4
1.5	2.6	1934	$23,311	30.3	32%	22.3
1.3	8.6		$ 7,045	40.4	25%	75.7
1.4	7.2	1985	$ 6,038	34.3	25%	63.8
1.8	11.7		$ 6,691	38.5	51%	52.2
1.5	7.8	1976	$19,133	33.2	47%	27.6
1.4	3.4		$24,239	27.3	46%	25.8
1.4	5		$22,172	31.4	44%	20.3
2.9	8.9		$ 4,813	39.5		
3.8	9.7	1992	$ 2,625	37.3		61
4.1	9.7		$ 3,142	36.3	26%	78.6
4.4	10.7		$ 3,755	39.6	27%	65
4	12.1		$ 4,950	33.7	28%	50
4.3	11.8		$ 5,721	35.8	25%	40
4.3	8.9		$ 2,781	37.5	26%	82
4.5	9.8		$ 2,674	41.3	27%	73
3.3	5	1950	$ 2,390	37.8		71
2.8	5	1950	$ 2,390	37.8		71

Appendix C

Gallup Global Research

Is religion an important part of your daily life?

Asked of adults in 114 countries and areas in 2009

	Yes	No		Yes	No
Bangladesh	99%+	0%	Romania	84%	12%
Niger	99%+	0%	Nicaragua	84%	15%
Yemen	99%	1%	Iraq	84%	11%
Indonesia	99%	0%	Peru	84%	14%
Malawi	99%	1%	El Salvador	83%	16%
Sri Lanka	99%	1%	Colombia	83%	16%
Somaliland region	98%	2%	Ecuador	82%	17%
Djibouti	98%	2%	Turkey	82%	15%
Mauritania	98%	2%	Georgia	81%	16%
Burundi	98%	2%	Turkmenistan	80%	18%
Thailand	97%	2%	Costa Rica	79%	19%
Comoros	97%	2%	Venezuela	79%	21%
Egypt	97%	2%	Bosnia and Herzegovina	77%	21%
Morocco	97%	1%	Macedonia	76%	22%
Afghanistan	97%	3%	Cyprus	75%	24%
Senegal	96%	4%	Poland	75%	19%
Cambodia	96%	3%	Armenia	73%	25%
Cameroon	96%	4%	Mexico	73%	25%
Malaysia	96%	3%	Kyrgyzstan	72%	25%
Nigeria	96%	3%	Moldova	72%	19%
Philippines	96%	4%	Italy	72%	25%
Mali	95%	4%	Greece	71%	28%
Rwanda	95%	5%	Montenegro	71%	28%
Chad	95%	5%	Singapore	70%	29%
Algeria	95%	4%	Chile	70%	29%
Qatar	95%	4%	Croatia	70%	28%
Zambia	95%	5%	Argentina	66%	33%

Appendix C (continue)

Gallup Global Research[36]

Ghana	95%	5%	United States	65%	34%
Congo (Kinshasa)	94%	5%	Ireland	54%	46%
Kenya	94%	6%	Serbia	54%	44%
Bahrain	94%	4%	Israel	51%	48%
Palestinian Territories	93%	7%	Uzbekistan	51%	46%
Nepal	93%	6%	Azerbaijan	50%	49%
Tunisia	93%	5%	Spain	49%	50%
Saudi Arabia	93%	4%	Slovenia	47%	52%
Sudan	93%	7%	Ukraine	46%	48%
Uganda	93%	7%	Kazakhstan	43%	48%
Pakistan	92%	6%	South Korea	43%	56%
Paraguay	92%	8%	Lithuania	42%	49%
Kuwait	91%	6%	Canada	42%	57%
United Arab Emirates	91%	8%	Switzerland	41%	57%
India	90%	9%	Uruguay	41%	59%
Kosovo	90%	8%	Germany	40%	59%
Tanzania	89%	11%	Latvia	39%	58%
Syria	89%	9%	Albania	39%	53%
Bolivia	89%	10%	Hungary	39%	58%
Zimbabwe	88%	12%	Luxembourg	39%	59%
Guatemala	88%	9%	Belarus	34%	56%
Panama	88%	11%	Russia	34%	60%
Ivory Coast	88%	12%	France	30%	69%
Dominican Republic	87%	13%	Vietnam	30%	69%
Lebanon	87%	12%	United Kingdom	27%	73%
Brazil	87%	13%	Hong Kong	24%	74%
Malta	86%	10%	Japan	24%	75%
South Africa	85%	15%	Denmark	19%	80%
Tajikistan	85%	12%	Sweden	17%	82%
Honduras	84%	15%	Estonia	16%	78%

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[36] Source: Gallup Global Research

Appendix D (part 1)

Survey

Part I

Basic info

*1. The country you are living in ...

*2. Gender...

○ Male   ○ Female

*3. Age...

○ 20 or younger   ○ 21-30   ○ 31-40   ○ 41 or older

*4. Marital status...

○ Single   ○ Married

○ In a relationship   ○ Partnership

*5. Occupation...

☐ Student

☐ Employed

☐ Unemployed

☐ Retired

☐ Other

Appendix D (part 2.1)

Survey

Part II

This part consists of 7 questions about your attitude toward religion.

＊6. To which religious denomination do you belong?

○ Christianity (all denominations)

○ Islam

○ Other

○ None

＊7. Do you belong to any church, denomination, or religious community?

○ Yes   ○ No

＊8. Is religion an important part of your daily life?

○ Yes   ○ No

＊9. How religious you feel you are?

○ Very religious

○ Moderately religious

○ Slightly religious

○ Not at all religious

○ Anti-religious

＊10. Which of the following best describes your practice of prayer or religion meditation?

○ Prayer is a regular part of my daily life

○ I usually pray in terms of stress or need but rarely at any other time

○ I pray only during formal ceremonies

○ I pray when I want

○ I never pray

＊11. Which of the following statements comes closest to your belief about God?

○ I am sure that God really exists

○ Although I sometimes question His existence, I do believe in God

○ I don't know if there is a personal God, but I do believe in a higher power of some kind

○ I don't believe in a personal God or in a higher power

Appendix D (part 2.2)

Survey

✱12. Which of the following statements comes closest to your belief about life after death (immortal)?

○ I believe in a personal life after death

○ I believe in a life after death of some kind. But I really don't know what it would be

○ I don't know whether there is any kind of life after death, and I don't know I will ever know

○ I don't believe in any kind of life after death

Part III

This part consists of 6 questions (13-18) about your attitude toward debts.
After the 13th question there are 5 short questions :)

＊13. Please, choose from 1 to 5, where:

5 - Strongly agree
4 - Agree
3 - Uncertain
2 - Disagree
1 - Strongly disagree

	5	4	3	2	1
1. You should always save up first before buying something	○	○	○	○	○
2. Debt is a normal part of today's lifestyle	○	○	○	○	○
3. It is OK to be in debt if you can pay it off	○	○	○	○	○
4. Once you are in debt it is very difficult to get out of it	○	○	○	○	○
5. It is better to have something now and to pay for it later	○	○	○	○	○
6. Life is too short to think about debts	○	○	○	○	○
7. Being in debts is basically wrong	○	○	○	○	○
8. I go into debts only in urgent case	○	○	○	○	○
9. There is no excuse for not paying for debts	○	○	○	○	○
10. When it comes to debts I always pay them off in time	○	○	○	○	○

＊14. Imagine the situation, you are about to die in one year as a result of a certain disease. But at the same time you are still able to live almost a normal life during this period. Also you have 100.000 NOK (~ 17.000 US dollars) just borrowed from a bank for buying a car.

What would you do in this case?

○ Spend these money on traveling, shopping, buying a car etc

○ Grant them to your relatives or friends

○ Pay them back to the bank (at least partially)

○ Give the money for charity

Appendix D (part 3.2)

Survey

*15. Imagine, you obtained 10.000 NOK by winning a lottery. You know that you have the 15.000 NOK debt to be paid during the next 2 month.

In this situation, you would enjoy your money now by shopping, travelling or smth else, rather than use them for paying for the debt

○ Strongly agree

○ You would use most of the money for shopping, travelling etc, and a small portion to pay your debt

○ Uncertain

○ You would use most of the money for paying the debt and the rest for your needs

○ You would use all of these money for paying off the debt

*16. Imagine, today is the 15th of March and you found out that you have completely forgotten to pay the apartment rental invoice. The deadline for the invoice payment is the 2 of March.

What would you do?

○ Pay the invoice today

○ Pay the invoice within a week

○ It is nothing special. You would pay the invoice when you have some time

○ Anyway you are late. So you would pay the invoice together with the next month's invoice

*17. It is acceptable for students to be late in debt payments but it is not true about people holding permanent job positions.

○ Strongly agree

○ Agree

○ Uncertain

○ Disagree

○ Strongly disagree

*18. Imagine, you are at your office. Today you are supposed to pay back 100 NOK borrowed from your colleague. But the colleague would have preferred to get the money last week. You have just noticed that you forgot your wallet with all your credit cards at home. The only money that you have is a 100 NOK banknote. It seems that you will remain without a lunch today. How would you use 100 NOK?

○ Buy a lunch and explain the situation to you colleague

○ Give the money to your colleague and remain hungry

Mann-Whitney Tests (for two samples)

Ranks

Importance of religion		N	Mean Rank	Sum of Ranks
Debt attitude	no	60	46.40	2784.00
	yes	42	58.79	2469.00
	Total	102		

Test Statistics[a]

	Debt attitude
Mann-Whitney U	954.000
Wilcoxon W	2784.000
Z	-2.084
Asymp. Sig. (2-tailed)	.037

a. Grouping Variable:1importance of religion

Ranks

Feeling religious		N	Mean Rank	Sum of Ranks
Debt attitude1	very religious	14	22.29	312.00
	not at all religious	20	14.15	283.00
	Total	34		

Test Statistics[b]

	Debt attitude1
Mann-Whitney U	73.000
Wilcoxon W	283.000
Z	-2.355
Asymp. Sig. (2-tailed)	.019
Exact Sig. [2*(1-tailed Sig.)]	.018[a]

a. Not corrected for ties.

b. Grouping Variable: feeling religious

Ranks

Christianity - Islam		N	Mean Rank	Sum of Ranks
Debt attitude5	Christianity	48	32.05	1538.50
	Islam	22	43.02	946.50
	Total	70		

Test Statistics[a]

	Debt attitude5
Mann-Whitney U	362.500
Wilcoxon W	1538.500
Z	-2.099
Asymp. Sig. (2-tailed)	.036

a. Grouping Variable: Christianity - Islam

Ranks

Occupation		N	Mean Rank	Sum of Ranks
Debt attitude6	Employed	23	59.61	1371.00
	Student	74	45.70	3382.00
	Total	97		

Test Statistics[a]

	Debt attitude6
Mann-Whitney U	607.000
Wilcoxon W	3382.000
Z	-2.074
Asymp. Sig. (2-tailed)	.038

a. Grouping Variable: occupation

Appendix F

Kruskal-Wallis test (for more than 2 samples)

Ranks

	Prayer	N	Mean Rank
Debt attitude	Prayer is a regular part	31	60.26
	I usually pray in terms...	11	58.23
	I pray only during formal ceremonies	7	42.57
	I pray when I want	23	38.39
	I never pray	30	52.12
	Total	102	

Test Statistics[a,b]

	Debt attitude
Chi-square	8.480
df	4
Asymp. Sig.	.075

a. Kruskal Wallis Test

b. Grouping Variable: Prayer