AGE AND RELIGIOSITY AS DRIVERS OF HOUSEHOLD DEBT

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1. ABSTRACT

Throughout this project, we will investigate the validity of the hypotheses proposed at the beginning of our study. The main objective is to analyze the decisions of two specific groups of households, which are part of the proposed hypotheses: young single-parent households and experienced single-parent households, as well as the relationship between religion and debt levels. Through the design of an experimental study, clear evidence could be found to contrast these hypotheses.

As the first hypothesis, we believe that young single-parent households are more likely to make risky financial decisions and incur unwanted debt compared to experienced single-parent households. On the other hand, the second hypothesis suggests that religious individuals tend to be more conservative when it comes to taking on debt compared to non-religious individuals.

1.1. KEY WORDS

Indebtedness, age, gender, religiosity.

1.1.1. CONCEPTS

Indebtedness: Indebtedness refers to the act of taking on debt, that is, borrowing money or other resources with the obligation to repay it at a specified time and with an agreed-upon interest rate. Indebtedness can occur in different areas, such as public, business, and household.

In our case, household indebtedness is the most interesting, as it refers to the amount of debt a family has incurred, whether through loans, mortgages, credit cards, or other means. Household indebtedness can have a significant impact on their financial situation and well-being, as if it is not managed properly, it can lead to problems such as overextending credit, defaulting on debts, and difficulty in covering daily expenses.

Household indebtedness can also be related to family structure, as analyzed throughout this project. The decision to take on debt and the ability to repay the debt can vary depending on whether the family is single-parent or not, and whether the decision-maker is young or more experienced. Therefore, it is important to understand how family structure can influence financial decision-making and debt management in households.

Mortgage: It is a type of loan used to finance the purchase of real estate, such as a house, apartment, or land. The acquired property becomes collateral for the loan, meaning that the lender has the right to take possession of the property if the borrower does not meet the loan terms.

In a mortgage, the borrower typically pays an initial amount of money and the rest of the loan amount is paid in periodic installments over an agreed-upon period of time, usually in years. In addition to the principal, these periodic payments also include interest on the borrowed amount, and in some cases may also include other costs such as home insurance and property taxes.

Once the loan is fully paid, the property becomes the borrower's full ownership and is released from the mortgage.

Single-parent family: is a type of family structure in which a single parent lives with one or more dependent children. The parent can be a father or a mother, and the single-parent family can result from different situations, such as divorce, separation, widowhood, adoption by a single person, among others.

In single-parent families, the single parent is solely responsible for the care and upbringing of the children, which can create additional challenges for the parent in having to perform additional roles and meet the family's needs without the help of a partner or spouse.

It is important to note that single-parent families are very diverse and can vary in terms of age, gender, race, ethnicity, sexual orientation, economic situation, and culture.

Religiosity: Religiosity can be defined as a manifestation of the human condition in relation to the divine, characterized by adherence to and practice of transcendent beliefs, rituals, and values. It is a phenomenon that encompasses the spiritual and moral dimension of the individual, involving their search for meaning, sense of belonging, devotion, and commitment to a supreme reality or transcendental entity.

Religiosity implies a set of theological or philosophical beliefs that inform and shape an individual's worldview and cosmology. These beliefs often include concepts such as the existence of a supreme being, deities, or divine entities, and the relationship between human beings and the sacred. Additionally, religiosity is manifested through practices and rituals such as prayer, meditation, ceremonial rites, and the observance of ethical and moral norms.

Religiosity is also linked to sociocultural aspects as it is often associated with specific religious communities and traditions. These communities provide a social and cultural framework in which individuals can express and live their religiosity collectively, sharing common beliefs, experiences, and values. However, it is important to note that religiosity can manifest both at an individual and collective level and is not limited to a single tradition or belief system. As it is not limited, it is important to consider that the relationship between religiosity, decision-making, and propensity for risk can be highly individual and dependent on various factors such as specific beliefs and teachings of the religion in question, personal interpretation of those beliefs, and the influence of other psychological and social factors on the individual.

In summary, religiosity involves a spiritual and moral dimension of the human being, characterized by adherence to and practice of transcendent beliefs, rituals, and values. It is a complex phenomenon that encompasses both individual and social aspects and is manifested through the relationship with the divine and the search for meaning and transcendence.

Household: A household is a social unit consisting of individuals who live together in a shared space, typically engaged in common activities and responsibilities. It encompasses a group of people who form a cohesive unit, sharing resources, living arrangements, and often familial or interpersonal relationships.

When considering the concept of a monoparental household, it pertains to a specific type of household structure where a single parent assumes the primary responsibility for raising and caring for their children. In such households, the single parent fulfills the roles of both caregiver and provider, often without the presence or involvement of a partner or spouse.

It is important to recognize that monoparental households exhibit unique characteristics and dynamics. They can be headed by either a single mother or a single father, and may result from various circumstances such as divorce, separation, widowhood, or the choice of single parenthood. In these households, the single parent shoulders the full responsibility for parenting, financial management, and maintaining the household.

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2. INTRODUCTION

It is becoming increasingly common to come across news stories about single-parent families. What was once just a theoretical concept is now a prevalent social reality. A single-parent family is typically composed of a parent and one or more children under their care. These families face unique and challenging circumstances as they must both provide for their household financially and take care of their children.

According to the Continuous Household Survey of 2020 conducted by the "Instituto Nacional de Estadistica" of Spain, 81.4% of all single-parent families were headed by women. This percentage has increased by 3% from the year 2019 to 2020.

Taking a broader perspective, there is also an increasing number of single-parent families with children in the European Union. Between 2010 and 2020, the number of single-parent households with children increased by 11%, while the number of households with two adults and children only increased by 4%. Eurostat (2021)
Single-parent families with children are much more common among women (as is the case in Spain) than among men in the EU. In 2020, 85% of single-parent families with children were led by women.
Furthermore, single-parent families with children are at a higher risk of poverty than other types of households. In the EU, 36% of single-parent families with children were at risk of poverty or social exclusion in 2020, compared to 19% of households with two adults and children. Eurostat (2021)

If we focus on young people who are emancipating, we see that there is a great variation between different countries in Europe. Generally, young people in southern European countries (such as Italy and Spain) tend to leave the parental home later than young people in northern European countries (such as Denmark and Sweden). Eurostat (2021)

Furthermore, young people are leaving their parental home at an increasingly later age. In 2020, the average age of young people leaving their parental home in the EU was 25 years, compared to 23 years in the 1990s. Generally, men tend to leave their parental home at a younger age than women in the EU. In 2020, the average age of men leaving their parental home in the EU was 24 years, while the average age of women leaving their parental home was 26 years. Eurostat (2021)

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The age at which young people leave their parental home is also related to their level of education. Young people with a higher level of education tend to leave their parental home at a later age than those with a lower level of education. Eurostat (2021)
On the other hand, religion is the basis of many cultures, so we believe that it can have a strong influence and correlation on a person's financial decisions. Additionally, it is true that depending on the country we are in, we will see that each one will have a different way of understanding and practicing their religion.

Spending on religious activities is relatively low in most EU countries and tends to be related to the predominant religion in the country. For example, Malta, a predominantly Catholic country, spent 1.3% of GDP on religious activities, while Sweden, a predominantly non-religious country, spent 0.1% of GDP on religious activities. Eurostat (2021)
According to different sources, we can see that in Europe (2010-2020) around 20% of the population does not believe in any type of God, compared to 80% who do. *Eurobarometer (2010).* Of this 80%, a large percentage of believers belong to Christianity, around 70%, with the second highest percentage belonging to Muslims.
The region where we see the most disparity is in the Middle East and North Africa, where approximately 93% of the population is Muslim. In other areas such as North America, we see very similar results to Europe, but with the particularity of a significantly lower percentage of Muslims. *Pew Research Center (2015)*

We have seen that the number of single-parent families with children is increasing both in Spain and in the European Union, especially headed by women, and that these families have a higher risk of poverty. We have also observed that the average age of young people leaving the parental home in the EU is increasing, and that this age is related to educational level. Regarding religion, we have seen that although spending on religious activities is relatively low in most EU countries, there is still a large number of believers on the continent, mainly Christians and Muslims. Overall, these data indicate a number of social and cultural trends that are shaping people's lives in Europe today.

2.1. OBJECTIVES AND RESEARCH QUESTIONS

The aim of this study is to analyze the financial decisions made by single-parent households and the influence of religion on such decisions. Two hypotheses will be tested to determine whether younger single-parent households are more prone to incur unwanted debts than more experienced single-parent households. Additionally, the study will test whether religious individuals tend to be more conservative in terms of indebtedness than non-religious individuals. Therefore, the study seeks to determine whether these two factors are indeed relevant in explaining indebtedness.

The objectives of this study are threefold. First, to verify whether hypothesis 1 is accurate by conducting an experimental study on single-parent households of varying ages. Second, to analyze whether hypothesis 2 is correct by comparing the propensity for indebtedness between religious and non-religious individuals. Finally, the study aims to provide useful insights for single-parent households and financial advisors regarding the management of their personal finances and indebtedness.

Therefore, we aim to develop two scientific questions that we will try to answer throughout the study. We will also attempt to show whether the studied factors are indeed determinants of indebtedness.

- Ceteris paribus, Are younger single-parent households more likely to make risky financial decisions and incur debt than more experienced single-parent households?

It is well-known that single-parent households face greater challenges in terms of maintaining a household, particularly in terms of finding the necessary financial resources to support the household and any children (in the case of family households). As such, we question whether younger single-parent households, who may earn lower incomes on average, are more likely to incur debt or if more experienced single-parent households are more prone to borrowing in order to maintain or improve their children's standard of living.

- Ceteris Paribus, Do religious individuals tend to be more conservative regarding indebtedness than non-religious individuals?

The hypothesis is that individuals with religious affiliations may tend to be more conservative in terms of indebtedness compared to those without religious affiliations. On the other hand, it could also be argued that religious individuals may be more risk-prone due to the belief that financial prosperity is a divine blessing or because they believe that risky investments can generate greater returns and thus more resources to assist others. This possible correlation between religion and attitudes towards financial management suggests that religious practice could have an impact on individuals' financial decisions. However, further research would be required to answer this question.

2.2. WORK HYPOTHESIS

In this study, we aim to investigate and examine several hypotheses that will serve as the foundation for our research. These hypotheses will guide our exploration and analysis, allowing us to gain a deeper understanding of the relationships and patterns within our study's focus.
Moreover, we will employ various research methods and data analysis techniques to assess the validity of our hypotheses. It is our hope that the findings from this research will shed light on the complex interplay between financial decision-making, debt propensity, monoparental households, and religiosity.

HYPOTHESIS 1: Younger single-parent households are more likely to make risky financial decisions and incur unwanted debt than more experienced single-parent households.

HYPOTHESIS 2: Religious people will tend to be more conservative when it comes to taking on debt than non-religious people.

3. THEORETICAL FRAMEWORK

The objective of the theoretical framework section in this undergraduate thesis is to present relevant theories on financial decision-making and debt acquisition. To achieve this, different approaches and perspectives in the fields of economics and psychology will be explored, in order to analyze the variables that may influence the financial behavior of single-parent households and religious people.

Firstly, some classical economic theories will be examined. These theories explain how individuals make rational economic decisions and maximize their expected benefit. Then, behavioral economic theories will be addressed, which recognize the importance of psychological, social, and cognitive factors in financial decision-making.

Regarding the study variables, attention will be paid to the level of indebtedness of single-parent households. Factors such as typology, gender, and age will be considered, while controlling for income level. Additionally, the relationship between religious beliefs and financial behavior will be explored, taking into account the tendency to be more conservative regarding debt.

3.1. DIFFERENT THEORIES ABOUT FINANCIAL DECISION MAKING AND ACQUISITION OF DEBTS

- **Prospect Theory: DANIEL KAHNEMAN AND AMOS TVERSKY**

The Prospect Theory, created by Kahneman and Tversky in 1979, is a psychological theory that attempts to explain how people make decisions in situations of uncertainty and risk. This theory asserts that individuals do not always act rationally, and that their decisions may be influenced by emotional and cognitive factors.

The theory is based on the idea that people evaluate the available options in terms of their potential consequences and that these evaluations are not always consistent with the actual probability of those outcomes occurring. In particular, the theory suggests that people are more sensitive to losses than gains and that decisions are largely based on the comparison between potential outcomes and a reference point or "reference state".

We can see a clear example presented to us: in problem 6, we are asked to consider a two-phase game. In the first phase, we are told that there is a 75% chance of ending the game without winning anything and a 25% chance of continuing to the second phase. In this second phase, participants choose between two options, the first (C) being a guaranteed gain of $30 and the second (D) being an 80% chance of winning $45. (the decision is to be made prior to the results)

In problem 7, participants are again given a choice between two options. In option (E), there is a 25% chance of winning $30 and a 20% chance of winning $45 (F).

These two problems are identical in terms of probability and outcome. Option C - 0.25 chance of winning $30, option D - 0.25x0.8=0.2 chance of winning $45. Despite offering the same probability, the way the options are presented makes participants think they are different options with different probabilities.

Between options C and D, we find that 74% of participants prefer option C, compared to the remaining 26%. Between options E and F, 42% of participants prefer option E, compared to the remaining 58%.

This result can be attributed to the certainty effect: “a constant reduction in the probability of an outcome has a greater impact when the outcome was initially certain than when it was only probable. Prospect theory attributes this effect to the properties of π."

This theory, developed throughout a study conducted by Daniel Kahneman and Amos Tversky, is closely related to ours, as the way financial situations are presented can affect people's decision-making (framing effect).

The main conclusion drawn from the study from Kahneman & Tversky (1979) is that if an option is presented in terms of gains, people are more likely to choose it than if it is presented as a loss, even if both options are identical in absolute terms. In other words, it has been demonstrated that decisions are not always rational and that people can be influenced by psychological factors.

- **Barro, R. J., & McCleary, R. M. (2003). Religion and economic growth.**

"Religion and Economic Growth," was written by Robert J. Barro and Rachel M. McCleary and published in 2003. It explores the relationship between religion and economic growth, aiming to understand the impact of religious beliefs and practices on a country's economic development.

One of the theories essential for understanding this study, would be, the secularization hypothesis. This theory of secularization suggests that economic development leads to a decline in religious involvement and beliefs, as measured by church attendance and faith in concepts such as heaven and hell. This hypothesis also encompasses the notion that economic progress reduces the influence of organized religion in political decision-making and societal processes in general. Barro and McCleary examine the hypothesis that religion affects economic growth by influencing individual behavior, social attitudes, and institutions. They argue that religious beliefs can shape human capital formation, encourage thrift and

savings, promote honesty and trust, provide social cohesion, and influence the legal and regulatory framework.
However, the secularization hypothesis remains controversial, and an alternative theory focuses on market forces and competition among religious providers. This perspective emphasizes the role of government regulation in shaping the religious marketplace, with a greater diversity of religions believed to foster stronger competition, higher quality religious offerings, and increased religious participation. Factors such as the presence of an established state church can impact the level of religious pluralism and overall engagement in organized religion.

The authors employ empirical analysis to investigate this relationship. They use data from various sources, including international surveys and measures of religious participation, to construct measures of religious beliefs and practices for different countries. They then analyze the relationship between these measures and economic indicators such as GDP growth rates.
Some of the conclusions we can find in this article are really relevant in order to understand the relation between religiosity and economic growth. First of all, there is a partial relation between these variables, more economic growth we have, generally is related positively to a decrease of religiosity. Moreover the authors found different variables that are also related with religiosity, such as education or children that are positively related. Barro & McCleary (2003) found that the higher education level people have, the more religious they tend to be and the same happens with children, indicating that having children influences individuals' religious engagement. On other hand, as people move to urban areas and experience an increase in their life expectancy, they tend to attend less religious services. In terms of the effects of religion on economic growth, the study finds that higher religious beliefs, particularly in concepts such as heaven, hell, and an afterlife, tend to boost economic growth. However, higher church attendance is found to depress economic growth.

Barro and McCleary acknowledge that their analysis has limitations, such as potential endogeneity issues and the difficulty of measuring religious variables accurately. Nonetheless, their study provides valuable insights into the complex relationship between religion and economic growth, highlighting the potential mechanisms through which religious beliefs and practices can impact a country's economic performance.

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- **The Protestant Ethic and the Spirit of Capitalism. (Max Weber)**

One hypothesis that is particularly interesting and relevant to our study is the one proposed by Max Weber, a prominent German sociologist, economist, and social theorist. He explored and emphasized the influence between religion and the economy. The main hypothesis was Weberian Thesis, which posited a causal relationship between Protestant religious ethics and the development of capitalism in Western Europe. Calvinism played a central role in this Protestant ethic, with values such as hard work and a business mentality being significant factors in societal development according to Weber.

However, this hypothesis has faced criticism from various authors and has been a subject of debate among academics. Becker and Woessmann (2009) engaged in a debate about Weber's theory, questioning its core hypothesis. They argued that other factors, such as economic and social considerations, better explained economic development. Their research demonstrated that regions and areas with higher investments in education and human capital exhibited greater economic development, regardless of individuals' religious affiliations. Consequently, they concluded that these factors were the primary drivers of economic development.

This study was highly important as it laid the groundwork for the field of economic sociology. It also motivated future researchers to delve further into the investigation of these potential causal relationships. Ultimately, Weber's work has contributed to our understanding of capitalism's development and its connection to cultural and religious factors. It has spurred research into the various factors that influence economic development.

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3.2. VARIABLES OF STUDY

Firstly, the level of indebtedness will be used as the dependent variable, which will be measured through indicators such as the amount and total amount of debts and loans acquired, among others.

Regarding the independent variables, the age of the members of the single-parent household will be considered, as it is hypothesized that younger households are more likely to make risky financial decisions and incur unwanted debts compared to more experienced households.

Religiosity will also be a variable that attempts to explain indebtedness, and this variable can be divided into two categories: whether or not they believe in a god.

Finally, the gender of the adult responsible for the single-parent household will be considered. We also control income levels.

4. LITERATURE REVIEW

The literature review will address different previous studies related to indebtedness and the making of risky financial decisions. The literature review will be essential for understanding the hypotheses proposed in this work and for developing a solid theoretical framework that will allow for a rigorous and detailed analysis of the results obtained.

4.1. HYPOTHESIS ORIGIN

In order to obtain hypotheses, previous information has been obtained through a comprehensive literature review. Research has been conducted on previous studies about families and their indebtedness, what causes it, and its consequences in different fields.

Currently, the economic situation of families is a significant concern for many societies. Indebtedness directly affects these families, and that is why it has been the subject of study on numerous occasions. The indebtedness of these families is caused by many factors, sometimes economic and even social. Angel & Heitzmann (2015) analyzed the significant correlation between household indebtedness and the socio-economic situations in which these households were located. They found that households in countries with high unemployment rates, low incomes, and low levels of education had a greater likelihood of

over-indebtedness. Berger et al. (2016) also obtained similar responses, where households with lower income levels had a higher probability of higher debt levels.
On the other hand, debt is not caused in the same way in the family nucleus. Men have greater confidence and tend to operate more in the stock market, (Barber & Odean, 2001). This suggests that men's overconfidence in their investment abilities leads them to take excessive risks and make wrong investment decisions. In contrast, women obtain higher returns due to a more conservative and cautious approach.

In a study that related household indebtedness and different economic cycles, it was proposed that indebtedness is a key cause and factor prior to a country's behavior and consumption. Specifically, they examined the role of this indebtedness and saw what influence it had on the different economic cycles. They concluded that household indebtedness precedes the vast majority of economic recessions (Mian et al., 2017). Furthermore, these increases in debt by households are associated with an increase in consumption and housing investment during expansion periods.

In addition, the authors Mian et al. (2017) highlighted that in countries where the market was more developed, household debt represented a greater proportion of GDP and therefore, increases in consumption and investment could cause the creation of a real estate bubble. Indebtedness not only has consequences in the economic sphere, but also in the social one, where in previous studies Berger et al. (2016) it is suggested that household indebtedness can have a negative effect on the mental health of adults due to financial stress and constant worry about debt repayment.

4.2. PREVIOUS STUDIES ON SINGLE-PARENT HOUSEHOLDS AND THEIR INDEBTEDNESS

Household debt is a growing concern in many countries, and single-parent households may be in a particularly vulnerable situation. Single parents, especially those with young children, may face greater financial challenges due to the need to balance household expenses with the costs of childcare and other unforeseen expenses.

However, the relationship between single-parent households and debt may vary depending on the age of the single parent. Single-parent households headed by young adults may face greater financial challenges due to their lack of financial experience and often have lower incomes due to their age and limited work experience. Additionally, they may have to deal with student debt and other expenses associated with their education.

On the other hand, single-parent households headed by older adults may have higher incomes due to their work experience and financial stability. However, they may also be at greater risk of indebtedness due to medical expenses and other costs related to their children.

Through a literature review, we aim to gain a broader understanding of the proposed topic. Within this section, we will consider the two types of subjects mentioned, young adults who have emancipated and single-parent households. We will attempt to relate them to the debt they acquire.

Although the level of indebtedness varies greatly depending on the country, some similarities can be found. In Europe, consumer debt decreases as age increases (Betti et al., 2007), meaning that as heads of households get older, they tend to significantly reduce their consumer loans. Additionally, it is observed that in highly indebted countries, households with higher incomes are more likely to be over-indebted, in contrast to other evidence we will see later in this study. It also concludes that the groups of people who get into debt the most are those with the highest incomes and the youngest households, and although over-indebtedness affects a large part of the population, not everyone has the same capacity to cope with these debts, which is why over-indebtedness is not exactly the best indicator of poverty, although they are clearly closely related, but the study concludes that Over-indebtedness is not exactly the best indicator of poverty, although they are clearly closely related, but later we will see how other studies argue the opposite.

However, at times, we may wonder what factors cause such indebtedness in such young people. Parents have a significant influence on their children, as they are their first figures of authority and role models. From childhood, parents have the responsibility to teach their children what is right and wrong, as well as instill values and social norms. This is why some authors suggest that good reciprocal financial communication between parents and children has greater benefits than, for example, the social status of the family (Serido et al., 2010).

Consumer Debt Distribution by Life-Cycle Stages

	Consumer debt holding (%)				
Stages	Installment loan	Credit card balance	Other debts	Other line of credit	Total
Young single	13.03	11.92	8.48	11.65	11.38
Newly married	5.12	4.94	3.74	7.77	4.43
Full nest I	19.61	16.57	13.97	13.59	16.91
Full nest II	19.88	20.52	19.20	25.24	19.26
Empty nest	17.55	20.10	33.67	20.39	21.30
Solitary household	8.71	12.13	9.73	10.08	12.00
Single parents	10.64	8.32	5.74	6.8	9.61
Childless middle-aged couple	5.45	5.5	5.49	3.88	4.83

Figure 1. Consumer Debt distribution by Life-Cycle Stages[1]

In this table (*Figure 1*), we can observe the different percentages of debt according to age or family structure. As we can see, single young adults represent 11.38% of the total debt compared to the other types of households considered. On the other hand, single parents represent 9.61% of the total. Additionally, the two types of households have in common that the most commonly used type of debt is "Installment loan" and according to the results obtained, it was confirmed that debt demand increased as a household expanded (Baek & Hong, 2004) .

The family structure is a crucial factor when it comes to the level of future and present economic development planning of households. Not only are there differences between single-parent families and those with two biological parents in the household, but also within single-parent families, we see differences between widowed and divorced mothers. The main difference between widowed and divorced mothers is that children of the latter have significantly lower levels of education, employment, and future happiness as adults. Rather than analyzing the differences between different types of single-parent families, we prefer to compare single-parent households to those with two biological parents, where we find that children raised in single-parent households have a lower likelihood of completing school or higher education, as well as having lower incomes and financial stability (Biblarz & Gottainer,

[1] *Figure 1. Consumer Debt distribution by Life-Cycle Stages: this is a table containing the different levels of debt in percentage, differentiating between different types of families and ages, and also between different types of debt. The study extracted data from the 1998 SCF*

2000). This income inequality is also reflected in households, where greater income inequality is associated with higher consumption-related debt (Jestl, 2022). To address or attempt to reduce this problem, macroeconomic policies are suggested, such as limiting credit supply. However, these policies should be targeted and specific to each country or population sector. Authors such as Betti et al. (2007) propose other alternatives, such as financial education.

Other authors also agree with the results that single-parent households tend to have higher debt than those formed by two parents (Flores & Vieira, 2014). The conclusion is also drawn that younger people and men tend to have higher debt than older people and women, respectively. This study poses a hypothesis very correlated with ours: "R10: There is a difference in behavior according to religion," and concludes that non-religious people tend to incur more debt.

Moreover, in this study the findings confirm that attitudes towards money, materialism, risk perception, and risk behavior influence one's likelihood of becoming indebted. Those who view money as a symbol of power and status, as well as individuals with higher levels of materialism, are more prone to accumulating debt. However, individuals with higher risk perception tend to have lower levels of indebtedness due to their aversion to unplanned expenses. Conversely, individuals who exhibit a propensity for risk-taking behavior are more willing to take on debt.

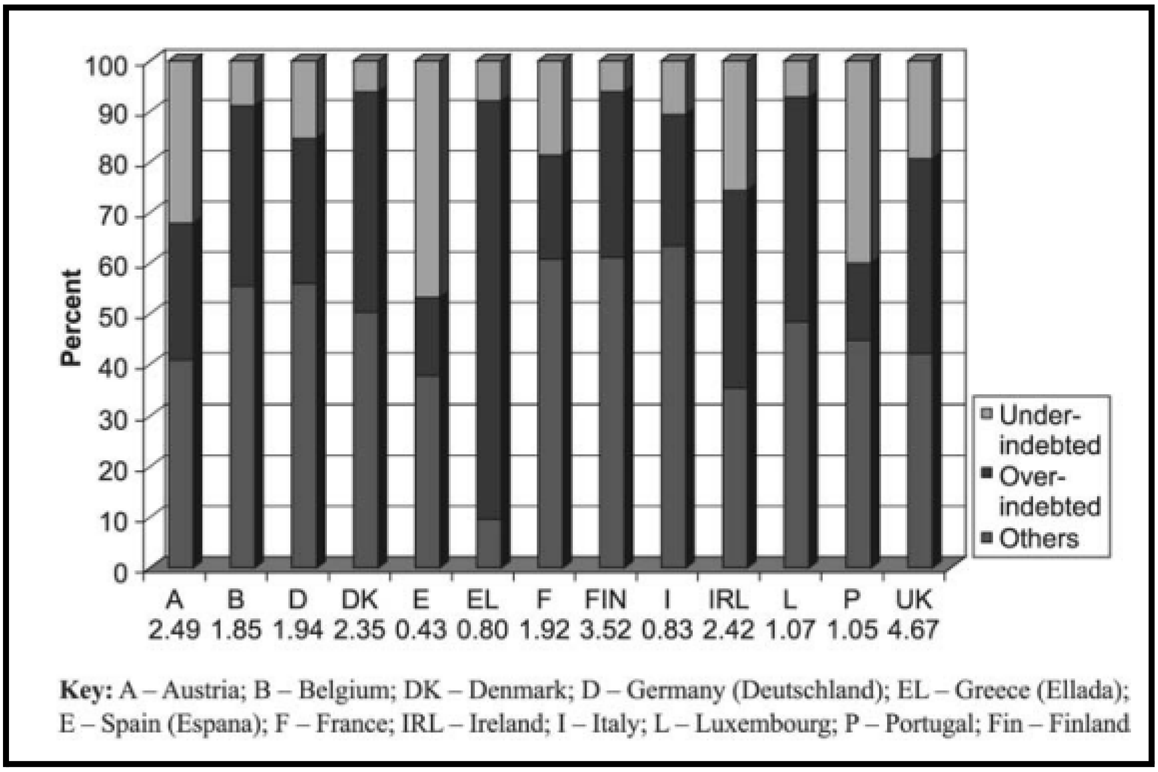

Figure 2. Single adults with children:
over-indebtedness and under-indebtedness[2]

We observe clear differences between this table (Figure 2) and the previous one attached in the study by Betti et al. (2007). When analyzing the debt of households in general and then focusing on debt in single-parent households, we can see that the debt incurred by households headed by single adults increases in the vast majority. This may indicate what we have seen in previous studies, that single parents with children are especially sensitive to financial problems.

[2] *Figure 2. Single adults with children: over-indebtedness and under-indebtedness. This is a table containing the different levels of over-indebtedness and under-indebtedness differentiated by European countries.*

4.3. PREVIOUS STUDIES ON RELATIONSHIP BETWEEN RISK AND INDEBTEDNESS WITH RELIGIOUS PEOPLE

Religion is an important aspect of many people's lives around the world, and it has been the subject of numerous studies in different fields, including psychology, sociology, and economics. Some studies suggest that religious beliefs may influence how people perceive financial risk and make decisions about borrowing. On the other hand, other studies suggest that religion does not necessarily influence people's financial attitudes, and that other factors, such as education, income level, and personality, may be more important. Through a review of the literature, we will gain insight and context on previous studies related to our project.

Religion is a free resource accessible to everyone and does not distinguish between classes. Therefore, it not only affects people in their financial behaviors, for example the authors Powell et al. (2003) also investigated the relationship between religion and physical health, concluding with similar results to other studies that religion provides a sense of purpose to life, therefore helping many religious people to avoid substance abuse and improve physical activity, especially those from disadvantaged backgrounds or minority groups. It is also suggested that regular attendance at churches provides greater benefits to physical health, but definitive conclusions are not drawn. Among the conclusions extracted, it is suggested that activities such as volunteering and those related to helping others reduce mortality.

In other studies, for example, researchers investigate how the emotional connection people have with their home can affect how they perceive risk in relation to home security (Billig, 2006). In addition, the author investigates how religious faith can influence the perception of risk related to home security. The study also analyzes how religious faith and risk perception can interact to influence the emotional connection people have with their home. Once again, we obtain results where religion does affect people's behavior and decisions. Furthermore, evidence was found that young people belonging to religious groups were happier, had a healthier lifestyle, and better stress management than non-believers, and the authors argue that these results stem from the existence of a higher sense of hope and purpose in the lives of believers.

On the other hand, León & Pfeifer (2017) found that non-believers in Germany, on average, have a lower risk aversion than those affiliated with a religion. Additionally, the study suggests that Christians are more likely to take financial risks than non-religious individuals. The study also analyzes risk perception among Catholics, Protestants, and Muslims. The data analyzed showed that Muslims are less risk-prone in general and when investing in financial products than Christians, Protestants, and non-religious individuals. Furthermore, the authors differentiate between recurrent participants in religion and sympathizers, and found that the level of participation significantly affects risk perception.

As we can see, the results vary when it comes to risk aversion, depending on the religion, level of participation, gender, and other factors. Therefore, the study questions to what extent we can generalize these findings to other countries, as there are so many variables and factors that may influence the relationship between religion and investment behavior. Moreover, differences in individuals within the same religion can also impact their investment behavior, as each individual has their own religious identity and level of commitment. Thus, investment behavior may be influenced by the most relevant belief in each case, i.e., the one that has the greatest impact on their financial behavior.

Miller & Hoffmann (1995) suggest that religions are one of the main causes of social differences between men and women. It should be noted that this study analyzes the interaction of risk and religion variables from a different point of view and direction. The hypothesis "Risk preferences influence religiosity within as well as between the sexes" is presented. After implementing the study methods and analyzing the data, it is confirmed that risk is a highly correlated variable with religiosity. It not only affects religiosity directly, but also when including risk perception in the study model, other variables such as gender become less relevant.

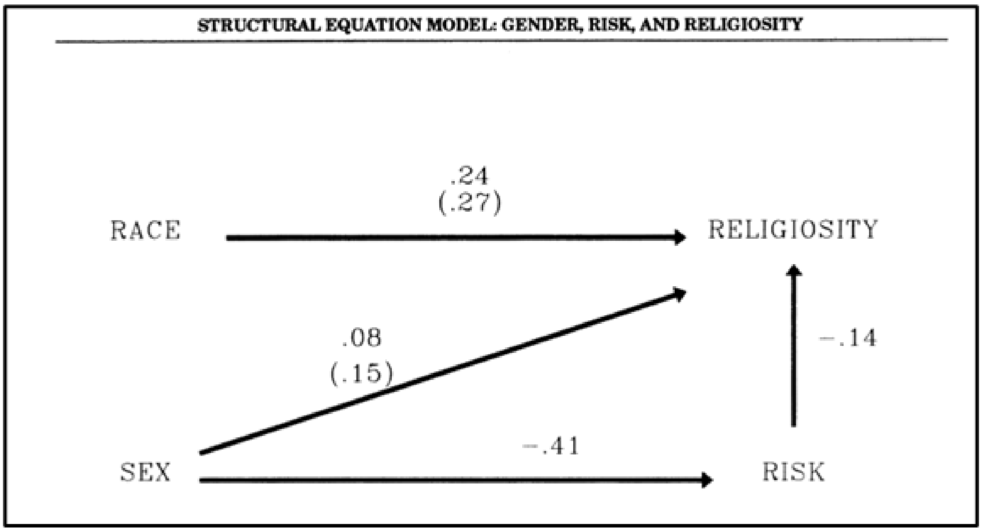

Figure 3. Structural equation model: Gender, risk and religiosity[3]

[3] *Figure 3. Structural equation model: Gender, risk and religiosity. Structural model proposed by the authors that relates the variables proposed in their study.*

The results of the analysis in this study and model suggest the different effects of each variable considered between themselves. We can highlight the strong influence between gender and risk perception, but it's not just risk that is affected, as the results show that religiosity is also impacted. The study proposes that risk preferences affect gender differences in religiosity in a subtle but significant way. It's suggested that different gender socialization patterns affect the development of risk preferences early in life, which may lead to a lower likelihood of religiosity among men later in life. Additionally, gender stratification can also affect risk preferences and thus serve to reinforce or impede religiosity. In fact, the results indicate that risk preferences partially mediate the relationship between gender and religiosity. Further research including all of these considerations is necessary to fully understand the effects of risk and gender on religiosity. However, gender differences in religiosity are a complex issue and there are several alternative explanations for the results obtained. It's concluded that increased understanding of the influence of risk preferences on religiosity can help to understand the complexity of this topic. Another aspect examined in the literature is how religion can influence financial attitudes and behavior. As we discussed in the previous section, there are studies that hypothesize a relationship between a person's behavior and whether they feel they are a believer in a religion (Flores & Vieira, 2014). This study supports the theory proposed by authors Davies & Lea (1995), which suggests that non-believers tend to have a greater amount of debt.

An inverse relationship was also found between religion and risk perception (Miller & Hoffmann, 1995). In other words, religious people tend to see the area where they live as less dangerous than people who do not have a religion.

4.4. CONCLUSIONS ABOUT LITERATURE REVIEW

In conclusion, our review of the literature has revealed several important findings related to the relationship between income, gender and debt. It is clear from the studies that families with lower incomes are more likely to be indebted and are at greater risk of financial instability, although there is a disparity with other studies where the opposite is thought to be true. In addition, the gender of the borrower is an important factor to take into account when analyzing debt levels, and should be controlled for in any analysis.

Furthermore, there are different conclusions about the relationship between religion and debt. While some studies suggest that religious individuals may be more likely to take financial risks, other studies suggest that non-religious individuals may have higher levels of debt. Thus, it is clear that more research is needed to fully understand the relationship between religion and debt. In addition, it is important to note the role of financial education in influencing household debt levels. Although this was not a specific topic of our study, all indications are that financial education can play a key role in reducing debt levels and promoting financial stability.

Overall, our literature review has highlighted the need for further research into the factors that influence household debt levels. By identifying these factors, we can work to promote financial stability and reduce the negative impact of debt on households and communities.

5. DISCUSSION

In conclusion, the research has revealed that financial literacy and sound financial decision making are areas of great importance for single and non-single parent households. The results indicate that there is a need to improve financial literacy and decision-making skills in these demographic groups.

To sum up, it can be concluded that financial education is fundamental to achieve better management of financial resources in single-parent households, and that more attention to this issue is needed in society. Because there are a variety of studies with different opinions on our hypotheses, we have not been able to validate or reject them, so we hope that our experiment and survey will be of vital help in understanding the behavior of households in their indebtedness, relating it to the religiosity of individuals and the type of family to which they belong, and thus be able to develop effective tools to improve financial education in single-parent households, and thus, contribute to their long-term financial wellbeing.

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7. APPENDICES

Figure 1: Baek, E., & Hong, G. S. (2004). Effects of family life-cycle stages on consumer debts. Journal of Family and Economic Issues, 25, 359-385.

Figure 2: Betti, G., Dourmashkin, N., Rossi, M., & Ping Yin, Y. (2007). Consumer over‐indebtedness in the EU: measurement and characteristics. Journal of economic studies, 34(2), 136-156.

Figure 3: Miller, A. S., & Hoffmann, J. P. (1995). Risk and religion: An explanation of gender differences in religiosity. Journal for the scientific study of religion, 63-75.