



LISBON
SCHOOL OF
ECONOMICS &
MANAGEMENT
UNIVERSIDADE DE LISBOA

**MASTER OF SCIENCE IN
FINANCE**

**MASTERS FINAL WORK
DISSERTATION**

**ATTITUDES ON THE ETHICS OF TAX EVASION: A
SURVEY OF BANKING EMPLOYEES**

DIOGO PEREIRA TEIXEIRA

OCTOBER - 2016



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SUPERVISOR:

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Abstract

The main objective of this paper is to assess the attitudes of banking employees on the ethics of tax evasion. The study of the ethics on banking employees is particularly relevant, given that, since the 2008 crisis, the confidence in the sector has not been fully recovered, particularly in Portugal, due to several recent cases of bankruptcy and people who have lost their lifetimes savings due to malpractices in the banking industry.

To address this issue, a survey was designed, based on the tax ethics literature and previous studies, and administered to banking employees from a bank institution operating in Portugal. The survey addresses several issues like tax ethics, tax morals, tax evasion and tax compliance and the sample obtained consisted of 71 observations.

The results point to the existence of a high level of tax ethics on banking employees. The study didn't find older people to be more ethical in their attitudes towards tax evasion, while women did not present higher levels of tax evasion than men. There were not found differences on the ethics towards tax evasion between religious and non-religious people.

In order to construct a more complete picture of ethics in the Portuguese banking system, it would be interesting extending this survey at a national level with access to employees of the biggest bank institutions operating in Portugal.

JEL Classification: H26

Keywords: Tax Ethics, Tax Evasion, Ethics, Taxpayers, Tax Morals, Tax Compliance, Banking

Resumo

O principal objetivo deste trabalho é avaliar as atitudes dos funcionários da banca em relação à ética na evasão fiscal. O estudo da ética nos funcionários da banca é particularmente relevante, dado que, desde a crise de 2008, a confiança no setor ainda não foi totalmente recuperada, particularmente em Portugal, devido a vários casos recentes de falências e de pessoas que perderam as suas poupanças em virtude a más práticas bancárias.

De forma a abordar esta questão, foi construído um questionário, com base na literatura e em estudos anteriores, e aplicado a funcionários de uma instituição bancária que opera em Portugal. Este questionário aborda várias questões como ética fiscal, moral tributária, evasão fiscal e cumprimento fiscal, sendo a amostra constituída por 71 observações.

Os resultados apontam para a existência de um elevado nível de ética fiscal nos funcionários da banca. O estudo não permitiu constatar que as pessoas mais velhas apresentam um maior nível de ética relativamente à evasão fiscal. Por outro lado, as mulheres não apresentaram níveis mais elevados de ética fiscal do que os homens. Não foram encontradas diferenças entre pessoas religiosas e não religiosas em relação ao seu nível de ética fiscal.

De forma a ter uma imagem mais completa da ética fiscal no sistema bancário português, seria interessante alargar a amostra a nível nacional, com o acesso às respostas dos funcionários das maiores instituições bancárias em Portugal.

Classificação JEL: H26

Palavras-chave: Ética Fiscal, Fraude Fiscal, Ética, Contribuintes, Moral Tributária, Cumprimento Fiscal, Banca

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List of Abbreviations

IRS - Internal Revenue Service

TPB - Theory of Planed Behaviour

TRA - Theory of Reasoned Action

Index of Tables

Table 1 - Responses by religion.....	25
Table 2 - Religious services attendance and praying frequency	25
Table 3 - Hypotheses tests - Attitudes toward tax evasion for the whole sample	28
Table 4 - KMO and Bartlett's Test.....	30
Table 5 - Total Variance Explained	31
Table 6 - Rotated Component Matrix	31
Table 7 - ANOVA.....	32
Table 8 - Cluster Distribution.....	33
Table 9 - Cluster Description	33
Table 10 - Attitudes towards tax evasion.....	50
Table 11 - Mann-Whitney Test Statistics for the religiosity variable.....	51
Table 12 - Mann-Whitney Test Statistics for the age variable	52
Table 13 - Mann-Whitney Test Statistics for the gender variable	53
Table 14 - Communalities	54
Table 15 - Alternative hypotheses tests - Attitudes toward tax evasion for the whole sample	55

Index of Figures

Figure 1 - Factor Analysis	33
Figure 2 - Cluster Analysis - Coefficients Difference	54
Figure 3 - Outliers.....	54

Table of Contents

1	INTRODUCTION	1
1.1	FRAMEWORK	1
1.2	OBJECTIVES	2
1.3	PROJECT STRUCTURE	3
2	LITERATURE REVIEW	4
2.1	INTRODUCTION	4
2.2	TAX EVASION	5
2.3	TAX COMPLIANCE	6
2.3.1	<i>Economic Deterrence Models</i>	7
2.3.2	<i>Social Psychology Models</i>	9
2.4	TAX MORALS	12
2.5	TAX ETHICS	14
2.5.1	<i>Religion on Tax Ethics</i>	15
2.5.2	<i>Age on Tax Ethics</i>	16
2.5.3	<i>Gender on Tax Ethics</i>	17
2.5.4	<i>Education Level on Tax Ethics</i>	17
2.5.5	<i>Occupation on Tax Ethics</i>	18
3	HYPOTHESES	19
4	DATA AND METHODOLOGY	21
4.1	METHODOLOGY	21
4.2	DATA	24
4.2.1	<i>Variables</i>	24
5	RESULTS	27
5.1	HYPOTHESES TESTS	27
5.2	FACTOR ANALYSIS	30
6	CONCLUSION	34
6.1	MAIN CONCLUSIONS	34
6.2	LIMITATIONS	34
6.3	FURTHER RESEARCH	35
7	REFERENCES	36
8	APPENDIXES	44
8.1	SURVEY	44

1 Introduction

1.1 Framework

Since the introduction of taxes by the Romans, with studies suggesting customs and excise duties as the earliest form of taxation, to property taxes imposed in Britain centuries ago, as reported by Mckerchar (2003), a lot has necessarily changed to reach the modern tax systems across countries.

Nowadays, one of the most important questions that governments have to address is if enough taxes are being collected from tax payers (OECD, 2013), providing tax revenues in order to enable governments to invest in development, infrastructures, to deliver public services and to combat poverty and guarantee social benefits to the citizens.

The importance of this topic is highlighted by the Portuguese Strategic Plan of Tax Fraud and Evasion Combat for the 2015-2017 triennial (Governo de Portugal, 2015), pointing the fight against tax fraud and customs evasion reinforcement as the priority vector of fiscal policy, in order to ensure a fair distribution of the tax effort and to sanction tax fraud more effectively. Also, according to Murphy (2012), tax evasion is a serious issue for the European Union with estimates of approximately 860 billion euros of taxes evaded per year and shadow economies representing 22.1% of total economic activities.

As referred by Torgler and Murphy (2004), the voluntary payment of taxes is an important issue for tax administrations worldwide, as some suggest it is by deterrence from fear of being caught, by opposition to the theory that there is a sense of tax morals, an intrinsic motivation to pay taxes affecting compliance behaviour. Therefore, it is of the utmost

importance to address the tax ethics studies in order to better understand the role of ethics in individual behaviour and in tax compliance, in particular in the case of banking employees where these situations are being so questioned lately.

The most famous quote, regarding taxation, from Benjamin Franklin, “In this world nothing can be said to be certain, except death and taxes”, illustrates well the importance of the topic in study.

1.2 Objectives

The main objective of this dissertation is to assess the attitudes of banking employees on the ethics of tax evasion. For that purpose, a survey was applied to banking employees, based on the tax ethics literature and previous studies, mainly McGee (2006; 2014). Through the analysis of several social-demographic variables it is intended to identify the factors that influence tax compliance.

The study of this sample is very important due to the low confidence level in the financial industry, with several cases of banking scandals and financial fraud, as highlighted by Wehinger (2013), and with the health of the banking system being much questioned. Also, a survey conducted within employees in the financial sector from the United States and the United Kingdom by Labaton Sucharow LLP (2012), reveals that despite the reforms to fix the financial sector and improve governance the respondents still present high levels of probability to engage in less ethical conducts. Cohn *et al.* (2014) found that bank employees behave honestly, despite the culture in the banking industry favouring dishonest behaviour contributing to its poor reputation. The authors believe that is very important to re-establish an honest culture in the banking industry.

The importance of studying attitudes on tax ethics is stressed in the literature as example of Onu (2016) affirming that taxpayers' attitudes towards tax evasion to be positively related to compliance behaviour. This topic was studied in several papers by McGee (2006; 2014), stating the importance of analysing tax compliance from the ethics approach. These studies evaluated the opinions on the ethics of tax evasion in several groups as philosophy professors and international business academics.

The present work aims to study tax evasion from a social and psychological point of view according to the last decade tendencies, with focus on the psychological variables and moral values forming attitudes towards tax compliance. This investigation intends to answer the following research questions: "The attitudes of banking employees on the ethics of tax evasion and their beliefs towards tax compliance are in line with the past literature findings?" and "Do banking employees present high levels of tax ethics?"

1.3 Project Structure

In the first part of this work, the literature review will address the most important questions regarding the tax topic, based in past research. Next, the hypotheses to test will be introduced, followed by a discussion of the data and methodology used in the elaboration of this dissertation. In the results section, the surveys will be analysed. Finally, the main conclusions will be presented as well as the limitations of this study and further research topics.

2 Literature Review

2.1 Introduction

The discussion about why taxpayers pay or not pay their taxes has always been very inconclusive, and one cannot say there is a perfect tax structure which is able to face the needs across every country. As described by Mckerchar (2003), the main objective of taxation is to collect enough revenues to fund the government expenditures.

Pereira (2011) defines taxes as monetary payments due to the state or other public entities in order to achieve public purposes. Tax is a compulsory levy by the government on people's income or wealth, without a direct *quid pro quo*, as described by Song and Yarbrough (1978).

The first study about this topic was introduced by Becker (1968), analysing illegal behaviour through an economic model including penalties, sanctions and probability of detection, where individuals would or wouldn't engage in criminal activities by evaluating the expected benefits and costs. Later, Allingham and Sandmo (1972) developed one of the most important tax evasion model, concluding that taxpayers choose the amount to evade in a way to maximize their expected utility given a certain probability of detection. As such, this is considered a relevant research topic, as shown by previous studies.

The main objective of this chapter is to present ideas, lines of thought and past research on the ethics of tax evasion, presenting a strong theoretical base for this dissertation. First, the tax evasion topic will be examined with emphasis on the first important studies regarding this issue. It is followed by a detailed analysis of the two main tax compliance theories: economic deterrence models and social and fiscal psychologic models. Next, the tax morals

topic will be addressed, ending with the tax ethics subject and a presentation of the most important variables used in the tax ethics studies.

2.2 Tax Evasion

Alm and Torgler (2011) define tax evasion as illegal and intentional actions in order to reduce tax obligations, by underreporting incomes, sales and wealth, or overstating deductions, exemptions and credits, or failing to file appropriate tax returns. Slemrod (2007) describes it as a situation where a person, committing fraud, pays less tax than is obligated to, while Benk *et al.* (2015) refers to its existence since governments started collecting taxes.

Expected utility theory developed by Allingham and Sandmo (1972) considers taxpayers as utility maximizers in their tax reporting and compliance decisions, viewing tax evasion as worthwhile if the financial gains compensate the financial costs, by deliberate underreporting. The important decision of underreporting depends on whether or not there will be an audit from the tax authorities, which could lead to a decrease in the income due to the penalties applied for the act of tax evasion. The contingency about the probability of being detected, leads to uncertainty whether to evade taxes or not. Two fundamental substituting policy tools, according to these authors, are sanctions over which the tax authority exercises direct control, and probability of detection that depends of the resources spent on detecting tax evasion. Contrary to Allingham and Sandmo (1972), Yitzhaki (1974) suggested that tax rate should have no effect on the tax evasion equation, as the penalty should increase *pari passu* with the tax rate. Srinivasan (1973) also views taxpayers as utility maximizers, stating that the probability of detection is independent from the income, leading to an increase on the evasion level as result of an income increase.

Attention is drawn by Cowell (1985) to the existence of an important boundary between tax evasion and avoidance, which is not always easy to distinguish. The simple division that can be considered is a legal one: tax evasion is an illegal practice of not paying taxes and beyond the law, as tax avoidance isn't, with the taxpayer trying to minimize taxes, using methods approved by the Internal Revenue Service in an abusive way. Tax avoidance involves using loopholes in the tax law with the purpose of reducing liabilities, as described by Sandmo (2004). In certain situations tax avoidance can be considered as bad as tax evasion, from a moral perspective, and should not be treated differently. Another important concept presented by Pereira (2011) is tax planning, a legal way to minimize taxes using strategies given by tax authority, as tax benefits and tax exemptions.

The question about who evades taxes is addressed by Slemrod (2007), affirming there appears to be a pattern consistent with the old saying that “the poor evade and the rich avoid”, with people with higher income reducing their taxes through legal avoidance, while those with lower income evade more.

Alm (2012) stresses the difficulty in analysing tax evasion due to the lack of reliable information on tax compliance, as taxpayers who evade have incentives to conceal their cheating, as tax evasion is an illegal practice.

2.3 Tax Compliance

One of tax compliance's key issues is whether taxpayers have sufficient incentives to declare their income and pay taxes. There are two main lines of thought about this, one based on the economic theory, and the other one focusing on theories of psychology and sociology as factors that explain the level of tax compliance.

For Milliron and Toy (1988) the economic definition of tax compliance views taxpayers as perfectly moral, risk-neutral or risk-averse individuals who seek to maximise their utility, and choose to evade tax whenever the expected gain exceeds the cost. Kirchler and Wahl (2010) define tax compliance as the most inclusive and neutral term for taxpayers' motivation to pay taxes. The intention of tax compliance can either be voluntary or enforced by authorities, leading to the honest payment of taxes. On the other hand, non-compliance refers to the act of paying less tax than it is due or outside the established deadlines, Roth *et al.* (1989).

Alm (1991) found empirical evidence that if detection and punishment would be the only factors influencing taxpayer's compliance behaviour, the overall compliance level would be lower than observed, which can only be explained by the existence of social and psychological factors affecting tax compliance.

2.3.1 Economic Deterrence Models

For a long time, taxpayers' decisions were studied from an economic perspective with emphasis on economic deterrence models, which comprises the likelihood of being caught and the range of penalties charged to those who evade, as stated by Devos (2014). Economic sanctions were considered to be the key to obtain high levels of tax compliance.

Hite (1989) stated that deterrence can be achieved by a persuasive approach, with the use of better education, increased advertising and incentives to improve taxpayers' attitudes towards tax administration and honest tax reporting. On the other hand, Fischer *et al.* (1992) believe deterrence can be reached by increasing three important compliance behaviour drivers:

1. Tax rate, that can be manipulated in order to increase tax compliance;
2. Probability of detection, which refers to the probability that non-compliance will be discovered by the tax authorities;
3. Penalty structure, with the imposition of tougher penalties to taxpayers who evade.

Tittle and Logan (1973) found evidence that a high probability of apprehension was more relevant than the sanctions imposed itself, in opposition to Becker (1968), who believed that raising sanctions and reducing the probability of apprehension was a more effective tax decision. According to Jackson and Milliron (1986), the taxpayers' perception of penalty levels are higher than the real ones, causing skewness in the research findings and making perceived rates of penalties more important than the actual penalties.

In their studies related to the sensitivity of individuals towards risk of detection versus the magnitude of the penalty, applied to a group of several American university students, Jackson and Jones (1985) found evidence that with a small audit rate, taxpayers were more sensitive to the extent of a tax evasion penalty than to the probability of detection itself. However, Graetz and Wilde (1985) believed that this range of penalties increase alone was not the most effective measure, and governments should address the auditing levels and lower tax rates as a way to reduce non-compliance. Graetz *et al.* (1986) took into the equation not only the taxpayer, but also the IRS, considering it an important actor in the compliance study regarding the existing relationship with the taxpayer. They created a model with income levels, tax rates and fines as exogenous variables and following the natural sequence of decisions, where the taxpayer reports his income, with the IRS deciding whether or not to perform an audit. The decision of performing an audit will determine if the report defines his

final tax (in case the taxpayer is not audited) or if the tax liability is based on the true income plus any penalties or interest (in case of an audit).

Despite studying the tax evasion from an economic perspective, Cowell (1985) stated that social objectives could be better achieved in others ways than penalties and audits, avoiding the loss of private expected utility. For that purpose, tax authorities should use the available information in a wise way in determining its tax policy.

Cuccia (1994) considers economic-based compliance research useful to identify the motives behind taxpayers' reports, but these models alone cannot predict accurately taxpayers' reporting decisions due to different individual attitudes and biases. Analysing small groups of taxpayers with similar economic incentives is important to understand taxpayers' behaviour.

Hasseldine (2000) affirms that there is no unequivocal empirical evidence supporting the predictions of economic deterrence models, in line with Feld and Frey (2004) that believe the traditional economic approach to tax evasion does not appear to explain successfully the extent of tax compliance.

2.3.2 Social Psychology Models

Lately, the focus of tax compliance studies was put in the social and psychological theories, focusing on psychological variables such as moral values and the perception of fairness of the tax system and tax authorities (Devos, 2014). Studies regarding both fiscal and social psychology analyse tax compliance from a human point of view, with several variables: social norms, education and personal characteristics to be considered important.

According to Pope and McKerchar (2011) the recent focus is on why taxpayers comply with their tax obligations instead of why they do not comply due to the higher than expected observed level of taxpayer compliance, in the traditional economic deterrence models. This unpredicted gap between expected and actual levels of tax compliance is generally associated with tax morals phenomenon and can be fulfilled with cooperation between taxpayers and fiscal authorities. This was previously referred by Andreoni *et al.* (1998), stating that social norms are a key factor for explaining the observed compliance levels, usually higher than the predicted by economic models.

Schmölders (1959) was one of the first authors studying tax compliance from a mentality point of view, considering taxpayers' self-interest distinct from the contribution to community interests. Comparing different countries across Europe, the author concluded that taxpayers' attitudes are a reflection of cultural differences, experiences and mentalities. The author refers to taxes in the latin word (*impuesto*) as an imposition upon the citizens, opposite to the german word (*steuer*), where it is considered as a support, and in Scandinavia (*skat*), viewed as a common treasure destined for common purposes.

Strümpel (1969) developed one of the first fiscal psychology models of tax compliance based on two main variables: 1) the rigidity of assessment, measuring the amount of taxes and the level of fines, the assessment process and the red tape in the engaging process with the tax authorities and 2) the willingness to cooperate related with the individuals' attitudes and perception of the tax system.

Later, Kinsey (1986) analysed the model developed by Strümpel (1969), interpreting willingness to cooperate as positively influencing tax compliance, contrary to the rigidity of assessment which appears to have two competing effects:

1. A positive effect on tax compliance under the influence of amount of fines, the tax rate and other economic variables;
2. A negative one on the willingness to cooperate, involving the level of red tape in the engagement process with tax authority.

Moreover, Ajzen and Fishbein (1980) introduced an alternative to the previous fiscal psychology models, the Theory of Reasoned Action. According to this theory, taxpayers' behaviour is determined by their intentions, which are a function of two factors: their attitudes towards behaviour and perception of subjective norms. The attitude towards behaviour is described as a positive or negative judgement regarding to the behaviour and the perception of subjective norms as the social pressure influencing a person to perform behaviour. Lewis (1982) and Cialdini (1989) also used the TRA to study the psychology of taxation. The first one examined attitudes and perceptions of taxpayers in order to understand compliance behaviour finding several factors affecting evasion intentions: moral outlook, age, perception of others evasion and personal and demographic characteristics. The second used the model to address the possibility of improving compliance by educating taxpayers about their social responsibility of paying taxes. After, Ajzen (1991) introduced the Theory of Planned Behaviour, as an extension of the TRA, which became one of the most used social and psychological theories in tax compliance behaviour. The main evolution from the TPB was the introduction of the concept of perceived behavioural control as a key element in determining the intention to engage in target behaviour and influencing the performance of the behaviour. Marandu *et al.* (2015) draws attention to the fact that TPB can fail to capture all the significant behaviour determinants of tax compliance because it is a general theory, not specific to analyse tax compliance behaviour.

Smith and Kinsey (1978) had a different approach in order to understand taxpayer behaviour. Rather than taxpayer intentions determining behaviour, they believe that situational factors as available information, opportunities for taking actions and the difficulty and costs of those actions, dictate taxpayers' compliance decision and actions. For the authors, the taxpayer behaviour results from indifference or habit rather than purely their intention.

Alm *et al.* (1992) also conducted a series of laboratory experiments in order to examine the role of fiscal exchange and the use of tax revenues and the decision process, finding that taxpayers respond positively when tax proceeds are applied in programs they approve and when they feel they are active in the decision process. Büttner and Grimm (2016) affirm that a government that is able to implement transparent policies, avoiding high levels of corruption, is a crucial requirement for high levels of tax compliance.

2.4 Tax Morals

Devos (2014) affirms that tax morals is related to taxpayers' beliefs and norms in relation to their tax obligations and is linked to the term tax ethics. OECD (2013) describes it as the taxpayers' motivation to pay their taxes other than their legal obligation to do so. Another definition is given by Alm and Torgler (2006) describing tax morals as the individual's intrinsic willingness to pay taxes, which according to Torgler (2011) is an important determinant of the "shadow economy", having an impact on tax evasion. The concept of "shadow economy" is described by Schneider (2011) as the unregistered economic activities that escape detection of tax authorities.

Schwartz and Orleans (1967) were pioneer in the studies of tax morals with a field experiment to determine the effectiveness of sanction, compared with an appeal to conscience in

increasing normative sentiments about the compliance in the income taxes payment. They concluded that sanctions were more effective on the highest social classes of the population, by opposition to the least educated, who are more sensitive to the appeals to conscience on their attitudes towards tax compliance. Even more important, they found evidence that conscience appeals are more effective than sanction threats regarding the overall tax compliance.

Tax morals have been broadly studied with several authors, as Torgler *et al.* (2008) and OECD (2013), pointing a direct relationship between tax morals and tax compliance behaviour, suggesting that taxpayers with high tax morals are more likely to comply, whereas those with low tax morals are more likely not to do so. According to the literature, the correlation between tax moral and tax compliance cuts across both developing and developed countries, making it important to understand what drives differences in tax morals across countries, to understand differences in tax compliance. Frey (1997) is one of the authors affirming that the intrinsic motivation for individuals to pay taxes differs across countries and if taxpayer values are influenced by cultural norms, with different societal institutions acting as constraints and varying between different countries, tax morals can be an important cause of taxpayer compliance and tax behaviour.

Torgler (2003) and Torgler and Murphy (2004) conducted important studies concluding that high levels of trust in the government and a high sense of moral obligation linked to the religion have a positive effect on tax morals. Cummings *et al.* (2009) also argue that the quality of governance and therefore the individual's positive perception of their governments induces higher tax compliance.

2.5 Tax Ethics

Alm and Torgler (2011) believe that ethics play a significant role in explaining tax compliance decisions and the differences in the ethics across different individuals that contribute to explain those decisions. Wenzel (2007) describes taxpayer ethics as a sense of moral obligation to pay taxes that affect tax compliance.

McGee (1998) describes four major views on the ethics of tax evasion which have appeared over time:

1. Tax evasion is never ethical, as individuals have a moral duty with the state to pay whatever taxes are demanded. This is a very criticized view and McGee (1999) points that not all taxes are automatically fair from an ethical perspective, with one of the most used examples being the Jews who had the moral obligation to pay tax during the Nazi regime;
2. Tax evasion is always ethical, which assumes the position that all governments are illegitimate;
3. Tax evasion is sometimes ethical, being largely discussed if individuals should pay for services they do not want, need, or use, or if they have an ethical obligation to pay more than what they receive in benefits;
4. There is an affirmative duty to evade taxes, making tax evasion one way of resisting to evil governments and wars, among others.

The lack of tax ethics is described by Song and Yarbrough (1978) as a disease seriously threatening the moral fiber of society and the reliability of the democratic system. The authors found that the degree of tax ethics is related to the level of suspicion that others violate the

tax laws, as the ones with higher tax ethics believe that others comply with tax authorities and the ones with less tax ethics believe the other are non-compliant.

2.5.1 Religion on Tax Ethics

Despite the idea stressed by Tomes (1985) that economics is fundamentally atheistic, and religious beliefs, practices and behaviour play no role in the life of “homo economicus”, one of the historical reasons found in tax literature to justify why people pay taxes is a sense of moral and religious obligation (Benk *et al.*, 2015).

Grasmick *et al.* (1991) found evidence that the religious identity highlights the threat of shame as a sanction, and therefore inhibits illegal behaviour like tax cheating. Torgler and Murphy (2004) studied the possibility that religiosity was a restriction to engage in tax evasion due to existing empirical studies that concluded that countries with higher rates of religious membership had significantly lower crime. They found evidence that, as more religious people are, the higher their level of tax morals. Torgler (2006) also analysed religiosity as a factor that potentially affects tax morals as an intrinsic motivation to pay taxes. Analysing several variables such as religious education, perceived religiosity, church attendance and trust in the church, among other, the study’s results pointed to the fact that religiosity raises tax morals.

Stack and Kposowa (2006) state that low rates of deviant behaviour, as tax fraud, can be consequence of high levels of religiosity in a society and point to the importance of religion in determining cultural attitudes on tax evasion unacceptability.

2.5.2 Age on Tax Ethics

Age is a frequently demographic variable examined in social sciences studies, according to McGee (1998). In particular, the author states that older people tend to be more ethical than younger people and obey more to rules and laws. An early study from Tittle (1980), regarding this topic, suggests that younger taxpayers are more willing to take risks than older people, and are less sensitive to sanctions, due to lifecycle variations and generational differences. In line with this perception, Richardson and Sawyer (2001) refer that the majority of the studies examining the age variable conclude that older people are more tax compliant. McGee *et al.* (2001) and Gupta and McGee (2010) are also among the authors who found older people to be more opposed to tax evasion than younger ones. According to Braithwaite *et al.* (2006), this happens because older generations seem to be better socialized into taxpaying and younger generations still need to go through a long life experience and socialization process regarding taxpaying. They state that younger people are less compliant in attitude and behaviour than older people and they are less likely to be tax compliant than middle aged and older. Torgler and Valev (2006) add the idea that age has been determined as an important element for illegal activities, as older people seem to be on average more tax compliant and less likely to get involved in criminal activities.

However there are studies with different conclusions regarding the influence of age on tax ethics. Clotfelter (1983) found evidence that both younger and older taxpayers have the highest degree of compliance, by opposition to the middle aged population. Porcano (1998) didn't found a consistent relationship between age and tax evasion suggesting that this demographic variable does not significantly influence tax evasion.

2.5.3 Gender on Tax Ethics

According to McGee (1998), gender is most likely the demographic variable more frequently studied in the social sciences literature. For example, Jackson and Milliron (1986) affirm that the majority of studies regarding the compliance level of males versus females have found men to be less compliant than women. Betz *et al.* (1989) also reported in their studies that men are more likely to engage in unethical business behaviour than women. Kastlunger *et al.* (2010) also concluded that men were less tax compliant, and also more likely to act strategically when paying their taxes. This could be explained mainly by the differences in socialization, femininity traits and self-image, with females being more socially than biologically determined.

On the other hand, Hasseldine and Hite (2003) found no evidence of significant differences between men and women in their tax reporting characteristics. The results of their study suggested that women are more compliant in response to a positive fiscal policy communication by opposition to men who appear to respond better to negative persuasive communication. Overall, it looks like the gap between females and males is showing a tightening tendency, with the increasing new generation of working women and a greater sense of independency (Richardson and Sawyer, 2001).

2.5.4 Education Level on Tax Ethics

The connection between education and tax compliance is quite difficult to understand, according to most of the literature. Beron *et al.* (1988) affirm that the education is highly correlated with income, and therefore its influence on tax compliance interpretation is not straightforward. Smith (1992) examined the relation between the education level and the perceptions of the probability of detection, stating that higher educated taxpayers present

lower perceived threat of sanctions. Also, Kasipillai *et al.* (2003) found statistical evidence suggesting a positive relationship between the level of education and tax compliance. Kolodziej (2011) highlights the role of economic education in creating positive attitudes of taxpayers towards tax law and authorities. More so, McGee (1998) discussed that more educated taxpayers tend to be more tax compliant and have more respect towards the law. However these groups usually have higher income levels and are therefore highly taxed, which, on the other hand, can result in higher evasion tendency.

2.5.5 Occupation on Tax Ethics

According to Hashimzade *et al.* (2014), the main importance of occupation on tax ethics is the possibility of concealing income in different occupations. The income tax directly deducted from the employees' salaries prevents any chance to evade, while self-employed have the opportunity to underreport and hide their income. The tradition of cash payments, depending on the nature of the occupation, can also influence tax compliance and ethics. Several studies, as Porcano (1998), have found that withholding of income at source or third-party information reporting was the most relevant variable in explaining non-compliant behaviour. In case of the banking industry, Koslowski (2011) points that the financial crisis highlighted the existence of a crisis in the ethical aspects of financial institutions and markets.

3 Hypotheses

The main goal of this dissertation is to answer to the following research questions “The attitudes of banking employees on the ethics of tax evasion and their beliefs towards tax compliance are in line with the past literature findings?” and “Do banking employees present high levels of tax ethics?”, exploring the previous work by McGee (2006). Consequently, based on the main variables affecting tax compliance, studied on the literature review, a series of hypotheses were defined and chosen to be tested. In order to test the hypotheses there were performed statistical tests with a 5% level of significance. Hopefully, they will contribute to a better understanding of the ethics role in taxpayers’ behaviour, as part of their tax compliance decisions.

H1-14: For each argument favouring tax evasion, the respondents show a high level of ethics towards tax evasion

H15: Taxpayers with high religiosity levels are more likely to be ethical in their attitudes towards tax evasion

Torgler and Murphy (2004) and Torgler (2006) were among the authors investigating religiosity as a restriction to engage in tax evasion, concluding that more religious people present higher levels of tax morals, having more positive attitudes towards paying taxes.

H16: Older people tend to be more ethical than younger people in their attitudes towards tax evasion

This hypothesis is supported by the literature review, with several authors finding evidences that younger taxpayers are less compliant with their tax obligations, including Richardson and Sawyer (2001), McGee et al. (2001) and Gupta and McGee (2010).

H17: Women are more ethical than men in their attitudes towards tax evasion

Several authors that studied gender as a variable influencing tax compliance, found men to be less compliant than women, as Tittle (1980), Betz *et al.* (1989) and Kastlunger *et al.* (2010). However, authors like Hasseldine and Hite (2003), claim that there are no significant differences between men and women in tax reporting characteristics.

As such, this hypothesis is formulated in line with the majority of past research findings.

4 Data and Methodology

4.1 Methodology

Analysing tax evasion is a difficult task, as Alm (2012) affirms due to the lack of reliable information on taxpayer compliance. One common way to study this topic is the use of surveys to assess taxpayers' attitudes towards tax evasion. As according to Kirchler and Wahl (2010), surveys on tax compliance are one of the most used methods to analyse tax compliance levels. Based on past literature, this dissertation makes use of a survey applied to banking employees as a tool to try to assess their attitudes on the ethics of tax evasion.

Crowe (1944) was pioneer on studying tax evasion from an ethical perspective, presenting 15 arguments favouring tax evasion and discussing the moral obligation of paying taxes from a theological and philosophical perspective, and according to the major views on the ethics of tax evasion, previously described in the literature review. Years later this work was revisited and developed in several works, by McGee (2006; 2014), with an upgraded 18-statement survey to assess the participants' opinions on tax evasion. These works were the starting point for the survey that is presented in this thesis.

Another useful work, when studying this topic, is the World Values Survey, a global research project, representative of almost 100 countries, which studies people's values and beliefs, and provides a global picture of tax morals. It consists of a number of key questions that were taken into account in the realization of the survey.

It is important, however, to have in mind what Alm (2012) referred, as the data obtained through questionnaires is somehow suspicious, given that taxpayers may not answer in a

completely honest way. Furthermore, Ajzen and Fishbein (1980) discuss that the relationship between attitudes and behaviour is not upfront as sometimes people act differently than their beliefs, due to external circumstances.

The present work consists on a survey, administered to banking employees from the headquarters of bank institution operating in Portugal. The data was collected through internal communication, during June and July of 2016, ensuring the participants data confidentiality, in order to try to guarantee the most honest answers possible. The sample consists of a total of 71 valid observations, 50 males and 21 females, aging between 20 and 58 years of age. The analysis of the data was carried out using Microsoft Excel and SPSS Statistics V23.

The survey was constructed considering all the aspects mentioned above, and is divided into the following sections:

Part A - Tax Compliance - This part consists of some statements about tax compliance, with respect to the shadow economy problem, in particular the non-declared “cash in hand” payments. It also includes one open-ended question, where the participants are requested to make a comment on the sentence “It is unfair to make cash payments in order to avoid taxes”.

Part B - Tax Evasion - The participants are presented a series of sentences to give their opinion about the extent of the tax evasion problem and the consequences to those who are caught evading taxes.

Part C - Tax Ethics and Tax Morals - In this part, two important questions are given to quantify the attitudes toward tax evasion and tax morals levels. Also, a series of arguments that justify or not tax evasion are presented in 14 statements, where participants are asked

“Tax evasion is ethical if ...”, using a 5 point Likert scale, ranging between 1 = strongly disagree and 5 = strongly agree.

Part D - Socio-Demographic Data - Here there are asked a series of questions to identify important social variables as age, gender, education. There are, furthermore, several questions to identify religious variables.

The first test that is important to perform, when using multiple Likert questions in a survey is a reliability analysis, to measure the internal consistency of the questions. For that purpose Cronbach's alpha is commonly used.

In order to test the hypotheses H1-14, a one sample t-Student test statistic was executed. These statistical tests were performed with a 5% level of significance, and the collected answers are assumed to be normally distributed. As the sample size is larger than 30 observations, we can consider the central limit theorem to approximate the sample to a normal distribution.

Regarding the hypotheses H15-17, non-parametric tests were used to compare differences between two independent groups, more specifically the Mann-Whitney test. Due to the fact that some groups in study have a sample size lower than 30 observations, the use of non-parametric tests is more adequate, as there is no assumption about the probability distributions of the variables evaluated.

Regarding the factor analysis, two important examinations that can be performed are the cluster analysis and a principal component analysis. The first one is an explorative analysis that attempts to identify homogenous groups of respondents within the sample, with respect to one or more characteristics, according to Marôco (2010). As for the second, the author

defines it as variable-reduction technique that allows us to transform a set of similar variables into a smaller number grouping them into dimensions, called principal components. This process should occur without significant loss of information. The link between the cluster analysis and the principal component analysis enable to clustering with a small number of input variables, which are the principal components. This is an important addition to the hypotheses testing, as it gives us the possibility to look into the behaviour of groups with similar characteristics in the sample and reducing the number of variables in their analysis.

4.2 Data

4.2.1 Variables

The variables selected in the study are age, gender, religiosity and tax ethics. The survey includes a series of questions to identify and measure these variables which will be examined next.

1. Age

In terms of age we observed participants aging between 20 and 58 years of age, with an average of 39.49 years. In order to analyse the results from the age point of view, the sample was divided in 2 groups: the first is composed by respondents up to 40 years old, while the other with the ones aging more than 40 years. From the observed sample, 35 participants belonged to the younger group and 36 to the older group.

2. Gender

Regarding to gender, the majority of the respondents were male, with 50 observations (29.6%) and 21 females (70.4%).

3. Religiosity

With respect to the religion the participants were asked the question “Currently, do you feel you belong to any particular religion?”, with 43 participants affirming to belong to a religion, against 29 claiming not to belong to any religion. The ones who currently don’t belong to any religion were asked “Have you ever felt you belonged to any particular religion?”, with 20 claiming never felt to belong to any religion and 9 who did.

In order to analyse this variable, points were awarded to que questions regarding the frequency of religious services attendance and praying, using a 6 point scale ranging between 1 = daily and 6 = never. The respondents scoring a total up to 6 points were included in the religious group, while to ones with a score higher than 6 points were considered non-religious.

Table 1 - Responses by religion

	Frequency	Percent
Religious	21	29,6
Non-religious	50	70,4
Total	71	100,0

Table 2 - Religious services attendance and praying frequency

	Religious services attendance		Praying frequency	
	Frequency	Percent	Frequency	Percent
Weekly	13	18,3	17	23,9
Monthly	4	5,6	7	9,9
Yearly	4	5,6	3	4,2
Occasionally	26	36,6	17	23,9
Never	24	33,8	27	38,0
Total	71	100,0	71	100,0

4. Tax Ethics

In order to assess the tax ethics level, a series of arguments that justify or don't tax evasion were presented in 14 statements, similar to the ones used in McGee (2006; 2014) studies, where participants were asked: "Tax evasion is ethical if ...". A 5 point Likert scale was used, ranging between 1 = strongly disagree and 5 = strongly agree. The lower the score the more opposed the respondents were to the argument justifying evading taxes. The average score to each argument can be found in the table 10 (see appendix).

To perform the hypotheses test, if the respondents present a high level of ethics for each argument favouring tax evasion, the population mean was considered to be an average score of 2 points, meaning that the respondents strongly disagree or at least disagree with the argument. The choice of setting the null hypothesis equal to 2 is related with the Likert scale used, as that answer consists on disagreeing with the affirmation. Thus, we are testing the hypothesis that the participants, on average disagree with the argument justifying tax evasion and therefore present a high level of ethics towards tax evasion.

5 Results

It is interesting to start by analysing the answers to the open-ended question, where the participants were requested to quantify their degree of agreement and make a comment on the sentence “It is unfair to make cash payments in order to avoid taxes”. The vast majority of the respondents show their concordance (only 4 disagree or strongly disagree) with the argument and the widespread opinion is that the use of cash payments in order to avoid taxes represents a major problem regarding the “shadow economy” phenomenon, and are therefore one of the leading causes of heavier tax burden.

Concerning the tax evasion issue, 90% of the survey respondents consider it to be a major problem and 82% believe tax evasion to be a very or moderately widespread phenomenon, which leads us to conclude that the general opinion is that this is a serious problem. Regarding the probability of those who evade taxes being caught, the opinion differs widely with 50% thinking that it is likely to happen and 44% that it is unlikely. The vast majority of the participants (76%) consider tax evasion to always be unacceptable.

The reliability analysis for the 14 items shows a Cronbach's alpha of 0.909, indicating a very high level of internal consistency for our scale on the tax ethics questions.

5.1 Hypotheses tests

Analysing the answer to each statement, we verify that in 8 of them the null hypothesis is not rejected (H1, H4, H5, H6, H7, H10, H12 and H13), meaning that the average mean is around 2 and for those affirmations the respondents disagree that tax evasion is ethical in those situations. In the cases where the null hypothesis is rejected we observe an average mean

lower than 2 for most situations, which means that there is a strong sense of ethics regarding the affirmations from those hypothesis (H3, H8, H9, H11 and H14). Thus, the only argument where there is no high levels of ethics on tax evasion is when a large portion of the money collected is wasted (H2). We can affirm that there is evidence of high levels of ethics towards tax evasion, which is one of the most important finding, as one of the research questions was “Do banking employees present high levels of tax ethics?”.

Table 3 - Hypotheses tests - Attitudes toward tax evasion for the whole sample

Hypothesis	Null Hypothesis	Alternative Hypothesis	Mean	t	p-value	Mean Difference	Conclusion
H1	$H_0: \mu=2$	$H_1: \mu \neq 2$	2,18	1,032	,306	,141	Not Reject H0
H2	$H_0: \mu=2$	$H_1: \mu \neq 2$	2,50	2,995	,004	,465	Reject H0
H3	$H_0: \mu=2$	$H_1: \mu \neq 2$	1,74	-2,176	,033	-,254	Reject H0
H4	$H_0: \mu=2$	$H_1: \mu \neq 2$	2,19	1,197	,235	,155	Not Reject H0
H5	$H_0: \mu=2$	$H_1: \mu \neq 2$	1,93	-,410	,683	-,056	Not Reject H0
H6	$H_0: \mu=2$	$H_1: \mu \neq 2$	1,97	-,591	,557	-,070	Not Reject H0
H7	$H_0: \mu=2$	$H_1: \mu \neq 2$	1,85	-1,715	,091	-,183	Not Reject H0
H8	$H_0: \mu=2$	$H_1: \mu \neq 2$	1,76	-2,599	,011	-,282	Reject H0
H9	$H_0: \mu=2$	$H_1: \mu \neq 2$	1,63	-4,750	,000	-,423	Reject H0
H10	$H_0: \mu=2$	$H_1: \mu \neq 2$	2,19	1,259	,212	,155	Not Reject H0
H11	$H_0: \mu=2$	$H_1: \mu \neq 2$	1,64	-4,724	,000	-,408	Reject H0
H12	$H_0: \mu=2$	$H_1: \mu \neq 2$	2,06	,099	,922	,014	Not Reject H0
H13	$H_0: \mu=2$	$H_1: \mu \neq 2$	1,93	-,956	,343	-,113	Not Reject H0
H14	$H_0: \mu=2$	$H_1: \mu \neq 2$	1,63	-4,058	,000	-,366	Reject H0

Also, to improve the robustness of this examination, we performed 4 extra tests with the null hypotheses set for the population means of 1, 1.5, 2.5 and 3 (see appendix).

We can see that for the extreme points, which are 1, the minimum Likert scale point, where respondents strongly agree with the argument, and 3, the Likert scale indifference point, all the hypothesis were rejected so we can conclude that the average score for every argument

is between 1 and 3. For the 2.5 test, the results are quite similar to the test for the mean of 2, with the argument there is when a large portion of the money collected is wasted (H2), being the only one above the average mean, with no high levels of ethics on tax evasion. These extra examination also supports the evidence of high levels of ethics towards tax evasion for the banking employee's population.

Regarding the hypothesis that taxpayers with high religiosity levels are more likely to be ethical in their attitudes towards tax evasion (H15), we defined the null hypothesis that religious and non-religious groups have equal levels of tax ethics. Performing the Mann-Whitney test, we observe that for every argument regarding the ethics on tax evasion the p-value is higher than the significance level of 0.05, so the decision is not to reject the null significantly for each of the 14 arguments and there is no evidence to conclude that the levels of tax ethics are different between the two groups, as seen in table 11 (see appendix).

As for the assumption that older people tend to be more ethical than younger people in their attitudes towards tax evasion (H16), the null hypothesis consists on the younger group having equal levels of tax ethics than the older group. Analysing the results from the Mann-Whitney test, we observe that the test statistic is in the rejection region and the p-value is lower than the significance level of 0.05, so we decided not to reject the null hypothesis, meaning that the differences between both groups in each argument, are not statistically significant. Therefore, there is no evidence of older people presenting higher levels of tax ethics than younger people, as shown in table 12 (see appendix).

Looking at the hypothesis that women are more ethical than men in their attitudes towards tax evasion (H17), we defined the null hypothesis that women and man have equal levels of tax ethics. Performing a Mann-Whitney test, we observed that p-value is higher than the

significance level of 0.05 for every argument regarding ethics on tax evasion, so the decision is not to reject the null hypothesis. Then, there is no evidence to conclude that women present higher levels of ethics than men, revealing no differences in level of ethics towards tax evasion in the sample, as presented in table 13 (see appendix).

5.2 Factor Analysis

In order to determine the numbers of clusters in the sample it was performed a hierarchical cluster method, using a graphical representation of the agglomeration coefficients, as can be seen in the figure 2 (see appendix). The observation of this graphic suggests a 4 cluster solution as the most appropriate.

Before taking the principal component analysis we should assess the existence of significant outliers in the sample in study. By the observation of the figure 3 (see appendix), we can conclude that none of the affirmations regarding the ethics on tax evasion should be excluded from the analysis. When performing the principal component analysis a set of results analysis should be taken into consideration, where several items are verified:

- The KMO measure of sampling adequacy allows us to understand if it is adequate to summarize the information provided by the initial affirmations into a lower number of factors. In this particular case we have a good adequacy level with a KMO of 0.835.

Table 4 - KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,835
Bartlett's Test of Sphericity	Approx. Chi-Square	663,335
	Df	91
	Sig.	,000

- The Communalities are the proportion of each variable's variance that can be explained by the principal components. We observe in the table 18 (see appendix) that every argument presents a higher level of communality than 0.3.
- The total variance explained by the 2 extracted principal components accounts for 60.774% of the total variance, which is an adequate value.

Table 5 - Total Variance Explained

Component	Initial Eigenvalues		Extraction Sums of Squared Loadings		Rotation Sums of Squared Loadings	
	Total	% of Variance	Total	% of Variance	Total	% of Variance
1	6,875	49,111	6,875	49,111	5,046	36,044
2	1,633	11,664	1,633	11,664	3,462	24,730

Thus, it can be concluded that the principal component analysis is adequate and the rotated component matrix presents 2 principal components found grouped by the arguments on ethics of tax evasion that characterise them. One possible characterization of the 2 principal components is “Paying taxes is a duty” for the first one, and “Moral reasons to not paying taxes” for the second.

Table 6 - Rotated Component Matrix

	Component	
	(1) Paying taxes is a duty	(2) Moral reasons to not paying taxes
Even if most of the money collected is spent wisely	,922	,049
If a large portion of the money collected is spent on projects that do not benefit me	,863	,179
Even if a large portion of the money collected is spent on worthy projects	,849	,200
Even if a large portion of the money collected is spent on projects that do benefit me	,812	,258

Even if it means that if I pay less, others will have to pay more	,718	,388
If the probability of getting caught is low	,675	,414
If everyone is doing it	,597	,285
If I was sure I would never get caught	,590	,487
If a large portion of the money collected is spent on projects that I morally disapprove of	,285	,734
If I lived in Portugal during the Salazar regime	,047	,700
If I can't afford to pay	,167	,668
If the government discriminates against me because of my religion, race or ethnic background	,158	,665
Even if tax rates are not too high because the government is not entitled to take as much as it is taking from me	,375	,624
If a large portion of the money collected is wasted	,345	,610

Rotation Method: Varimax with Kaiser Normalization.

With the principal component analysis, we can proceed again to the sample clustering with the K-means algorithm, through which the 4 cluster solution is validated.

Table 7 - ANOVA

	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
Paying taxes is a duty	17,806	3	,247	67	71,948	,000
Moral reasons to not paying taxes	17,461	3	,263	67	66,404	,000

Finally we can analyse our 4 clusters and their representativity in the 2 defined principal components.

Table 8 - Cluster Distribution

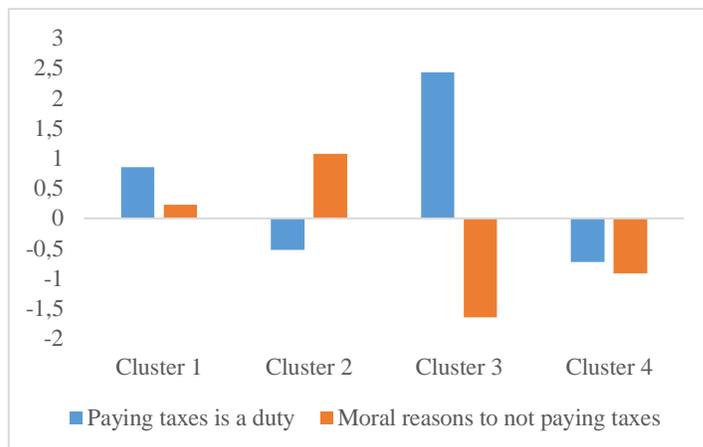
			Female To 40 years	Female + 40 years	Male To 40 years	Male + 40 years
Cluster Number of Case	Cluster 1	%	75,0%	25,0%	43,8%	56,3%
	Cluster 2	%	0,0%	100,0%	53,3%	46,7%
	Cluster 3	%	100,0%	0,0%	100,0%	0,0%
	Cluster 4	%	66,7%	33,3%	38,9%	61,1%
	Total	%	57,1%	42,9%	46,0%	54,0%

Table 9 - Cluster Description

	Paying taxes is a duty		Moral reasons to not paying taxes	
	Mean	Standard Deviation	Mean	Standard Deviation
Cluster 1	,857	,619	,230	,594
Cluster 2	-,521	,613	1,069	,506
Cluster 3	2,428	,310	-1,651	,619
Cluster 4	-,726	,137	-,914	,411

We can also conclude from figure 1 that the participants grouped in the cluster 3 are the ones who agree more with the affirmations regarding the principal component “Paying taxes is a duty” and less with “Moral reasons to not paying taxes. It is also relevant that the respondents from cluster 1 have a contrary and symmetrical to the opinions from the cluster 4.

Figure 1 - Factor Analysis



6 Conclusion

6.1 Main Conclusions

The study's main objective was to assess the attitudes of banking employees on the ethics of tax evasion. Analysing the survey results, the majority of the respondents showed a strong opposition to tax evasion, disagreeing with the arguments favouring tax evasion. So, the results point to the existence of high tax ethics levels on banking employees.

Contrary to expectations, and most of the literature, women did not present higher levels of tax ethics than men, with evidences suggesting the ethics levels to be similar. This can be justified by the increasing new generation of working women and their higher independency, as argued by Richardson and Sawyer (2001). Also, the religiosity level was not a determinant factor from the tax ethics level, with no evidence found that the ethics towards tax evasion was different between religious and non-religious people. The study also didn't found any significant differences between different age groups, suggesting that this demographic variable does not significantly influence tax evasion, as stated by Porcano (1998).

The factor analysis indicates 2 principal components, designated by "Paying taxes is a duty" and "Moral reasons to not paying taxes", and grouped the participants in 4 clusters.

Hopefully, this work will draw interest into this topic, leading to new studies and contributing to further research in the tax ethics analysis.

6.2 Limitations

Despite the fact that surveys on taxpayer attitudes has much less limitations than on individuals' compliance decisions, according to Alm and Torgler (2011), there are some

objections that can be made to the use of surveys to assess this issue. Jackson & Milliron (1986) suggest that one of the main problems related with surveys is the obtainment of honest answers due to the sensitive nature of this kind of information. Also, Ajzen and Fishbein (1980) emphasize that the relationship between attitudes and behaviour are not straightforward, as it's not unusual that people behave differently from their beliefs. Another critical factor of using surveys in this work is the possibility of the sample not being representative of the banking employees' population.

6.3 Further Research

This kind of research on tax ethics has endless possibilities. It would be interesting to extend this survey at a national level with assess to employees of the biggest bank institutions operating in Portugal, having a more representative sample. Even in the bank institution studied, it would be valuable to extend the study to all national territory rather than just in Lisbon and Porto, which was not possible due to some restrictions.

Another possibility would be to compare the results obtained with different population samples other than banking employees, observing the divergences or agreements on their attitudes on tax ethics.

7 References

- Ajzen, I. (1991), "The Theory of Planned Behavior", *Organizational Behavior and Human Decision Processes*, Vol. 50, Issue 2, pp. 179-211.
- Ajzen, I. and Fishbein, M. (1980), "Understanding attitudes and predicting social behaviour", Englewood Cliffs, NJ: Prentice-Hall.
- Allingham, M.G. and Sandmo, A. (1972), "Income tax evasion: a theoretical analysis", *Journal of Public Economics*, Vol. 1, Issue 3-4, pp. 323-338.
- Alm, J. (1991), "A perspective on the experimental analysis of taxpayer reporting", *The Accounting Review*, Vol. 66, No. 3, pp. 577-593.
- Alm, J. (2012), "Measuring, explaining, and controlling tax evasion: lessons from theory, experiments, and field studies", *International Tax and Public Finance*, Vol. 19, Issue 1, pp. 54-77.
- Alm, J., Jackson, B.R. and McKee, M. (1992), "Fiscal exchange, collective decision institutions, and tax compliance", *Journal of Economic Behavior & Organization*, Vol. 22, Issue 3, pp. 285-303.
- Alm, J. and Torgler, B. (2006), "Culture differences and tax morale in the United States and in Europe", *Journal of Economic Psychology*, Vol. 27, Issue 2, pp. 224-246.
- Alm, J. and Torgler, B. (2011), "Do Ethics Matter? Tax Compliance and Morality", *Journal of Business Ethics*, Vol. 101, Issue 4, pp. 635-651.
- Andreoni, J., Erard, B. and Feinstein, J. (1998), "Tax compliance", *Journal of Economic Literature*, Vol. 36, No. 2, pp. 818-860.
- Becker, G.S. (1968), "Crime and Punishment: An Economic Approach", *Journal of Political Economy*, Vol. 76, No. 2, pp. 169-217.
- Benk, S., McGee, R.W. and Yüzbaşı, B. (2015), "How Religions Affect Attitudes Toward Ethics of Tax Evasion? A Comparative and Demographic Analysis", *Journal for the Study of Religions and Ideologies*, Vol 14, Issue 41, pp. 202-223.

- Beron, K.J., Tauchen, H.V. and Witte, A.D. (1988), "A Structural Equation Model for Tax Compliance and Auditing", *National Bureau of Economic Research*, Working Paper No. 2556.
- Betz, M., O'Connell, M. and Shepard, J.M. (1989), "Gender Differences in Proclivity for Unethical Behavior", *Journal of Business Ethics*, Vol. 8, No. 5, pp. 321-324.
- Braithwaite, V.A., Smart, M. and Reinhart, M. (2006), "Why young people are less compliant on tax: enduring or transient defiance?", *Regulatory Institutions Network*, Occasional Paper 11, pp. 1-49.
- Büttner, T. and Grimm, V. (2016), "Taxation, social norms, and compliance: Research questions and results", *Journal of Economic Behavior & Organization*, Vol. 124, pp. 1-6.
- Cialdini, R.B. (1989), "Social motivations to comply: Norms, values and principles", *Taxpayer Compliance*, Vol. 2, pp. 220-227.
- Clotfelter, C.T. (1983), "Tax Evasion and Tax Rates: An Analysis of Individual Returns", *The Review of Economics and Statistics*, Vol. 65, No. 3, pp. 363-373.
- Cohn, A., Fehr, E. and Maréchal, M.A. (2014), "Business Culture and Dishonesty in the Banking Industry", *Nature*, Vol. 516, pp. 86-89.
- Cowell, F.A. (1985), "The Economic Analysis of Tax Evasion", *Bulletin of Economic Research*, Vol. 37, Issue 3, pp. 163-193.
- Crowe, M.T. (1944), "The Moral Obligation of Paying Just Taxes", *The Catholic university of America. Studies in sacred theology*, No. 84.
- Cuccia, A.D. (1994), "The economics of tax compliance: What do we know and where do we go?", *Journal of Accounting Literature*, Vol. 13, pp. 81-116.
- Cummings, R.G., Martinez-Vazquez, J., McKee, M. and Torgler, B. (2009), "Tax morale affects tax compliance: Evidence from surveys and an artefactual field experiment", *Journal of Economic Behavior & Organization*, Vol. 70, Issue 3, pp. 447-457.
- Feld, L.P. and Frey, B.S. (2004), "Illegal, Immoral, Fattening or What?: How Deterrence and Responsive Regulation Shape Tax Morale", in: C. Bajada and F. Schneider (eds.), *Size, Cause and Consequences of the Underground Economy*, Ashgate, Aldershot, pp. 15-37.

- Fischer, C.M., Wartick, M. and Mark, M.M. (1992), "Detection probability and taxpayer compliance: A review of the literature", *Journal of Accounting Literature*, Vol. 11, pp. 1-46.
- Frey, B.S. (1997), "Not just for the money - An economic theory of personal motivation", Cheltenham-Brookfield 199, Edward Elgar Publishing.
- Governo de Portugal (2015), "Plano Estratégico de Combate à Fraude e Evasão Fiscais e Aduaneiras - 2015-2017". Available in: http://info.portaldasfinancas.gov.pt/nr/rdonlyres/e245bdae-d856-4186-a950-f0be649869df/0/plano_estrategico_combate_fraude_fiscal_aduaneira_2015_2017.pdf
- Graetz, M.J. and Wilde, L.L. (1985), "The Economics of Tax Compliance: Fact and Fantasy", *National Tax Journal*, Vol. 38, No. 3, pp. 355-363.
- Graetz, M.J., Reinganum, J.F. and Wilde, L.L. (1986), "The Tax Compliance Game: Toward an Interactive Theory of Law Enforcement", *Journal of Law, Economics, & Organization*, Vol. 2, No. 1, pp. 1-32.
- Grasmick, H.G. and Bursik, R.J. (1990), "Conscience, Significant Others and Rational Choice: Extending the Deterrence Model", *Law & Society Review*, Vol. 24, No. 3, pp. 837-862.
- Grasmick, H.G. and Scott, W.J. (1982), "Tax evasion and mechanisms of social control: A comparison with grand and petty theft", *Journal of Economic Psychology*, Vol. 2, Issue 3, pp. 213-230.
- Grasmick, H.G., Cochran, J.K. and Bursik, R.J. (1991), "Render Unto Caesar What Is Caesar's": religiosity and taxpayers' inclinations to cheat", *The Sociological Quarterly*, Vol. 32, No. 2, pp. 251-266.
- Gupta, R. and McGee, R.W. (2010), "A Comparative Study Of New Zealanders' Opinion On The Ethics Of Tax Evasion: Students v Accountants", *New Zealand Journal of Taxation Law & Policy*, Vol. 16, No. 1, pp. 47-84.
- Hashimzade, N., Myles, G.D., Page, F. and Rablen, M. D. (2014), "Social networks and occupational choice: The endogenous formation of attitudes and beliefs about tax compliance", *Journal of Economic Psychology*, Vol. 40, pp. 134-146.

- Hasseldine, J. (2000), "Linkages between Compliance Costs and Taxpayer Compliance Research", *Bulletin for International Taxation*, Vol 54, No. 6, pp. 299-303.
- Hasseldine, J. and Hite, P.A. (2003), "Framing, gender and tax compliance", *Journal of Economic Psychology*, Vol. 24, Issue 4, pp. 517-533.
- Hite, P.A. (1989), "A Positive Approach to Taxpayer Compliance", *Public Finance*, Vol. 44, Issue 2, pp. 249-267.
- Jackson, B.R. and Jones, S.M. (1985), "Salience of Tax Evasion Penalties Versus Detection Risk", *Journal of the American Taxation Association*, Vol. 6, Issue 2, pp. 7-17.
- Jackson, B.R. and Milliron V.C. (1986), "Tax Compliance Research: Findings, Problems, and Prospects", *Journal of Accounting Literature*, Vol. 5, pp. 125-165.
- Kasipillai, J., Aripin, N. and Amran, N.A. (2003), "The influence of education on tax avoidance and tax evasion", *eJournal of Tax Research*, Vol. 1, No. 2, pp. 134-146.
- Kastlunger, B., Dressler, S.G., Kirchler, E., Mittone, L. and Voracek, M. (2010), "Sex differences in tax compliance: Differentiating between demographic sex, gender-role orientation, and prenatal masculinization (2D:4D)", *Journal of Economic Psychology*, Vol. 31, Issue 4, pp. 542-552.
- Kinsey, K.A. (1986), "Theories and Models of Tax Cheating", *Criminal Justice Abstracts*, Vol. 18, pp. 403-425.
- Kirchler, E. and Wahl, I. (2010), "Tax compliance inventory TAX-I: Designing an inventory for surveys of tax compliance", *Journal of Economic Psychology*, Vol. 31, Issue 3, pp. 331-346.
- Kolodziej, S. (2011), "The role of education in forming voluntary tax compliance", *General and Professional Education*, Issue 1, pp. 22-25.
- Koslowski, P. (2011), "The ethics of banking: Conclusions from the financial crisis", New York: Springer.
- Labaton Sucharow LLP (2012), "Wall Street Fleet Street Main Street: Corporate Integrity at a Crossroads: United States & United Kingdom Financial Services Industry Survey".

- Lewis, A. (1982), "The psychology of taxation", *Journal of Economic Psychology*, Vol. 3, Issue 2, pp. 177-181.
- Marandu, E.E., Mbekomize, C.J. and Ifezue, A.N. (2015), "Determinants of Tax Compliance: A Review of Factors and Conceptualizations", *International Journal of Economics and Finance*, Vol. 7, No. 9, pp. 207-218.
- Marôco, J. (2010), "Análise Estatística com Utilização do SPSS", Edições Sílabo.
- McGee, R.W. (1998), "The Ethics of Tax Evasion: Perspectives in Theory and Practice", New York: Springer.
- McGee, R.W. (1999), "Is It Unethical to Evade Taxes in an Evil or Corrupt State? A Look at Jewish, Christian, Muslim, Mormon and Baha'i Perspectives", *Journal of Accounting, Ethics & Public Policy*, Vol. 2, No. 1, pp. 149-181.
- McGee, R.W. (2006), "The Ethics of Tax Evasion: A Survey of International Business Academics".
- McGee, R.W. (2014), "Attitudes on the Ethics of Tax Evasion: A Survey of Philosophy Professors".
- Mckerchar, M. (2003), "The impact of complexity upon tax compliance: a study of Australian personal taxpayers", *Australian Tax Research Foundation*, Research Study No 39.
- Milliron, V.C. and Toy, D.R. (1988), "Tax Compliance: An investigation of key features", *Journal of the American Taxation Association*, Vol. 9, Issue 2, pp. 84-104.
- Murphy, R. (2012), "Closing the European tax gap: A Report for Group of the Progressive Alliance of Socialists & Democrats in the European Parliament", *Tax research LLP*.
- OECD (2013), "What drives tax morale?", *OECD Publishing*.
- Onu, D. (2016), "Measuring Tax Compliance Attitudes: What surveys can tell us about tax compliance behaviour", *Tax Administration Research Center*, Discussion Paper.
- Pereira, M.H.F. (2011), "Fiscalidade", Coimbra: Almedina.

Pope, J. and McKerchar, M. (2011), "Understanding tax morale and its effect on individual taxpayer compliance", *British Tax Review*, 5, pp. 587-601.

Porcano, T.M. (1998), "Correlates of tax evasion", *Journal of Economic Psychology*, Vol. 9, Issue 1, pp. 47-67.

Richardson, M. and Sawyer, A.J. (2001), "A taxonomy of tax compliance literature: Further findings, problems and prospects", *Australian Tax Forum*, Vol. 16, pp. 137-320.

Roth, J.A., Scholtz, J.T., and Witte, A.D. (1989), "Taxpayer compliance: An agenda for research", *University of Pennsylvania Press*.

Sandmo, A. (2004), "The theory of tax evasion: A retrospective view", *National Tax Journal*, Vol. 58, No. 4, pp. 643-663.

Schneider, F. (2011), "The Shadow Economy and Shadow Economy Labor Force: What Do We (Not) Know?", *Institute for the Study of Labor*, Discussion Paper No. 5769.

Schmölders, G. (1959), "Fiscal psychology: A new branch of public finance", *National Tax Journal*, Vol. 12, No. 4, pp. 340-345.

Schwartz, R.D. and Orleans, S. (1967) "On Legal Sanctions", *University of Chicago Law Review*, Vol. 34, No. 2, pp. 274-300.

Slemrod, J. (2007), "Cheating Ourselves: The Economics of Tax Evasion", *Journal of Economic Perspectives*, Vol. 21, No. 1, pp. 25-48.

Smith, K. and Kinsey, K. (1987), "Understanding taxpaying behaviour: A conceptual framework with implications for research", *Law and Society Review*, Vol. 21, No. 4, pp. 639-663.

Song, Y. and Yarbrough, T.E. (1978), "Tax Ethics and Taxpayer Attitudes: A Survey", *Public Administration Review*, Vol. 38, No. 5, pp. 442-452.

Srinivasan, T.N. (1973), "Tax Evasion: A Model", *Journal of Public Economics*, Vol. 2, No. 4, pp. 339-346.

Stack, S. and Kposowa, A. (2006), "The Effect of Religiosity on Tax Fraud Acceptability: A Cross-National Analysis", *Journal for the Scientific Study of Religion*, Vol. 45, Issue 3, pp. 325-351.

Strümpel, B. (1969), "The Contribution of Survey Research to Public Finance". In: Peacock, A.T., (Eds.) *Quantitative methods in public finance*, New York: Praeger, pp. 13-32.

Thurman, Q.C., St. John, C. and Riggs, L. (1984), "Neutralization and tax evasion: how effective would a moral appeal be in improving compliance to tax laws?", *Law and Policy*, Vol. 6, No. 3, pp. 309-327.

Tittle, C.R. (1980), "Sanctions and Social Deviance - The Question of Deterrence", New York: Praeger.

Tittle, C.R. and Logan, C.H. (1973), "Sanctions and Deviance: Evidence and Remaining Questions", *Law & Society Review*, Vol. 7, No. 3, pp. 371-392.

Tomes, N. (1985), "Religion and the Earnings Function", *The American Economic Review*, Vol. 75, No. 2, pp. 245-250.

Torgler, B. (2003), "To evade taxes or not to evade: that is the question", *The Journal of Socio-Economics*, Vol. 32, Issue 3, pp. 283-302.

Torgler, B. (2006), "The importance of faith: Tax morale and religiosity", *Journal of Economic Behavior & Organization*, Vol. 61, Issue 1, pp. 81-109.

Torgler, B. (2011), "Tax Morale and Compliance: Review of Evidence and Case Studies for Europe", *World Bank Policy Research*, Working Paper No. 5922.

Torgler, B. and Valev, N.T. (2006), "Corruption and Age", *Journal of Bioeconomics*, Vol. 8, Issue 2, pp. 133-145.

Torgler, B. and Murphy, K. (2004), "Tax Morale in Australia: What Shapes it and Has it Changed over Time?", *Journal of Australian Taxation*, Vol. 7. No. 2, pp. 298-335.

Torgler, B, Demir, I.C., Macintyre, A. and Schaffner, M. (2008), "Causes and Consequences of Tax Morale: An Empirical Investigation", *Economic Analysis and Policy*, Vol. 38, Issue 2, pp. 313-339.

Yitzhaki, S. (1974), "Income tax evasion: A theoretical analysis", *Journal of Public Economics*, Vol. 3, Issue 2, pp. 201-202.

Wehinger, G. (2012), "Banking in a challenging environment: Business models, ethics and approaches towards risks", *OECD Journal: Financial Market Trends*, Vol. 2.

Wenzel, M. (2007), "The Multiplicity of Taxpayer Identities and Their Implications for Tax Ethics", *Law & Policy*, Vol. 29, No. 1, pp. 31-50.

8 Appendixes

8.1 Survey

The distribution of the questionnaire was carried out in a Portuguese version.

This survey aims to study ethical attitudes in tax evasion and fraud in personal income tax, thus it should be answered by the Bank employees. It's part of a project from the Master in Finance, which has been developed in Instituto Superior de Economia e Gestão (ISEG), Universidade de Lisboa (UL).

We ask you to pay attention to the answer's instructions that will appear along the survey.

We remind you that there are no right or wrong answers. All of them are important.

This survey is anonymous and thus we guarantee the data confidentiality. The answers will be treated only in aggregate form, therefore is not allowed the individual identification.

We thank you for your collaboration that is crucial for this project.

A. You are now going to see a series of statements that people have made about complying with tax obligations. The statements are about the shadow economy, in which income is received in cash and not declared for tax purposes. For each statement, please select if you (SA) "strongly agree", (A) "agree", (N) "neutral", (D) "disagree" or (SD) "strongly disagree".

A1. Please consider to what extent you agree or disagree with the following statements.

		SA	A	N	D	SD
1	It is unfair to use cash to avoid paying tax	•	•	•	•	•
2	Through various communications, the Autoridade Tributária (AT) is keeping the community informed about their efforts to stop 'cash in hand payments'	•	•	•	•	•
3	The AT is effective in dealing with people who do not declare all their cash earnings	•	•	•	•	•
4	I do not think it is fair for people to consistently work for cash in hand payments without paying tax	•	•	•	•	•
5	In the last 12 months, I have heard what happens to people who have not complied with their tax obligations	•	•	•	•	•

A2. Please try to explain, in as much detail as you can, your answer to the question "It is unfair to use cash to avoid paying taxes"

B. Tax evasion consists of licit acts or businesses that are qualified by tax law as not being in accordance with the economic reality or as being abusive. Therefore, tax evasion is considered as a deliberate practice, not an accidental one.

B1. In your view, do you think that income tax evasion is...

1	A major problem	•
2	A moderate problem	•
3	A minor problem	•
4	Not a problem at all	•
5	Don't know	•

B2. In your view, how widespread do you think income tax evasion is...

1	Very widespread	•
2	Fairly widespread	•
3	Not very widespread	•
4	Not widespread at all	•

5	Don't know	•
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B3. In your view, do you think AT is currently putting too much, too little or about the right amount of effort into reducing income tax evasion?

1	Too much	•
2	Too little	•
3	No effort	•
4	About the right amount	•
5	Don't know	•

B4. How likely would you say it is for people who regularly evade paying income tax to get caught?

1	Very likely	•
2	Quite likely	•
3	Not likely	•
4	Not at all likely	•
5	Don't know	•

B5. Please tell me to what extent you agree or disagree with the following statements. For each statement, please select if you (SA) "strongly agree", (A) "agree", (N) "neutral", (D) "disagree" or (SD) "strongly disagree".

		SA	A	N	D	SD
1	A lot of people I know think its okay not to pay tax on cash earnings	•	•	•	•	•
2	I think it's okay being paid in cash for a job and then not declaring all of it on your tax return	•	•	•	•	•
3	The financial penalties AT can impose are sufficient to deter people from regularly evading income tax?	•	•	•	•	•

B6. What are the possible consequences for people caught evading income tax, especially where it becomes public knowledge? (Code all that apply)

1	Social stigma	•
2	Embarrassment	•
3	Negative impact on job prospects	•
4	Negative impact on credit record	•
5	Negative impact on ability to start up in business	•
6	Financial penalties	•
7	Financial problems	•
8	Criminal record	•
9	Prison sentence	•
10	No consequences	•
11	Other _____	•
12	Don't know/ Can't think of any	•

B7. Please consider which of the statements comes closest to your own view about income tax evasion.

1	It is always acceptable (<i>Continue to D1</i>)	•
2	It is mostly acceptable (but depends on the circumstances)	•
3	It is mostly unacceptable (but depends on the circumstances) (<i>Continue to C9</i>)	•
4	It is always unacceptable (<i>Continue to D1</i>)	•

5	None of these (<i>Continue to D1</i>)	•
6	Don't know (<i>Continue to D1</i>)	•

B8. In which are the circumstances do you think income tax evasion would be acceptable? (Code all that apply)

1	When a person cannot afford to pay tax/financial hardship	•
2	When small amounts of money are involved	•
3	When the evasion activity is short term/a one off	•
4	Depends on a person's occupation	•
5	When taxes are unfair or unreasonable	•
6	When a person is disadvantaged or vulnerable (e.g. elderly or disabled)	•
7	Other _____	•

B9. In which circumstances do you think income tax evasion would be unacceptable? (Code all that apply)

1	When a person can afford to pay tax/is wealthy	•
2	When the amount of money is large	•
3	When the evasion activity is long term/regular	•
4	Depends on a person's occupation	•
5	Depends on the type of evasion	•
6	Other _____	•

B10. Which is the main reason taxpayers wouldn't regularly evade income tax? (Choose only one option).

1	The probability/likelihood of being caught	•
2	Because it is immoral	•
3	Because they're honest	•
4	Because it's illegal	•
5	Because it is unfair to other taxpayers	•
6	There is no reason why not to regularly evade tax	•
7	Because of the penalties/consequences they could face	•
9	Other _____	•

C. This section aims to assess tax morale and tax ethics levels in relation to tax evasion.

C1. Please consider to what extent you agree or disagree with the following statements. For each statement, please select if you (SA) "strongly agree", (A) "agree", (N) "neutral", (D) "disagree" or (SD) "strongly disagree".

		SA	A	N	D	SD
1	It is always justifiable to claim government benefits to which you're not entitled to	•	•	•	•	•
2	It is always justifiable cheating on taxes if you have a chance	•	•	•	•	•

C2. Please consider to what extent you agree or disagree, about each statement, as a way of governing a country. For each statement, please select if you (SA) "strongly agree", (A) "agree", (N) "neutral", (D) "disagree" or (SD) "strongly disagree".

		SA	A	N	D	SD
1	Having a strong leader who does not have to bother with parliament and elections	•	•	•	•	•

2	Having a democratic political system	<input type="checkbox"/>				
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C3. Please consider your degree of trust in the following institutions. For each institution, please select if you (TT) “totally trust”, (T) “trust”, (N) “neutral”, (D) “distrust” or (TD) “totally distrust”.

		TT	T	N	D	TD
1	The Police	<input type="checkbox"/>				
2	The Courts	<input type="checkbox"/>				
3	The Government (in your nation’s capital)	<input type="checkbox"/>				
4	Political Parties	<input type="checkbox"/>				
5	Parliament	<input type="checkbox"/>				
6	The President	<input type="checkbox"/>				

C4. Please consider to what extent you agree or disagree with the following statements. For each statement, please select if you (SA) “strongly agree”, (A) “agree”, (N) “neutral”, (D) “disagree” or (SD) “strongly disagree”.

		SA	A	N	D	SD
1	Tax evasion is ethical even if tax rates are not too high because the government is not entitled to take as much as it is taking from me.	<input type="checkbox"/>				
2	Tax evasion is ethical if a large portion of the money collected is wasted.	<input type="checkbox"/>				
3	Tax evasion is ethical even if most of the money collected is spent wisely.	<input type="checkbox"/>				
4	Tax evasion is ethical if a large portion of the money collected is spent on projects that I morally disapprove of.	<input type="checkbox"/>				
5	Tax evasion is ethical even if a large portion of the money collected is spent on worthy projects.	<input type="checkbox"/>				
6	Tax evasion is ethical if a large portion of the money collected is spent on projects that do not benefit me.	<input type="checkbox"/>				
7	Tax evasion is ethical even if a large portion of the money collected is spent on projects that do benefit me.	<input type="checkbox"/>				
8	Tax evasion is ethical if everyone is doing it.	<input type="checkbox"/>				
9	Tax evasion is ethical if the probability of getting caught is low.	<input type="checkbox"/>				
10	Tax evasion is ethical if I can’t afford to pay.	<input type="checkbox"/>				
11	Tax evasion is ethical even if it means that if I pay less, others will have to pay more.	<input type="checkbox"/>				
12	Tax evasion is ethical if the government discriminates against me because of my religion, race or ethnic background.	<input type="checkbox"/>				
13	Tax evasion would be ethical if I lived in Portugal during the Salazar regime.	<input type="checkbox"/>				
14	Tax evasion is ethical if I was sure I would never get caught	<input type="checkbox"/>				

D. You’ve reached the last section. This part intends to gather personal data.

D1. Gender:

1	Male	<input type="checkbox"/>
2	Female	<input type="checkbox"/>

D2. Age _____

D3. Did you born in Portugal?

1	Yes	<input type="checkbox"/>
2	No	<input type="checkbox"/>

D4. How many school years did you complete successfully? _____

D5. Did you ever attend any course in Taxes, Tax Law or related?

1	Yes	•
2	No	•

D6. What was the workload in Tax training in the last 12 months?

1	Less than 24 hours	•
2	Between 24 and 48 hours	•
3	More than 48 hours	•

D7. When did you get in the Banking industry? _____

D8. In which bank department are you in?

1	Asset Management	•
2	Treasury and Capital Markets	•
3	Human Resources	•
4	Private Banking	•
5	Operations	•
6	Tax	•
7	Compliance	•
8	Marketing	•
9	IT	•
10	Other _____	•

D9. Which is your marital status?

1	Married	•
2	Cohabiting	•
3	Single	•
4	Widowed	•
5	Divorced	•

D10. Which of the following describes more closely what do you feel about the current income of people living in your household?

1	The current income allows to live comfortably	•
2	The current income allows to live	•
3	It is difficult to live with the current income	•
4	It is very difficult to live with the current income	•

D11. Which is your tax residence district? _____

D12. Independently of whether you attend religious services or not, would you say you are:

1	Not a religious person	•
2	A very religious person	•

D13. Do you belong, in the present time, to a religion or religious denomination?

1	Yes	•
2	No (<i>Continue to question A15</i>)	•

D14. Which one?

1	Catholic	•
2	Protestant	•
3	Orthodox	•
4	Other Christian	•
5	Jewish	•
6	Islamic/Muslim	•
7	Eastern religions	•
8	Non-Christian	•

D15. Did you belong, in the past, to a religion or religious denomination?

1	Yes	•
2	No (<i>Continue to question A17</i>)	•

D16. Which one?

1	Catholic	•
2	Protestant	•
3	Orthodox	•
4	Other Christian	•
5	Jewish	•
6	Islamic/Muslim	•
7	Eastern religions	•
8	Non-Christian	•

D17. Apart from weddings, funerals and christenings, about how often do you attend religious services these days?

1	Daily	•
2	Weekly	•
3	Monthly	•
4	Yearly	•
5	Occasionally	•
6	Never	•

D18. Apart from weddings, funerals and christenings, about how often do you pray?

1	Daily	•
2	Weekly	•
3	Monthly	•
4	Yearly	•
5	Occasionally	•
6	Never	•

Table 10 - Attitudes towards tax evasion

		Average Score
1	Tax evasion is ethical even if tax rates are not too high because the government is not entitled to take as much as it is taking from me.	2,18
2	Tax evasion is ethical if a large portion of the money collected is wasted.	2,50
3	Tax evasion is ethical even if most of the money collected is spent wisely.	1,74
4	Tax evasion is ethical if a large portion of the money collected is spent on projects that I morally disapprove of.	2,19
5	Tax evasion is ethical even if a large portion of the money collected is spent on worthy projects.	1,93
6	Tax evasion is ethical if a large portion of the money collected is spent on projects that do not benefit me.	1,97
7	Tax evasion is ethical even if a large portion of the money collected is spent on projects that do benefit me.	1,85
8	Tax evasion is ethical if everyone is doing it.	1,76
9	Tax evasion is ethical if the probability of getting caught is low.	1,63
10	Tax evasion is ethical if I can't afford to pay.	2,19
11	Tax evasion is ethical even if it means that if I pay less, others will have to pay more.	1,64
12	Tax evasion is ethical if the government discriminates against me because of my religion, race or ethnic background.	2,06
13	Tax evasion would be ethical if I lived in Portugal during the Salazar regime.	1,93
14	Tax evasion is ethical if I was sure that I would never get caught.	1,63

Table 11 - Mann-Whitney Test Statistics for the religiosity variable

	Even if tax rates are not too high because the government is not entitled to take as much as it is taking from me	If a large portion of the money collected is wasted	Even if most of the money collected is spent wisely	If a large portion of the money collected is spent on projects that I morally disapprove of	Even if a large portion of the money collected is spent on worthy projects	If a large portion of the money collected is spent on projects that do not benefit me	Even if a large portion of the money collected is spent on projects that do benefit me	If everyone is doing it	If the probability of getting caught is low	If I can't afford to pay	Even if it means that if I pay less, others will have to pay more	If the government discriminates against me because of my religion, race or ethnic background	If I lived in Portugal during the Salazar regime	If I was sure I would never get caught
Mann-Whitney U	482,000	519,000	473,500	514,000	462,000	453,500	509,000	518,000	473,500	482,500	514,000	506,500	472,500	512,500
Wilcoxon W	713,000	750,000	1748,500	1789,000	1737,000	1728,500	1784,000	749,000	1748,500	713,500	745,000	737,500	703,500	1787,500
Z	-,570	-,078	-,713	-,146	-,853	-,966	-,219	-,097	-,732	-,563	-,155	-,248	-,707	-,176
Asymp. Sig. (2-tailed)	,569	,937	,476	,884	,394	,334	,827	,923	,464	,573	,877	,804	,480	,860

Table 12 - Mann-Whitney Test Statistics for the age variable

	Even if tax rates are not too high because the government is not entitled to take as much as it is taking from me	If a large portion of the money collected is wasted	Even if most of the money collected is spent wisely	If a large portion of the money collected is spent on projects that I morally disapprove of	Even if a large portion of the money collected is spent on worthy projects	If a large portion of the money collected is spent on projects that do not benefit me	Even if a large portion of the money collected is spent on projects that do benefit me	If everyone is doing it	If the probability of getting caught is low	If I can't afford to pay	Even if it means that if I pay less, others will have to pay more	If the government discriminates against me because of my religion, race or ethnic background	If I lived in Portugal during the Salazar regime	If I was sure I would never get caught
Mann-Whitney U	595,000	539,000	565,500	606,000	549,500	498,000	590,500	555,500	579,000	545,000	572,500	610,000	611,000	579,500
Wilcoxon W	1261,000	1205,000	1231,500	1272,000	1215,500	1164,000	1256,500	1221,500	1245,000	1175,000	1238,500	1276,000	1277,000	1245,500
Z	-,424	-1,087	-,815	-,290	-,995	-1,628	-,493	-,943	-,662	-1,028	-,738	-,245	-,234	-,650
Asymp. Sig. (2-tailed)	,672	,277	,415	,772	,320	,103	,622	,346	,508	,304	,460	,806	,815	,516

Table 13 - Mann-Whitney Test Statistics for the gender variable

	Even if tax rates are not too high because the government is not entitled to take as much as it is taking from me	If a large portion of the money collected is wasted	Even if most of the money collected is spent wisely	If a large portion of the money collected is spent on projects that I morally disapprove of	Even if a large portion of the money collected is spent on worthy projects	If a large portion of the money collected is spent on projects that do not benefit me	Even if a large portion of the money collected is spent on projects that do benefit me	If everyone is doing it	If the probability of getting caught is low	If I can't afford to pay	Even if it means that if I pay less, others will have to pay more	If the government discriminates against me because of my religion, race or ethnic background	If I lived in Portugal during the Salazar regime	If I was sure I would never get caught
Mann-Whitney U	484,000	513,000	442,500	474,000	409,000	495,000	489,500	392,500	458,000	486,000	461,500	469,500	458,000	499,500
Wilcoxon W	1759,000	744,000	1717,500	705,000	1684,000	1770,000	1764,500	1667,500	1733,000	717,000	1736,500	1744,500	1733,000	730,500
Z	-,544	-,157	-1,142	-,676	-1,571	-,405	-,486	-1,838	-,952	-,517	-,893	-,745	-,902	-,359
Asymp. Sig. (2-tailed)	,587	,875	,253	,499	,116	,685	,627	,066	,341	,605	,372	,456	,367	,719

Figure 2 - Cluster Analysis - Coefficients Difference

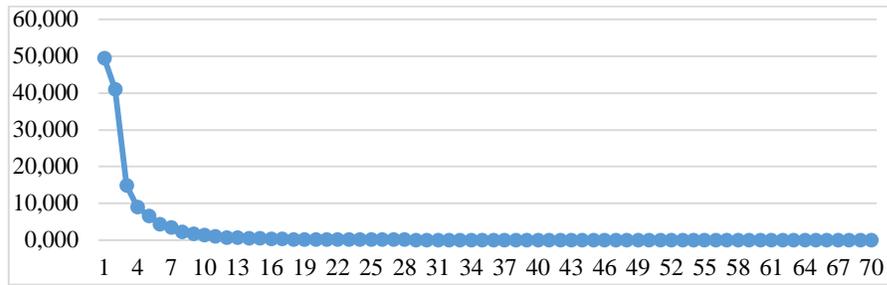


Figure 3 - Outliers

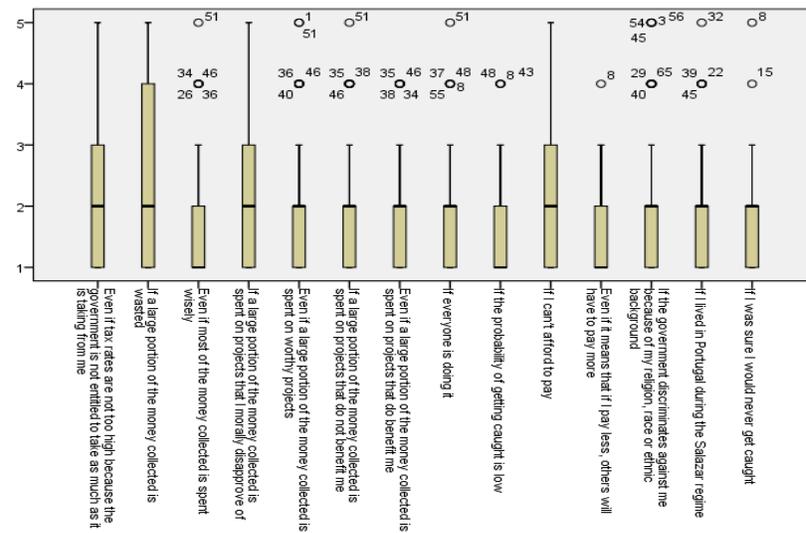


Table 14 - Communalities

	Initial	Extraction
Even if tax rates are not too high because the government is not entitled to take as much as it is taking from me	1,000	,531
If a large portion of the money collected is wasted	1,000	,492
Even if most of the money collected is spent wisely	1,000	,853
If a large portion of the money collected is spent on projects that I morally disapprove of	1,000	,620
Even if a large portion of the money collected is spent on worthy projects	1,000	,761
If a large portion of the money collected is spent on projects that do not benefit me	1,000	,776
Even if a large portion of the money collected is spent on projects that do benefit me	1,000	,725
If everyone is doing it	1,000	,438
If the probability of getting caught is low	1,000	,627
If I can't afford to pay	1,000	,474
Even if it means that if I pay less, others will have to pay more	1,000	,666
If the government discriminates against me because of my religion, race or ethnic background	1,000	,467
If I lived in Portugal during the Salazar regime	1,000	,493
If I was sure I would never get caught	1,000	,586

Table 15 - Alternative hypotheses tests - Attitudes toward tax evasion for the whole sample

Hypothesis	Mean	p-value ($\mu=3$)	Conclusion	p-value ($\mu=2,5$)	Conclusion	p-value ($\mu=1,5$)	Conclusion	p-value ($\mu=1$)	Conclusion
H1	2,18	,000	Reject H0	,010	Reject H0	,000	Reject H0	,000	Reject H0
H2	2,50	,001	Reject H0	,821	Not Reject H0	,000	Reject H0	,000	Reject H0
H3	1,74	,000	Reject H0	,000	Reject H0	,038	Reject H0	,000	Reject H0
H4	2,19	,000	Reject H0	,010	Reject H0	,000	Reject H0	,000	Reject H0
H5	1,93	,000	Reject H0	,000	Reject H0	,002	Reject H0	,000	Reject H0
H6	1,97	,000	Reject H0	,000	Reject H0	,001	Reject H0	,000	Reject H0
H7	1,85	,000	Reject H0	,000	Reject H0	,004	Reject H0	,000	Reject H0
H8	1,76	,000	Reject H0	,000	Reject H0	,048	Reject H0	,000	Reject H0
H9	1,63	,000	Reject H0	,000	Reject H0	,387	Not Reject H0	,000	Reject H0
H10	2,19	,000	Reject H0	,007	Reject H0	,000	Reject H0	,000	Reject H0
H11	1,64	,000	Reject H0	,000	Reject H0	,293	Not Reject H0	,000	Reject H0
H12	2,06	,000	Reject H0	,001	Reject H0	,001	Reject H0	,000	Reject H0
H13	1,93	,000	Reject H0	,000	Reject H0	,002	Reject H0	,000	Reject H0
H14	1,63	,000	Reject H0	,000	Reject H0	,143	Not Reject H0	,000	Reject H0