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Tax Compliance Behaviour of Muslim Communities in Ireland, Canada, and Scotland

by

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A research dissertation submitted in fulfilment of the requirements for the

degree of

Doctor of Philosophy

of the

National University of Ireland, Galway

Discipline of Accounting & Finance

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Declaration

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of Doctor of Philosophy is entirely my own work and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

Signed: _____

Date: _____

Abstract

The aim of this study is to achieve a better understanding of tax compliance decisions and to identify the factors that impact this decision-making. Adopting a quantitative research approach, this study investigates the role of the issue, moral agent, and environmental characteristics in shaping the three stages of ethical decision making. These are ethical recognition, evaluation and intention. The conceptual model is developed from different disciplines, namely tax compliance, ethical decision-making, and ethics literature. Using a survey containing three different tax compliance scenarios, data was collected from a total of 679 individuals which were mainly Muslims as well as students, and full and part-time employees in three countries: Ireland, Canada, and Scotland. The validity and reliability of the measurement scales were confirmed using exploratory factor analysis and confirmatory factor analysis and the developed hypotheses were tested using structural equation modelling.

The results of this study provide empirical evidence on the importance of moral intensity in assisting taxpayers throughout their tax compliance decisions. Consistent with the majority of empirical studies, the most influential characteristics in predicting and shaping tax compliance decision are the moral agent characteristics (personal norms). Environmental characteristics such as the general societal norms were also very influential in the tax compliance decisions. The results also suggest that the religiosity level of taxpayers has the power to influence the relationships between tax compliance decisions and its determinants by strengthening these relationships.

Overall, this study contributes to the literature by providing insights on the process of tax compliance decisions and provides empirical evidence on the applicability of issue-contingent models in relation to tax compliance. A comprehensive research synthesis model was developed in this study to address the calls in the literature for the need to consider the stages of the tax compliance decision process and the factors that impact each of these stages instead of focusing only on the decision outcomes. Finally, this study takes the initiative to investigate the role of the religiosity level in tax compliance behaviour by offering an alternative approach to look at religiosity levels as a moderator variable that has the potential to impact the relationships between tax compliance decisions and the factors that influence these decisions.

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List of Acronyms and Abbreviations

AGFI	Adjusted Goodness of Fit Index
AVE	Average Variance Extracted
X ²	Chi-square Test
CLF	Common Latent Factor
CFI	Comparative Fit Index
CR	Composites Reliability
CFA	Confirmatory Factor Analysis
DN	Descriptive Norms
EDM	Ethical Decision Making
EE	Ethical Evaluation
INT	Ethical Intention
ER	Ethical Recognition
EFA	Exploratory Factor Analysis
SNG	General Societal Norms
GFI	Goodness of Fit Index
IUN	Injunctive Norms
KMO	Kaiser Meyer Olkin
PM	Magnitude and Probability of Consequences
MC	Magnitude of Consequences
H	Maximal Reliability
ML	Maximum Likelihood
MLE	Maximum Likelihood Estimation
MSV	Maximum Shared Variance
MI	Moral Intensity
PAF	Principal Axis Factoring
PCA	Principal Components Analysis

List of Acronyms and Abbreviations

POE	Probability of Effects
RMSEA	Root Mean Square Error of Approximation
SC	Social Consensus
OE	Societal Norms in relation to Overstating Tax Deductions
DNG	Societal Norms in relation to Paying Taxes
RT	Societal Norms in relation to Reporting Honestly Cash Earnings
CH	Societal Norms in relation to Working for Cash-in-Hand
STD	Standard Deviation
SRMS	Standardised Root Mean Square Residual
SEM	Structural Equation Modelling
SUN	Subjective Norms
TVE	Total Variance Explained
TLI	Tucker-Lewis Index
VIF	Variance Inflation Factors
WBAD	Willing, Being Able, Daring

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Chapter 1: Introduction

1. 1. Introduction

This chapter provides a general introduction to this study and outlines the content and structure of this thesis. This chapter starts with a description of the background to this study which includes a brief description of tax, the motivations to comply with the tax system, as well as the objectives and principles of the tax system (Section 1.2). It then proceeds to outline the problem statements (Section 1.3), the objectives of the research (Section 1.4), the overview of the research methodology and design (Section 1.5), the contribution of this study (Section 1.6), and the layout of the thesis structure (Section 1.7). Finally, a summary of this chapter is provided (Section 1.8).

1. 2. Background and Motivation for the Study

“Tax matters. Globally, it touches the lives of every citizen and economic entity, sometimes in ways we do not fully appreciate.”

Boden et al. (2010: p 541)

Taxation has received considerable attention in literature not only because of its key role in the economy of a country but also because of its function of wealth redistribution among citizens and promotion of social and economic welfare. Taxation is one of the main sources of revenue for any society, and it is considered to be one of the pillars of the economy in most modern societies (Lamb, 2005). It plays a key role in civilised societies and continues to be the most crucial source of revenue for most countries, especially in developed countries (Lymer and Oats, 2016). A common definition of taxation was given by Lymer and Oats (2016: p 3) as, “*A compulsory levy, imposed by government or other tax raising body, on income, expenditure, wealth or people, for which the taxpayer receives nothing specific in return.*” According to the

well-known economist Adam Smith, a tax system is based on four principles: equity, certainty, convenience and efficiency.

Equity can be horizontal or vertical. Vertical equity means that taxpayers with more capacities (higher income) should incur a higher tax burden (pay higher amounts of taxes), whereas horizontal equity means that taxpayers with the same capacities (same income) should incur the same tax burden (pay the same amount of taxes). Certainty refers to the simplicity of tax systems as taxpayers should be aware of their tax liabilities and when/where to pay these liabilities.

Convenience and efficiency refer to the success of tax authorities in collecting and enforcing the tax systems upon taxpayers. Convincing the taxpayers to comply with tax systems has been the focus of many scholars in this area. Indeed, tax authorities are supposed to devote their resources in an optimal fashion to target the taxpayers who deliberately engage in tax evasion, as well as provide a support for those who are voluntarily willing to comply with the tax system. Meanwhile, tax authorities should ensure a fair and equitable treatment for all taxpayers and seek to improve the process of tax collection in order to respond to economic, social, and demographic changes. The growing calls for research on tax compliance (Feld and Tyran, 2002; Frey and Feld, 2002; Torgler, 2003; Lago-Peñas, 2010) imply that the traditional approaches to improving and managing tax compliance levels are unsustainable. This matter is particularly problematic in developed countries due to ageing population and rising immigration from emerging economy countries with different attitudes, norms and cultures, which can cause some difficulties to the tax authorities in managing tax compliance level through the conventional enforcement system (Langham et al., 2012). Therefore, understanding tax compliance behaviour is becoming a priority now more than ever for tax authorities, who seek to develop a stronger and more effective enforcement system.

Studying the tax compliance behaviour of the same religious community across different developed countries is believed to be novel within the existing academic literature and has significant potential to contribute to the future academic literature.

This study examines the tax compliance behaviour of the Muslim community across three countries: Ireland, Canada, and Scotland. With 1.6 billion followers (23% of the world's population), Islam is one of the world's most significant religious. According to Pew Research Center's Forum on Religion and Public Life (2011), this number is expected to rise to 35% by 2030. The Muslim population is scattered across the world with 62% of Muslims living in Asia-

Pacific countries, 20% in the Middle East and North Africa, 15% in Sub-Saharan Africa, 3% in Europe, and less than 1% in North America. Although the Muslim ethnic sub-cultures are heterogeneous, they are often classified as a monolithic group (Ciftci et al., 2013).

According to the 2011 Irish census, the Irish Muslim community is the second largest faith group in Ireland after Christianity with almost 50,000 members, and over 50% of this community are immigrants. Compared to other European countries, Ireland's Muslim population is relatively small, but it is expanding rapidly. The size of the community increased by 70% between 2002 and 2006, and tenfold in the last 20 years. The Canadian Muslim community is much bigger than the Irish Muslim community with a population of over 1 million or 3.2% of the Canadian population. It is again the second largest religion after Christianity. This number is expected to increase to 2.7 million by 2030. The Scottish Muslim community is estimated to include 80,000 members, which accounts for 1.4% of the Scottish population, with almost a 100% increase in size since 2001 (40,000 members) according to the 2011 Scottish census.

Overall, immigration to the countries included in this study is increasing, which will have implications for tax authorities and tax enforcement. Therefore, the main motivation of this study is to provide a better understanding of the tax compliance behaviour and the underlying factors that influence this behaviour in order to help tax authorities find efficient and cost-effective approaches to improve tax compliance levels.

1. 3. Problem Statements

“One of the key tasks of any revenue authority is to try to encourage taxpayers to comply with the tax rules and regulations. In an ideal world, the rules would be very clear, taxpayers would understand how much they have to pay, and would willingly pay the right amount of tax at the right time. Unfortunately, our world is not ideal, and the level of compliance among taxpayers is variable, to say the least.”

Lymer and Oats (2016: p 4)

Annually, the revenue authority publishes the actual tax revenues collected and the predicted amount which it should have been collected, if the tax compliance was impeccable¹ (Alm, 1991). The difference between the two figures (the tax gap) has negative effects on different areas such as: reducing the revenues for the government, impacting the amount of public provision for

¹ Taxpayers fully reported all the taxable incomes and declare honestly the deductible expenses.

goods and services, the distribution of income, the diffusion of the feelings of unfair treatment, and reducing the trustworthiness of tax authorities. In fact, this tax gap compels the tax authorities to urge academic scholars to detect the ‘root causes’ of the non-compliant behaviour to help them develop strategies to enhance the level of tax compliance (Wenzel and Taylor, 2004).

According to the academic literature, the compliance level of a taxpayer is explained through either purely an economic view (deterrence theory and expected utility theory) or a psychological behavioural view (Andreoni et al., 1998). Over the years, the purely economic view has been heavily criticised by academics due to its inability to provide a full explanation of the level of compliance observed. For instance, Sandmo (2005: p 11) pointed out: “*Common sense and everyday observations tell us that people refrain from tax evasion - as well as from speeding, shoplifting and polluting the environment - not only from their estimates of the expected penalty, but for reasons that have to do with social and moral considerations*”.

Meanwhile, the psychological behavioural approach has become very popular among contemporary researchers due to its ability to offer broader explanations than the economic view. It includes the same economic factors (such as penalty, audit, and enforcement) and non-economic factors (such as social and personal norms). The psychological behavioural view complements the economic view by adding another dimension to the compliance equation, ‘tax morale.’ Tax morale is widely accepted to have a vital role in shaping and affecting the decision making of taxpayers, driving consensus in the literature on the necessity to include tax morale into any study on tax compliance, evasion or avoidance (Frey and Feld, 2002; Torgler, 2004; Frey and Torgler, 2006; Feld and Frey, 2007; Torgler, 2007; Wenzel, 2007; Cummings et al., 2009; Bobek et al., 2013; Margaret McKerchar, 2013).

Generally, scholars of psychology refer to tax morale as ‘taxpayer ethics’ and define it as not cheating and honestly reporting the taxable incomes due to the personal ethics of the taxpayer. In fact, tax morale is commonly referred to as the intrinsic motivation to pay taxes (Torgler, 2002; Torgler, 2006; Torgler and Schneider, 2009). Whereas, some economists refer to tax morale as the error term that serves as an explanation for the difference between predicted and actual compliance behaviour (McKerchar et al., 2012). For the purpose of this study, tax morale is defined as an umbrella term that includes all non-economic factors that have or may have a

potential to influence the tax compliance of an individual in his/her tax compliance decision-making process.

There has been a tremendous call for more research on ‘tax morale’, especially on the factors that shape the tax morale (Andreoni et al., 1998; Torgler, 2006; Blanthorne and Kaplan, 2008). Feld and Tyran (2002: p 199) claimed that, “*All in all, too little is known as to which motivations of citizens shape tax morale.*” Moreover, they mentioned that nearly all studies referred to ‘tax morale’ as a black box without examining or at least discussing the factors that arise or maintain it. Thus, this research will attempt to fill this gap by determining the mechanisms by which taxpayers engage in tax compliance decision making and identifying the factors that shape this decision-making process (e.g., tax morale, social norms...etc.). Also, opening the black box of tax morale (encompassing all non-economic factors) has the potential to contribute to the effort of designing alternative strategies of enforcement to limit tax evasion behaviour and enhance tax compliance.

1. 4. Research Aims and Objectives

“The tax declaration decision is a decision under uncertainty. The reason for this is that failure to report one’s full income to the tax authorities does not automatically provoke a reaction in the form of a penalty. The taxpayer has the choice between two main strategies: (1) He may declare his actual income. (2) He may declare less than his actual income. If he chooses the latter strategy his payoff will depend on whether or not he is investigated by the tax authorities. If he is not, he is clearly better off than under strategy (1). If he is, he is worse off. The choice of a strategy is therefore a non-trivial one.”

Allingham and Sandmo (1972: p 324)

Examining the root cause of tax non-compliance² requires a better understanding of the process of tax compliance decisions and the factors influencing this process. The first objective of this study is to examine the process by which taxpayers make ethical decisions in relation to tax compliance. More specifically, this study tests whether the ethical decision-making model of Rest³ (1986) explains the tax compliance decisions made by taxpayers who live in three different tax jurisdictions. An improved understanding of tax compliance behaviour will assist tax authorities in developing stronger and more effective enforcement systems.

² Tax non-compliance here and thereafter refers to tax evasion.

³ Rest’s (1986) EDM model will be referred to here and thereafter as EDM model, Rest’s model, or Rest and Barnett’s (1986) model.

The second objective of this study is to investigate whether the perceived moral intensity of different tax compliance situations (scenarios) has an impact on ethical decision-making. Based on the ‘issue contingent model’ of Jones (1991), the influence of three dimensions⁴ of issue characteristics on the EDM process will be examined.

Further, in the third objective, the issue contingent model will be extended with the inclusion of two further types of characteristics: moral agent characteristics (personal norms, religiosity level, and socio-demographic factors) and environmental characteristics (general social norms on tax systems). This new model developed in this study (termed The Research Synthesis Model) predicts the effects of the three characteristics on shaping tax compliance decisions. This objective aims to provide empirical evidence of the applicability and the relevance of the research synthesis model in tax compliance research and provide tax authorities with a better understanding of the role of the issue, moral agent, and environmental characteristics in tax compliance behaviour.

Finally, the fourth objective of this study is to examine the impact of the individual’s religiosity level on tax compliance behaviour. More specifically, the individual’s religiosity level will be examined for a potential moderation effect on the relationships between the three characteristics⁵ and the tax compliance behaviour. This objective aims to provide empirical evidence on the influence of religiosity level in tax compliance behaviour, which should result in offering a better understanding of the mechanisms through which individuals’ religiosity levels affect their tax compliance decisions.

To address these research objectives, a comprehensive review of relevant areas in tax compliance and ethical decision-making literature was performed. Also, relevant theories underlying the research variables were consulted. Further details and elaboration of the research objectives as well as hypotheses developed from these objectives are discussed in Chapter 4.

In summary, the theoretical perspective of this study claims that the integration of the three characteristics⁶ in the research synthesis model will offer a better understanding of tax compliance decisions and the factors influencing this process.

⁴ The three issue characteristics refer to social consensus, probability of effects, and magnitude of consequences.

⁵ The three characteristics refer to issue, moral agent, and environmental characteristics.

⁶ The three characteristics refer to issue, moral agent, and environmental characteristics.

1. 5. Research Design and Methodology

In light of the aforementioned research objectives and the sensitivity of the topic being examined, this study follows a quantitative, functionalist, and deductive approach based on a self-reported survey distributed in three different countries: Ireland, Scotland, and Canada. After piloting⁷ the survey on a group of 25 participants to improve the validity, reliability, and refine the questions, a total number of 2100 questionnaires were distributed to individuals at different venues and events in the three mentioned countries. At the rate of response equals to 32.3%, a total number of 679 questionnaires were completed and returned.

The survey was divided into four main sections. The first section consisted of three tax evasion scenarios adopted from well-established studies and modified to suit the potential participants of the study. The second section covered the socio-economic demographic characteristics of the participants. The third section measured the religiosity level of the participants using the well-established scale of Worthington et al. (2003) ‘Religious Commitment Inventory’ RCI-10 scale. The last section dealt with the general perception of social norms around four⁸ aspects of the tax system.

To facilitate the data analysis, this study follows the four steps of operation of Hair et al. (2010) which are: (1) Data Screening; (2) Exploratory Factor Analysis; (3) Confirmatory Factor Analysis; and (4) Structural Equation Modelling. Other supplementary analysis includes t-tests, one-way analysis of variance (ANOVA), correlation analysis, mediation and moderation examination using the bootstrapping technique. The details of research design and methodology are described in Chapter 5.

1. 6. Contributions of the Study

This study advances the existing literature in several ways. As indicated above in the research objectives section, the ultimate goal of this study was to detect the root cause of tax non-

⁷ A pretesting of the survey was conducted before the pilot test. The pretesting was conducted on a group of students, full and part time employees, colleagues, and other potential participants from the population.

⁸ Those four aspects are (1) reporting honestly all cash earnings; (2) overstating tax deductions; (3) working for cash-in-hand; (4) paying all due taxes.

compliance behaviour through understanding the mechanism through which taxpayers use to form their tax compliance decisions, and the factors that impact this decision-making process. The current study contributes to the literature by validating the ethical decision making process of Rest (1986) in the tax compliance area and shows that when taxpayers face a tax compliance situation, they will first recognise that the situation involves an ethical issue, and will then evaluate the situation as either an ethical or a unethical situation, and will subsequently form a behavioural intention toward the situation.

This study also contributes to the literature by providing empirical evidence of the applicability of Jones's (1991) 'Issue-Contingent model' in the tax compliance context and addresses the call to provide an in-depth study that demonstrates the factors that affect the movement of taxpayers from inertia to an active course of action. Indeed, this study provides evidence for the significant role of moral intensity's dimensions in facilitating the recognition of the ethical component of a tax situation, assisting the ethical judgement, and encouraging taxpayers to form a more ethical intention towards the tax situation. In addition, this study contributes to Jones's (1991) model by extending one of the variables of his model (social consensus) based on the social norms theory of Cialdini (1998).

Moreover, the research synthesis model developed in this study is new and it contributes to the literature by providing a theoretical framework that offers theoretical insights and empirical evidence on the relevance of issue, moral agent, and environmental characteristics in tax compliance decisions. It shifts the attention in literature from the simple 'comply' or 'not comply' concerns (the decision outcome), to the dynamics of the tax compliance decision and the complex nature of the factors that impact this decision-making process.

Furthermore, the study contributes to the literature by providing reliable and theoretical valid social norms' scales that distinguish between social consensus (social norms related to the specific situation) and societal norms (social norms related to the general aspect of a situation), and unpacks the social consensus into three components: subjective, injunctive, and descriptive norms following the recommendation of the social norms theory (Cialdini, 1998).

Finally, this study contributes to the literature by testing an alternative model of the influence of individual's religiosity level in tax compliance decisions. It argues that religiosity level should be examined as a moderator variable that affects the relationships between the issue, moral agent, and environmental characteristics and the three stages of tax compliance decision in such a way

that these relationships are stronger when the individual's religiosity levels are higher. Empirical evidence supports the moderation effect of religiosity levels on the relationships between the issue characteristics and the tax compliance decision-making process, and between the ethical evaluation and intention were provided. Therefore, the individual's religiosity level has a significant influence on tax compliance decisions by strengthening the relationships between the moral intensity's dimensions and ethical decision-making stages.

1. 7. Structure and Overview of Thesis

This section briefly sets out the layout of the thesis.

Chapter 2 presents the theoretical perspective of the research and reviews the context of ethical behaviour in ethical decision making (EDM) literature. It discusses the most relevant models in ethical decision-making literature and outlines the two models that will be used to develop the research synthesis model in this study (more details on this model are found in Chapter 4). The first model that the research will be based on is the 'ethical decision making' model of Rest (1986). This is the predominant model in EDM literature. It consists of the four stages: ethical recognition, ethical evaluation, ethical intention and actual behaviour. The second model that will be used in developing the research synthesis model is the issue-contingent model of Jones (1991). Although this model is well used in different disciplines, there is a dearth of research on moral intensity in the context of tax compliance decisions. Jones (1991) argued that the characteristics of the issue itself have a significant effect on the EDM process, while other psychology researchers claim that moral agent and environmental characteristics also have a considerable impact on the EDM process. Hence, this chapter will elicit the need to develop a comprehensive model that includes the stages of EDM along with the three types of characteristics: issue, moral agent, and environmental characteristics.

Next, Chapter 3 reviews the literature related to tax compliance studies. It starts with a general definition of tax compliance and tax non-compliance, as well as tax morale. The motivation to comply with tax systems is then presented. This motivation was explored from three different schools of thought. The economic school of thought claims that the motivations to comply with tax systems are only due to enforcement systems such as penalties and auditing (deterrence

theory). The social-psychological school of thought adds social and psychological factors to the previous school of thought (economic school of thought), and argues that the economic factors are not the only factors that impact tax compliance decisions. The third school of thought (fiscal-psychological) takes a broader view and adds environmental and organisational factors to the aforementioned factors. Factors such as the reward system (public services), trust in government and fiscal authorities, and the treatment of taxpayers by the tax authorities are all deemed to have a direct impact on the tax compliance decisions of taxpayers. The chapter concludes by identifying the main types of characteristics that have the potential to impact the tax compliance behaviour.

Following this, Chapter 4 builds on the gaps in the literature identified in the preceding chapter, and applies the theoretical perspectives that were formulated in Chapter 2, in order to present the conceptual model of the research (the research synthesis model). Chapter 4 then outlines the objectives of the study and generates the research hypotheses of this study. The research synthesis model will be based on relevant theoretical frameworks from the EDM literature [EDM's model of Rest (1986) and issue-contingent model of Jones (1991)]. In order to achieve the research objectives, this chapter generates hypotheses to be empirically tested following the insights of the theoretical frameworks and drawing on relevant empirical and conceptual studies. Chapter 5 describes the research methodology adopted in this study. It starts with the philosophical assumptions that were adopted along with the research paradigm and the research approach. It then proceeds to describe how the survey was designed and how the data was collected. Finally, a description of the statistical techniques employed, data analysis procedures and the order of operations to test the generated hypotheses are addressed.

In the second part of this chapter, the preliminary analysis of the survey items is provided. The first stage in the analysis is the Exploratory Factor Analysis which attempts to statistically reproduce the data by as few factors as possible. The second stage is the Confirmatory Factor Analysis which seeks to statistically test the fitness of the dataset to the proposed model. At this stage, the reliability and validity of the survey items are assessed.

Next, Chapter 6 presents the statistical analysis of the data in three main parts. In the first part, descriptive statistics on each of the survey's items, as well as on the profile of the respondents and their socio-demographic background are presented. The second part presents the findings of the variance analysis that is conducted on the socio-demographic factors. Before formally testing

the hypotheses developed in Chapter 4, a bivariate correlations analysis using SPSS is conducted to assess the appropriateness of the structural model and the developed hypotheses, as suggested by Hair et al. (2010). As it was mentioned before, SEM analysis is the main technique to formally test the hypotheses of the study and, in essence, achieve the research objectives.

Chapter 7 proceeds to discuss the results in great detail to draw the theoretical and practical implications of the results. This discussion is in light of the theories adopted to direct the research, as well as comparisons with relevant prior theoretical and empirical studies. It first discusses the results of SEM analysis on the EDM's model. The factors that impact the tax compliance decisions are discussed next in three sections, namely, the results of the issue-contingent model, the results of the research synthesis model, and the role of the demographics characteristics. Finally, the results of the moderation effect of religiosity level are discussed.

The last chapter of the thesis presents a summary and the conclusions of the thesis. Specifically, a brief summary of the research objectives, hypotheses and results is provided. This is followed by the contributions of the current study and the main implications for tax authorities. The strengths and limitations of the study are acknowledged, and the areas of future research are then detailed. Finally, a conclusion of this chapter is provided.

1. 8. Chapter Summary

This chapter has introduced the thesis by providing the background of the study and the problem statements. The motivations and objectives of the study were then listed, as well as stating the research contributions, and outlining the structure of the thesis. The next chapter will present the theoretical perspective of the study and review the models in ethical decision-making literature.

Chapter 2: Ethical Decision Making

2. 1. Introduction

The previous chapter identified the motivations, aims and research objectives of the current research and outlined the structure of the thesis. This chapter presents the conceptualisation context of the research. It discusses the most relevant models in ethical decision-making literature and outlines the possible factors that impact on the decision-making process.

To better understand the process of ethical decision making, this chapter starts by presenting the predominant model in the literature which is the ethical decision-making model “EDM” of Rest and Barnett (1986). This model claims that the ethical decision-making process starts once a moral agent recognises an ethical problem. Subsequently, this moral agent makes a judgment and establishes a behavioural intention, which leads to an actual behaviour.

The literature claims that numerous factors have the potential to impact the EDM stages, and moral intensity is one of them. Jones (1991) pointed out the significant role of the characteristics of the issue under consideration in shaping the ethical decision-making stages, and he argued for the need to include the dimensions of moral intensity in any study intending to examine ethical decision-making. Jones’ (1991) issue contingent model is discussed in Section 2.4.

As addressed in this chapter, along with the issue’s characteristics, there is convincing evidence of the possible role of the moral agent and environmental characteristics on shaping the three stages of EDM.

In this chapter, section 2.2 provides an overview of the models that were explored in the EDM literature. Section 2.3 describes the EDM process developed by Rest and Barnett (1986), and section 2.4 presents the issue contingent model of Jones (1991). Section 2.5 discusses the need to adopt a comprehensive model (research synthesis model) that includes a combination of the issue’s characteristics along with the moral agent and the environmental characteristics. Finally, Section 2.6 summarises this chapter.

2. 2. Overview of the Conceptual Models

Finding a precise definition of ethics is a challenging task to accomplish, due to the term's many nuances. According to Taylor (1975: p 1) the concept of ethics is defined as:

"Inquiry into the nature and grounds of morality where the term morality is taken to mean moral judgments, standards, and rules of conduct."

According to Robin and Reidenbach (1987: p 45) ethics:

"Requires that the organization or individual behave in accordance with the carefully thought out rules of moral philosophy."

The absence of a clear consensus about a universal definition of ethics may lead to different interpretations of the concept. Several definitions can be found in the ethical decision-making literature. However, the most prevalent definition is suggested by Jones (1991). This definition states that an issue (situation) has an ethical component if acting on it or making some decision about it has outcomes that may affect others, provided that the moral agent has a volitional control over the action or decision. In the context of taxation and tax compliance, the subject matter of this thesis (tax compliance) is an ethical issue because it will certainly affect others, and taxpayers have certain volitional control over their tax reporting and what they disclose to the Revenue Authorities.

The procedure an individual goes through in making decisions about an ethical situation has different stages, and there are factors that affect each of these stages. In the late 80s and early 90s, academic scholars developed a number of models of ethical decision-making, where they focused on a variety of factors that interact to produce decision outcomes. These theoretical models come from a diverse range of fields including; psychology, sociology, organization behaviour and marketing such as Ferrell and Gresham (1985); Rest and Barnett (1986); Trevino (1986); Hunt and Vitell (1986); Dubinsky and Loken (1989); and Jones (1991). Each of these models has sought to provide a comprehensive understanding of what determines ethical behaviour.

Understanding how individuals engage in the EDM process and learning about the factors that affect these decisions is considered to be of significant importance in tax compliance and tax behaviour. It would certainly enhance tax compliance when tax policy and administration take these factors into account. Hence, the first objective of the current study is to determine the

precise chain of reasoning that taxpayers use when they face a tax compliance situation. Following on from this, the second and third objectives are to identify the potential factors that may impact this chain of reasoning.

The framework developed in this research comprises of two main models. The first model is the ethical decision-making model ‘EDM’ developed by Rest and Barnett (1986)⁹ which is considered to be the predominant framework upon which the other frameworks [such as Dubinsky and Loken (1989) and Jones (1991)] were based, and embraces the essential stages of decision making. Thus, it is the pivotal schema of the model developed in this study (research synthesis model).

In order to capture a more accurate depiction of EDM and tax compliance behaviour, the issue contingent approach was explored, which was first introduced by Jones (1991) who explicitly incorporated the characteristics of moral issues and demonstrated their effects on the four stages of Rest’s model. Jones’s (1991) model is, therefore, the second model drawn upon in this study to develop the research synthesis model.

Most of the EDM’s frameworks include personal characteristics such as: personal norms, experiences, and socio-demographic factors (Ferrell and Gresham, 1985; Trevino, 1986) along with cultural and environmental characteristics such as: culture, social norms, and institutional factors (Ferrell and Gresham, 1985; Hunt and Vitell, 1986; Jones, 1991). However, due to a large number of factors which simultaneously or in certain combinations impact EDM, scholars have failed to load all the characteristics and factors into a unique framework. Hence, this study will develop a new model that attempts to fill this gap and demonstrate the effects of the three types of characteristics¹⁰ on the EDM process. The research synthesis framework takes into consideration the common EDM process¹¹ (Rest and Barnett, 1986) with the most dominant issue-contingent dimensions (Jones, 1991) along with important moral agent characteristics (socio-demographics, personal norms and religion) and environmental characteristics¹² (general social norms).

Sections 2.3 and 2.4 describe the two models of Rest and Barnett (1986) and Jones (1991).

⁹ This framework here and hereafter will be referred as Rest’s model, Rest’s (1986), or Rest and Barnett’s (1986) model interchangeably.

¹⁰ The three characteristics are: issue, moral agent, and environmental characteristics.

¹¹ The first objective of the current study is to determine the chain of reasoning that taxpayers use in tax compliance situation.

¹² The second objective of this study is to investigate the role of the three characteristics (issue, moral agent, and environment) on the tax compliance behaviour.

2. 3. Ethical Decision-Making Model

Despite the myriad of models in the EDM, the model that was introduced by Rest and Barnett (1986) is the most predominant one, used by scholars in the EDM literature. According to Rest and Barnett (1986), EDM starts once an individual recognises a moral issue. Subsequently, this individual makes a moral evaluation and establishes behavioural intentions, which is highly believed to lead to an actual behaviour (see Figure 2.1 below).

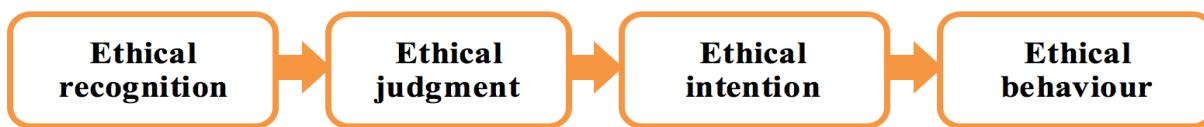


Figure 2.1: The Four Stages of Rest's Model.

Although these stages are arranged logically, they are not in a fixed order. Each stage is conceptually distinct, in a sense that success in one stage does not essentially imply success in the following or any other stage (Rest and Barnett, 1986). Each stage of the EDM process is described below.

2. 3. 1. Ethical Recognition

Rest and Barnett (1986) argued that moral recognition is the initial stage of the EDM process that a moral agent (a taxpayer in the context of this study) uses to produce an ethical behaviour. Rest and Narvez (1994) described the ethical awareness as the ability to recognise that a situation contains a moral dilemma (an ethical issue) by a moral agent. Ethical awareness has been referred to also as ethical sensitivity or ethical recognition. Hence ethical recognition, sensitivity and awareness are used interchangeably. The process of recognising a moral issue requires the moral agent to sense that his/her actions have the possibility to harm/benefit others (Rest and Barnett, 1986). Likewise, Butterfield et al. (2000: p 982) comprehensively termed moral sensitivity as:

“A person’s recognition that his or her potential decision or action could affect the interests, welfare, or expectations of the self or other in a fashion that may inflict with one or more ethical standards”.

Similarly, Chia and Lim (2000) who asserted that the decision maker could be assumed to have recognised a moral dilemma if he/she is able to:

- 1) Sense that the issue has a potential to influence the well-being of others; and
- 2) Use certain moral standards in his/her deliberations

This definition has been generalised in the later research, and now ethical sensitivity is referred to solely as the recognition that a situation has a moral content by the decision makers (Reynolds, 2006). Many researchers have realised the importance of ethical sensitivity and have included it in their frameworks (eg., Ferrell and Gresham, 1985; Trevino, 1986; Jones, 1991).

2. 3. 2. Ethical Evaluation

After recognising the ethical issue, the moral agent passes into the second stage, which is ethical evaluation (ethical judgment). Rest and Barnett (1986) among others¹³ considered ethical evaluation to be one of the four stages of psychological processes that are involved in producing an ethical behaviour.

Ethical evaluation refers to the shaping and assessment of potential solutions to the ethical dilemma, which have moral justifications. Moreover, this stage requires reasoning through the potential alternatives and possible consequences to decide which are the ethically ideal (Lincoln and Holmes, 2011). Similarly, Morris and McDonald (1995) defined ethical judgment as an opinion of the morally right of action or behaviour that should be done when a moral agent confronts an ethical issue.

Hence, in the decision-making context, ethical judgment refers to either the alternative chosen (Jones, 1991) or a person's evaluation of the alternative chosen (Jones and Huber, 1992). With this in mind, this study defines ethical judgment as an alternative chosen (Morris and McDonald, 1995). In previous decision-making models, this stage was deemed to incorporate the individual's level of cognitive moral development (Kohlberg, 1969) and/or philosophical ideology or orientation, specifically deontological and teleological evaluation (Hunt and Vitell, 1986; Ferrell et al., 1989) to measure and explain moral evaluation, often in conjunction with environmental and social factors (Morris and McDonald, 1995). Cognitive moral development and philosophical ideology are described further in the next sub-sections.

¹³ For instance: Hunt & Vitell (1986); Trevino (1986); O. Ferrell, Gresham, & Fraedrich (1989); and Jones (1991).

2. 3. 2. 1. Cognitive Moral Development

The lack of research on the theory of ethical evaluation led to Kohlberg (1969) establishing the conceptual model of ‘cognitive moral development’. Kohlberg’s model provides a significant contribution to EDM research. The model emphasises the cognitive or reasoning aspect of EDM. It suggests that a decision maker’s level of cognitive moral development strongly impacts the rightness, duties, and obligations of a particular ethical issue on the person’s decision. Furthermore, it enumerates the cognitive mechanism behind the complexity and sophistications of ethical evaluation. Specifically, it addresses the reasons a decision maker uses to justify a moral choice, rather than the outcome of the decision (Trevino, 1986). The cognitive moral development consists of three broad levels, and each of them is composed of two stages. The characteristics of the levels and stages collectively define ‘ethical judgment’. Kohlberg (1969) stressed that moving from one stage into the other is invariably an irreversible sequence.

The first level is the ‘pre-conventional level’, which consists of two stages. At this level, a decision maker is sticking to the rules and is only concerned with concrete outcomes, the external rewards and punishments, and the immediate interest. In the second level, labelled as ‘the conventional level’, the rightness of behaviour is consistent with the expectations of good behaviour of the vast majority of society, family, or peer group. Most adults in society are placed at this level (third and fourth stages). In the first stage of this level, the assessment of the appropriateness of an ethical decision is by satisfying the expectations of the significant others (e.g., family, close friends, colleagues at work). In the second stage the decision maker is able to take a broader perspective of society. For instance, an individual appreciates society’s laws in evaluating and determining his/her decision. The third level or the ‘principled level’ is where the judgment of the appropriateness of an ethical decision is determined by principles or universal values. So, individuals at the last stages (fifth and sixth stage) concerns are beyond laws, standards or the expectations of groups or authorities (Trevino, 1986). The six stages of the Kohlberg (1969) framework, as cited by Trevino (1986), are presented in Table 2.1.

To summarise, the cognitive moral development framework¹⁴ offers a well-developed theoretical basis to comprehend the mechanism a decision maker uses to assess a moral dilemma, and how thoughts and actions appear to be related (Trevino, 1986).

¹⁴ Bearing in mind that this study does not measure these stages using the DIT instrument.

Table 2.1: The Six Stages of Moral Development

Levels	Stages	What is considered to be right
Level one: Pre-conventional	<i>Stage 1:</i> Obedience and punishment orientation	Sticking to rules to avoid physical punishment. Obedience for its own sake.
	<i>Stage 2:</i> Instrumental purpose and exchange	Following rules only when it is in one's immediate interest. Right is an equal exchange, a fair deal.
Level two: Conventional	<i>Stage 3:</i> Interpersonal accord, conformity, mutual expectations	Stereotypical "good" behaviour. Living up to what is expected by people close to you
	<i>Stage 4:</i> Social accord and system maintenance	Fulfilling duties and obligations to which you have agreed. Upholding laws except in extreme cases where they conflict with fixed social duties. Contributing to the society, group.
Level three: Principled	<i>Stage 5:</i> Social contract and individual rights	Being aware that people hold a variety of values; that rules are relative to the group. Upholding rules because they are the social contract. Upholding nonrelative values and rights regardless of majority opinion.
	<i>Stage 6:</i> Universal ethical principles	Following self-chosen ethical principles. When laws violate these principles, act in accord with principles.

Source: Adapted from Kohlberg (1969) in Trevino (1986: p 605).

2. 3. 2. 2. Philosophical Ideology

Philosophy and value orientation encompass various theories of ethical decision-making evaluation such as justice, relativism, utilitarianism, deontology, teleology, egoism, and idealism (Craft, 2013). Moral philosophy is a term that is commonly used to refer to the cognitive theories that individuals choose to use in their ethical evaluation process. To date, empirical research has mainly focused on two theories; deontology and teleology. In fact, Hunt and Vitell (1986) claimed that decision makers use one of these two theories or both to build their ethical evaluation. Furthermore, Brady (1985) postulated that these two theories of evaluation are complementary rather than antagonistic or mutually exclusive.

Teleology Theory

Researchers have referred to the teleological evaluation using different terminology due to various teleological ethical theories, such as utilitarianism which was named after the well-known and widely accepted teleological theory developed by Bentham and Mill (1973). This study, however, uses the terminology of Reynolds (2006) ‘teleology’. Teleology or ends-based decision-making focuses on the consequences of the potential action/behaviour and argues that the moral act is the one that reaps the most benefits (Reynolds, 2006). Moreover, teleological evaluation contains an analysis of the desirability and likelihood of the outcome of an ethical issue. In other words, the teleological theory argues that individuals, who behave ethically, first determine the potential consequences of the behaviour in a given situation and evaluate the inherent good/bad results of these consequences. Under the utilitarianism theory, the moral agent has to select the alternative that maximises the benefits to the largest number (May and Pauli, 2002). However, teleology theory fails to provide any guideline of the type of consequences that offer the greatest good nor specify to whom they should apply (Reynolds, 2006). It simply evaluates the value of an act’s outcomes, which determines whether the act is ethical or not.

Deontology Theory

Again, deontology theory has been referred to by different terminologies such as formalism, which was developed by Brady (1985). Once more, this study hereafter will use deontology instead formalism. This theory refers to deontological, or obligation-based ethical evaluation. It involves examining the inherent rightness or wrongness of an action based on individual’s beliefs or standards. Moreover, it emphasises the importance of patterns or the behaviour’s rules (standards) in determining the morality of actions (May and Pauli, 2002). Deontologists argue that an individual will assess the rightness or wrongness of an action/behaviour based solely on principles or rules of behaviour, without considering the circumstances or consequences of the action/behaviour (Henderson and Kaplan, 2005). Similar to teleology theory, this theory fails to specify whether those formal elements are principles, laws, customs or ideals, but it dictates that those elements determine the morality of action/behaviour (Reynolds, 2006).

In summary, teleology theory relies on consequences to evaluate and determine the ethical issue, whereas the deontology theory utilises rules and principles to conduct such analyses.

2. 3. 3. Ethical Intention

After the ethical evaluation process, the moral agent is ready to move to the next stage of the EDM process. Ethical intention (moral motivation) refers to the intention to prefer one moral decision over another potential alternative representing a different value (Lincoln and Holmes, 2011). It involves a commitment to select the moral value. For instance, a moral agent may recognise different potential solutions to an issue, some may result in increasing personal power, and others are morally right. Here, the ethical intention is the commitment to choose the value of morality over the value of personal power (Lincoln and Holmes, 2011). This component of EDM is thought to subsequently lead to the actual moral action/behaviour (Hunt and Vitell, 1986; Trevino, 1986; Ferrell et al., 1989; Jones, 1991) due to the common belief that intention is the paramount predictor of a person's behaviour in the theory of planned behaviour (Ajzen, 1991). Many theories have been used over the past decades to study a wide variety of behavioural intentions and behaviours, such as the theory of reasoned action (Ajzen and Fishbein, 1980) and its recent extension, namely the theory of planned behaviour (Ajzen, 1991). According to both theories, the main tool to predict behaviour is intentions.

2. 3. 4. Ethical Behaviour

Ethical behaviour (moral action) refers to a person's behaviour. It is considered to be the last stage in the chain of the decision-making process. After establishing a moral intention, the individual will move to an action. This stage involves courage, determination, and the ability to follow through with the moral decision (Lincoln and Holmes, 2011). Until this point, research on this last stage of the EDM's model 'moral behaviour' is sparse due to the difficulty in capturing the actual moral behaviour in most situations. This is particularly difficult in a tax compliance situation (Henderson and Kaplan, 2005) as accessing the necessary data is typically not possible.

2. 3. 5. Summary of Ethical Decision-Making Model

One of the main objectives of this study is to determine the precise chain of reasoning that taxpayers use when they face a tax compliance situation. To achieve this objective, Rest's model

which is the predominant model of EDM was adopted and applied to account for this chain of reasoning. The EDM's model describes four stages¹⁵ that individuals go through when they face an ethical situation. The current study will include the first three stages of EDM model (ethical recognition, evaluation, and intentions). Despite the fact that more research is needed to investigate the last stage of EDM (ethical behaviour) and its potential relationship with moral intensity's dimensions and other characteristics, the current research will exclude the ethical behaviour's stage from the final research model due to the inherent challenges of studying the taxpayer's actual behaviour (the actual tax compliance decision). Thus, the final research model will be based solely on the first three stages of EDM.

As referred to earlier, in addition to establishing the chain of reasoning that taxpayers apply when they face a tax compliance situation, the factors that have the potential to impact this process will also be investigated. Starting with the issue/situation characteristics, the issue contingent model of Jones (1991) will be drawn upon and is discussed in Section 2.4. This is followed by a discussion of the other two types of characteristics (moral agents and environmental characteristics) which will be included in the research synthesis model (Sections 2.5 and 4.2.3).

2. 4. Issue-Contingent Model

The lack of studies on the issues or situation's characteristics motivated Jones (1991) to take the initiative and establish the moral intensity model. Jones (1991) claimed that the moral issue's characteristics, which he collectively called moral intensity, affect the EDM's stages. He hypothesised that the moral intensity dimensions would directly shape each of the four stages of Rest's EDM model, from the recognition that an issue constitutes a moral issue to decide whether to engage in this particular behaviour and the actual behaviour (Barnett, 2001). According to Jones, the moral imperative to act in an event is related to the seriousness of the ethical consequences that would result from the event, that is, 'magnitude of consequences'; the degree to which social agreement that an action is ethically questionable evil or good, that is, 'social consensus'; the joint function of the probability that the behaviour in the situational

¹⁵ Ethical recognition, evaluation, intentions and the actual behaviour.

context will actually take place and this behaviour will actually lead to harm/benefit, that is, ‘probability of effect’; the length of time between the decision being made and the effect of this decision, that is, ‘temporal immediacy’; the physical, psychological, or social closeness the moral agent has to the people who are likely to be affected by the potential decision, that is, ‘proximity’; and an inverse function of the number of individuals affected by the decision taken by the moral agent, that is, ‘concentration of effect’ (May and Pauli, 2002). Figure 2.2 provides a summary of Jones’ model.

Jones (1991) claimed that the combined effects of these dimensions describe the moral intensity of a particular issue. So, an issue is considered to have a low moral intensity, if it has negligible consequences, and/or the vast majority of the society agrees that the behaviour is ethical, and/or the potential negative consequences are relatively unlikely to actually occur, and/or the time between the action and its outcome is relatively long, and/or the number of individuals affected by the action is spread over large numbers, and/or the moral agent is relatively removed from the affected individuals (Frey, 2000). In contrast, the moral intensity will be high for an action that has serious consequences, and/or most people agree that it is unethical, and/or the certainty of the negative outcomes to occur is high, and/or to occur in the soon future, and/or to have concentrated effect on a small circle of people, and/or the affected individuals are actually close to the moral agent (Frey, 2000).

Figure 2.2: The Moral Intensity’s Dimensions

Moral intensity					
Magnitude of consequences	Social consensus	Probability of effect	Concentration of effect	Immediacy effect	Proximity

Each of these six dimensions is discussed further below.

2. 4. 1. Magnitude of Consequences

The magnitude of consequences is also referred to as the seriousness of consequences and is defined as the degree of harm/benefit a particular behaviour or action would cause to the victims of this behaviour/action (Jones, 1991). Harm is the extent to which the victim (a person or group) is injured physically, psychologically, or economically (Collins, 1989). Given the multidimensionality of the concept of harm that could vary in many different manners it is deeply rooted in moral theory, which makes it very reasonable to presume that when the

presence of harm affects the perception of the moral agent, the issue is a moral dilemma (Collins, 1989; Jones, 1991; Butterfield et al., 2000; Reynolds, 2006). Many empirical studies provide consistent evidence that the magnitude of consequences significantly affects the process of EDM (Morris and McDonald, 1995; Singhapakdi et al., 1996; Singer and Singer, 1997; Frey, 2000; May and Pauli, 2002; Reynolds, 2006).

2. 4. 2. Social Consensus

The social consensus was defined by Jones (1991: p375) as, “*The degree of social agreement that a proposed act is evil (or good)*”. A social group or culture shares norms and values that affect the perceptions of the goodness of different behaviours/actions which in turn create an agreement that an action/behaviour is either morally acceptable or unacceptable (Chia and Lim, 2000). A high degree of social agreement would lead to reducing the ambiguity of the issue, where the moral agent may struggle to decide on the ethicality of the behaviour. Therefore, a strong social consensus makes the situation more concrete (Harrington, 1997). Furthermore, a strong social consensus against unethical action clarifies the situation to the moral agent to classify the consequence into approved/unapproved categories by the others. Generally, an individual’s behaviours are kept within the ‘established conventions’ created by particular social norms, standards, and principles.

Many empirical studies provide consistent evidence that the social consensus toward a particular behaviour significantly affects the process of EDM (Morris and McDonald, 1995; Singhapakdi et al., 1996; Reynolds, 2006; Lincoln and Holmes, 2011). The social consensus was mentioned in the theory of planned behaviour (Ajzen, 1991) by the notion of ‘subjective norms’, which refers to individual’s perception of whether a specific group approves or disapproves of the personal behaviour in a particular situation (Bobek and Hatfield, 2003). Elster (1989) argued that in order to refer to the norm as a social norm, it has to be shared by other individuals within a group and be partly sustained by their approval and disapproval, that is, ‘Injunctive norms’. Wenzel (2004: p 220) stated that “*The social norm referred to the perceived injunctive norms of most people.*” Although, Jones (1991: p 375) has described social consensus as, “*The degree of social agreement that a proposed act is evil (or good)*”, he never specified precisely what is meant by ‘social agreement’. To measure accurately the social consensus, a precise definition of this

concept needs to be provided. Torgler (2002: p 663) claimed that, “*When working with social norms, we have the difficulty of specifying their exact meaning*”. According to social norms theory, social consensus could be referring to one or all of these categories: general societal expectations of the person’s own behaviour, that is, ‘injunctive norms’; expectations of significant others for the person’s own behaviour, that is, ‘subjective norms’; and standards that develop out of observation of the rest of the society’s behaviours, that is, ‘descriptive norms’ (Cialdini and Trost, 1998; Bobek et al., 2013). Therefore, in this study, social consensus will be unpacked into three components: (1) subjective norms; (2) injunctive norms; and (3) descriptive norms, following the recommendation of Cialdini (1998) as described in table 2.2. Any detected effects of those three components on the tax compliance decision will be considered as evidence of an effect of social consensus on the tax compliance behaviour. Table 2.2 (page 26) describes the three components of social consensus and how these components influence tax compliance. For instance, if tax compliance is perceived as ‘the norm’ then descriptive norms will lead to compliance. In contrast, if the situation is ambiguous or novel, then what the individual thinks others do will be influential (more details in the table 2.2).

2. 4. 3. Probability of Effects

The probability of effects refer to the joint function of the likelihood of action to actually take place as well as the likelihood of the consequences of the action (level of harm/benefit) to actually occur (Jones, 1991). If the likelihood of an action to occur and cause the expected harm is high, the moral intensity of this particular issue will be high (Lincoln and Holmes, 2011). Several empirical studies provide consistent evidence that the probability of effect significantly affects the process of EDM (Morris and McDonald, 1995; Singhapakdi et al., 1999; Craft, 2013)

2. 4. 4. Concentration of Effect

The relationship between the number of people affected by the action/behaviour and the magnitude of harm defines the concentration of effect. In other words, it is related to the extent of harm over the potential victims, so if the number of people affected is small, that causes the moral intensity to increase. However, Jones (1991: p 378) admitted that this dimension

‘concentration of effect’ was included in moral intensity just, “*For the sake of completeness*”. As a result, Chia and Lim (2000) claimed that the concentration of effect is the weakest component of moral intensity and it is therefore excluded from the empirical part of this study.

2. 4. 5. Immediacy Effects

Immediacy effects refer to the length of the time distance between the moment the decision is taken and when the consequences occur. Jones (1991: p 376) defined it as the “*Length of time between the present and the onset of consequences of the moral act in question*”. In other words, temporal immediacy is a discount function¹⁶ that a decision maker is evaluating. If the decision maker believes that consequences¹⁷ will occur soon enough after the action has been made, the moral intensity is definitely high (Barnett, 2001). Again, this dimension will be excluded from the empirical study of this research due to the challenging task of measuring the immediacy effects of tax compliance behaviour.

2. 4. 6. Proximity

Proximity refers to the degree of closeness that the moral agent has for the people potentially affected by the issue or action in the situation. In fact, the closer the moral agent feels to those affected by the issue, the higher the level of moral intensity for this particular action (Barnett, 2001). As with the previous dimensions, this dimension will be excluded from this study due to the difficulty of measuring or assessing this in the tax compliance context.

¹⁶ Barnett (2001: p 1040) stated, “Consequences occurring in the distant future are likely to be discounted by those evaluating an ethical issue or action”.

¹⁷ Consequences refer to either positive or negative consequences. In the study context ‘tax evasion’, it is assumed to have a negative consequence.

Table 2.2: Summary of the Components Social Consensus.

	Descriptive norm	Injunctive norms	Subjective norms
Definition	Descriptive norms are derived from observation of what other people do in any given situation. Watching others provides information about what is “normal” in a novel or ambiguous situation.	Injunctive norms represent the perceived behaviour of which most people approve (or disapprove). They specify what “should” (should not) be done.	Subjective norms represent an individual’s perception of the injunctive norms held by “referent” others (e.g., family, friends, and coworkers).
Social norm helps to achieve	Descriptive norms are helpful for maximising effectiveness in social situations. They help individuals make accurate choices about how to behave.	Injunctive norms prescribe appropriate behaviour and thus aid in building and maintaining social relationships.	Subjective norms represent the injunctive norms of those closest to an individual. Thus, they aid in building and maintaining social relationships with people whose opinions matter the most.
When will the norm be influential?	Descriptive norms will be most influential when the situation is novel, ambiguous, or uncertain. Individuals are most effective when they model the behaviour of those who are similar to them but also successful. The individual might be more likely to imitate others who have visible signs of success.	Injunctive norms motivate behaviour by promising social rewards or punishments. They need not be expressed in order to direct behaviour. There is evidence that they can be “primed” and are more powerful when they are brought into focus.	Subjective norms will influence behaviour when individuals are motivated to comply with the norms of referent others.
Why norm may influence tax compliance	If tax compliance is viewed as ‘normal’, then descriptive norms will lead to compliance. If the situation is ambiguous or novel, then it may matter what one thinks others do. High profile cheaters or compliers may cause imitation.	To the extent one has a desire to conform to societal norms, injunctive norms should influence behaviour	Influences of important others might affect the likelihood of feeling guilty. Conformity is greater with friends, family and/or “similar” others. More likely to share tax compliance choices with referent others

Source: (Bobek et al., 2007; Bobek et al., 2013)

2. 4. 7. Summary of The Issue-Contingent Model

Since its introduction by Jones (1991), the components of moral intensity have been the subject of many published empirical studies. For instance, Singhapakdi et al. (1996) showed initial evidence that supports Jones's (1991) framework. Furthermore, May and Pauli (2002) found that all characteristics of the moral issue were highly related to the recognition, evaluation, and intention stages of the EDM. Flannery and May (2000) emphasised that researchers needed to include the moral intensity dimensions in any research of ethical decision making. Indeed, Weber (1996: p 3) cautioned that, "*The conclusions and implications presented in prior research which ignored the ethical issue when assessing decision-making may be limited or misdirected.*" Therefore, this study will include moral intensity's dimensions¹⁸ in the research synthesis model (see chapter 4) as factors that have the potential to impact the tax compliance decision. Jones (1991) emphasised that the moral intensity's dimensions are only related to the issue's characteristics and are not related to the moral agent's characteristics (such as moral development, field dependence, locus of control, or knowledge or value), nor to environmental's characteristics (such as social, cultural, and organisational factors). However, he acknowledged that moral intensity's dimensions are not the only factors that have an impact on EDM since all of the moral agent and environmental characteristics also have the potential to impact the EDM. These two types of characteristics are addressed in the next section.

2. 5. Moral Agent and Environmental Characteristics

The ethical decision-making literature also describes the role of the moral agent's characteristics and their influence on its models. The decisive role of the moral agent's characteristics was clear from the number of models that include them when addressing the stages of EDM (Ferrell and Gresham, 1985; Trevino, 1986; Dubinsky and Loken, 1989). According to Ferrell and Gresham (1985: p 90) "*Beliefs may serve as inputs affecting attitude formation/change and intentions to resolve problems. Also, the evaluation or intention to act (or even to think about an ethical dilemma) may be influenced by cognitive factors that result from individuals' socialization*

¹⁸ Although, it includes just three of the six dimensions of moral intensity (see section 4.2.2 for a full explanation).

processes”. Trevino (1986: p 609) also stated that “*Certain individuals' variables can influence the likelihood of an individual's acting on the choice of what is thought to be right or wrong.*”

Trevino also posited that situational (environmental) characteristics also impact the EDM process in the same manner that personal variables do (ego strength, field dependence, locus of control). Generally, ethical issues are vague by nature. Standards and rules are also in conflict. Thus, moral agents are more likely to involve external/internal factors or variables to help them remove this vagueness. In the context of tax, the complexity of the tax system and the inherent confusion that accompanies compliance decisions, lead the taxpayer to seek help in reporting a decision by incorporating environmental variables such as cultural influences, social norms on one side and certainly their personal norms and beliefs on the other side. Ferrell and Gresham (1985: p 90) affirmed that evaluation, intention and recognition of ethical problems are highly influenced by the socialisation process that the moral agent is surrounded by: “*It is at this stage that cultural differences would influence perceptions of problems*”.

In addition, moral behaviour takes place in a social context and certainly can be impacted heavily by environmental characteristics. So, the ethicality of behaviour in a particular situation is not merely a product of individual characteristics or the issue itself, but also influenced by environmental (societal) characteristics, that to some extent shape the manner in which the individual approaches ethical dilemmas, evaluates and acts upon them (Trevino, 1986).

The assumptions about the role of cultural and group norms/values on the personal behaviour process are found in models in the EDM literature (e.g., Ferrell and Gresham, 1985; Trevino, 1986; Ferrell et al., 1989). Arguably, the taxpayer is surely not an isolated entity that does not interact with his/her environment, and his/her compliance decision is not merely a result of his/her own assessment. Hence, compliance behaviour may be affected by the culture and general social norms surrounding the taxpayer (Torgler, 2004; Wenzel, 2004). Bartels (1967) emphasised the importance of culture on ethics. She encompassed factors such as law, religion, national identity and loyalty, social norms and customs, all under the umbrella of culture.

Critically important in the context of this study, Bartels (1967: p 23) notes that “*contrasting cultures of different societies produce different expectations and become expressed in the dissimilar ethical standards of those societies*”. For instance, in a democratic culture, where self-assessment and opinions of society members can be voiced, and members are encouraged to take responsibility for their decisions to solve lower level conflicts, different schema of cognitive

moral development would be established; compared to in an authoritarian culture, where members are advised to follow the rules and laws of formal authority, with limited tolerance (Trevino, 1986). Therefore, this study recognises the possibility that moral agents and environmental characteristics may influence individuals' tax compliance decision and incorporates these characteristics into the research synthesis framework (see section 4.2.3).

2. 6. Chapter Summary

This chapter addressed the conceptualisation upon which the current study is founded. The two main models being drawn upon were outlined in detail. The first model represents the process which a moral agent goes through when he/she is faced with an ethical situation. This process consists of four stages which are collectively called the four stages of Rest's model, or the four stages of the EDM process: ethical recognition; ethical evaluation; ethical intentions; and ethical behaviour.

The second model is the issue-contingent model of Jones (1991). Jones argued that the issue's or situation's characteristics will have a significant effect on the three stages of EDM. For instance, in high-intensity situations, the course of action is clearer to the moral agent compared to low-intensity situations. So, there is a theoretical basis supporting the potential role of the moral intensity's dimensions in the EDM process. In addition to the moral intensity's dimensions, all of the moral agent and environmental characteristics are deemed to have a significant effect on the EDM stages as well (Hunt and Vitell, 1986; Trevino, 1986; Ajzen, 1991; Henderson and Kaplan, 2005; Torgler and Schneider, 2009). Therefore, there is a need to adopt a comprehensive framework which accommodates the three types of characteristics: issue, moral agents, and environmental characteristics; and demonstrates their effects on the three stages of EDM which this study focuses on, namely, ethical recognition, ethical evaluation, and ethical intention. The research synthesis model is developed and detailed in Chapter 4 (section 4.2.3). This model is unique and novel in tax compliance literature. Prior to setting out the theoretical framework, the next chapter sets out the contextual background of this study and reviews the relevant tax compliance literature.

Chapter 3: Literature Review

3. 1. Introduction

The previous chapter presented the conceptualisation upon which the current research is based. This chapter reviews the relevant literature on tax compliance behaviour. Given the large volume of literature on the tax compliance, this chapter starts by providing a clear definition of tax compliance (tax non-compliance) and reviewing the current body of literature on the tax compliance behaviour and the motivation behind this decision. Finally, it concludes by determining the factors that have the potential to impact the tax compliance decision.

This chapter is organised in the following order: Section 3.2 covers the concepts and the definitions of tax compliance, tax morale, and tax non-compliance (tax evasion). Section 3.3 explains the tax compliance from various perspectives and discusses the most dominant theories used to explain the compliance level of taxpayers, namely deterrence theory, social psychology theory, and fiscal psychology theory. Section 3.4 addresses the factors that determine the tax compliance based on the adopted school of thought (paradigm). Section 3.5 briefly summarises this chapter.

3. 2. The Concept and Definition of Tax Compliance and Tax Non-Compliance

This section presents the definitions of tax compliance and tax non-compliance (tax evasion). In order to fully understand why people do pay their taxes (tax compliance), the reasons why they do not pay their taxes need to be considered. Hence, the definitions of tax compliance and tax non-compliance (tax evasion) are presented in the following sub-sections.

3. 2. 1. Tax Compliance

Finding a universal definition of tax compliance behaviour is difficult due to the reason that “*tax has the reputation of being a complex subject*” (Richardson, 1967 : p 6). Therefore, there is a lack of consensus on a precise definition of tax compliance. In fact, tax compliance has been defined in various ways. For instance, one of the earlier and more comprehensive definition of tax compliance was provided by Roth et al. (1989: p 2), who defined tax compliance as:

“Compliance with reporting requirements means that the taxpayer files all required tax returns at the proper time and that the returns accurately report tax liability in accordance with the Internal Revenue Code, regulations, and court decisions applicable at the time the return is filed.”

Alm (1991) offers a simpler definition in which tax compliance is defined as the reporting of all actual incomes and payment of all due taxes by fulfilling the provisions of tax laws, obligations and regulations. Another descriptive definition of tax compliance behaviour was given by Pogge and Mehta (2016: p 105), who described it as:

“Seeking to pay the right amount of tax in the right place at the right time where right means that the economic substance of the transactions undertaken coincides with the pace and form in which they are reported for taxation purposes.”

Arguably, these definitions seem to provide clear guidelines for a taxpayer’s responsibilities towards his/her tax obligations. However, they fail to address or take account of the taxpayer’s motivation to comply. A wider definition of tax compliance was developed by James and Alley (2002), who re-examined the meaning of tax compliance and suggested that the existing definitions were too narrow to capture the concept of tax compliance. They defined tax compliance as:

“The willingness of individuals and other taxable entities to act in accordance within the spirit as well as the letter of tax law and administration, without the application of enforcement activity.” (p 32).

This definition explicitly includes compliance within the spirit as well as the letter of the law and the willingness of the taxpayer to comply with the tax systems. It also distinguishes between ‘voluntarily comply’ and ‘comply as result of enforcement activities’. Kirchler and Braithwaite (2007: p 22) emphasised the importance of distinguishing between, “*Taxpayers who voluntarily comply with the tax law and taxpayers who comply as a result of enforcement activities.*”

Aydin et al. (2016: p 34) defined voluntary compliance as meeting tax obligations “*without the need for enquiries, obtrusive investigations, reminders or the threat or deterrence application of legal or administrative sanctions.*”

The main motivation for voluntary compliance with tax law is ‘tax morale’. Tax morale as a term has been defined as “*intrinsic motivation to pay taxes. It is individuals’ willingness or moral obligation to pay taxes.*” (Torgler, 2005 : p 526). Other psychology scholars refer to tax morale as ‘taxpayer ethics’ and define it as not cheating and honestly complying with tax obligations as a result of socio-psychological factors and non-economic factors (see section 3.3.2.1).

Although researchers do not adopt a universal definition of tax compliance and tax morale, there are no major contradictions between the various definitions used and for the purpose of this study, the following definitions of tax compliance and tax morale are used which capture the essence of the various definitions referred to above.

The definitions are:

- (1) tax compliance refers to ‘*the degree to which taxpayers comply with the tax obligations, declare their correct income, claim the correct deductions, and pay all taxes on time.*’
- (2) tax morale is defined as: ‘*An umbrella term that includes all non-economic factors (non-enforcement activities) that have the potential to impact the taxpayers’ motivation and willingness to comply with tax obligations*’.

3. 2. 2. Tax Non-Compliance (Tax Evasion)

In contrast with tax compliance, tax non-compliance represents “*the most inclusive conceptualisation referring to failures to meet tax obligations whether or not those failures are intentional*” (Kirchler and Braithwaite, 2007 : p 21). Being on the other end of the continuum to tax compliance, the definition of tax non-compliance can be divided into two types: intentional and unintentional non-compliance behaviour (James and Alley, 2002).

According to Kirchler and Wahl (2010), the intentional non-compliance is an act which results in paying less tax or no tax through a legal means (tax avoidance) or illegal means (tax evasion). In contrast, unintentional tax non-compliance which could also result in paying less tax or no tax, which may arise due to different reasons such as a lack of knowledge or due diligence (Kirchler and Wahl, 2010).

The intentional non-compliance can be classified into two separate sub-categories, which are, tax avoidance and tax evasion. On the one hand, tax avoidance amounts to eliminating or reducing tax liabilities by legal means and taking advantage of some loopholes in the tax law (Scholes et al., 2009). Wenzel (2002: p 630) defined tax avoidance as “*deliberate acts of reducing one’s taxes by legal means*”.

On the other hand, tax evasion is illegal and consists of acts of commission or omission (Kirchler and Braithwaite, 2007), and is subject to punishment. Wenzel (2002: p 630) defined tax evasion as “*deliberate criminal non-fulfilment of tax liabilities by taxpayers*”, while Clyne (1979: p 22) defined tax evasion as the attempt to reduce personal tax liabilities by “*fraud, dishonesty, false returns, double book entries, forgery and dishonest and/or illegal methods*”.

Richardson and Sawyer (2001: p 224) emphasised the importance of “*examining separately the two main forms of taxpayer non-compliance: non-compliance through the overstatement of deductions; and non-compliance through the understatement of income.*”

Therefore, for the purpose of this study, tax evasion is defined as:

‘*deliberate failure to comply with tax obligations by illegal underreporting the correct taxable income, and/or overstating tax deductions, and/or paying less amount of taxes beyond the stipulated time frame*’.

From the above, it is clear there are overlaps and connections between definitions of evasion and non-compliance and at times the phrases tax evasion and non-compliance could be used interchangeably. However, in this study, while recognising this, these terms are used interchangeably within the thesis but predominantly reference is made to compliance/non-compliance, which aligns with the objective of improving our understanding of tax compliance behaviour. This effectively captures some forms of tax evasion as evidenced in the scenarios used. A further in-depth discussion on what are arguably very sophisticated and complicated acts of tax evasion/non-compliance is beyond the scope of this study.

3. 3. Theories of Tax Compliance

There is no one definition of tax compliance, nor just limited determinants of it, which justifies the investigation of the topic. The motivation behind the tax compliance could be identified differently, depending on the schools of thought by which tax compliance is being approached. This ranges from the narrow economic view and law enforcement approach, through to wider psychological views and an even more comprehensive EDM approach that incorporates the environmental characteristics that reflect tax authorities and government policy on a bigger scale. These differing views can be categorised into three schools of thoughts: (1) deterrence theory; (2) social psychology theory; and (3) fiscal psychology theory¹⁹ (McKerchar and Evans, 2009). The following sub-sections describe each of these schools of thought or theories.

3. 3. 1. Deterrence Theory

Since the creation of the fiscal system, tax authorities have struggled to agree on how to implement taxes and motivate individuals to comply. The economic perspective of applying taxes is via enforcement and a deterrence system. According to economists, such as Allingham and Sandmo (1972) who based their study on Becker's (1968) economic theory of crime, the compliance level is determined purely by the deterrence system, which consists of the probability of being detected and the magnitude of the fine imposed. Alm (1991) affirmed that increasing the penalty rate encourages more compliance and that more frequent audits lead to enhancing the compliance level. For those rational reasons, deterrence has been deemed the main system to apply and drive individuals to fully comply. The two main tools that this theory relies upon are the punishment system and auditing, both of which are addressed below.

3. 3. 1. 1. Punishment System

The main tool that fiscal authorities have used since the establishment of the tax system is a punishment scheme, which is considered to be as old as taxes themselves. Again, the first instrument of enforcement applied to levy taxes was high penalties upon non-compliance behaviour. The economists theorised that an increase in the rate of fines imposed would cause a

¹⁹ This school of thought is the combination and evolution of the first two main schools of thought.

rise in the declared income by taxpayers, and the associated increased tax compliance (Allingham and Sandmo, 1972; Song and Yarbrough, 1978; Alm, 1991). Furthermore, evidence from Orviska and Hudson's (2003) empirical work indicated that both penalties and audit probabilities have a significant positive effect on tax compliance.

The deterrence system works such that non-compliant individuals would be fined heavily in order to deter them from illustrating non-compliance with the basic obligation of the fiscal system (Feld and Frey, 2002). The comprehensive discussion by Davis et al. (2003) provides interesting evidence about the mechanism to apply the deterrence system. They argue that the fiscal authorities have to bear in mind that imposing a punishment scheme on a population must be based on whether the society is relatively compliant or noncompliant, prior to the introduction of such a scheme. In the case where the population is relatively compliant, the fiscal authorities have the opportunity to decrease the level of deterrence (punishment and auditing) to a certain critical point without a major impact on compliance level. In the other case, where the population is relatively noncompliant, the tax authorities can augment, in a modest manner, the deterrence rate so a decrease in non-compliance behaviour would be noticed. Once a degree of compliance equilibrium is reached in the first case, any drop in deterrence rate below the critical point will inevitably shift the behaviour in a dramatic manner, and non-complaint behaviour will start to be observed. Furthermore, any attempt to rectify the situation by reintroducing deterrence activities will be unsuccessful and noncompliant behaviour will remain. In the second case, the same effect would be observed if tax authorities are to increase the deterrence level above the critical point that makes compliance in equilibrium. In that case, suddenly, the compliant behaviour will be shifted to be non-compliant behaviour. Similarly, a decrease back to the equilibrium level will not switch back the non-compliant to compliant level. Hence, the key to success for this punishment approach is to determine the optimal point that delivers the compliance equilibrium.

3. 3. 1. 2. Audit Probability

The second instrument that the deterrence system consists of is auditing. Many researchers found that auditing or the probability of being audited is one of the main tools to deter non-compliant behaviour. Feld and Frey (2002) went as far as considering that the probability of detection is more effective than any high fines in reducing tax evasion. Most of the theoretical studies

concluded that individuals seem to be deterred from tax evasion by the possibility of being caught (Allingham and Sandmo, 1972; Alm, 1991; Orviska and Hudson, 2003; Sandmo, 2005).

One of the first models to examine tax compliance was developed by Allingham and Sandmo (1972). This model purely demonstrated that tax compliance is just a function of the degree of punishment and probability of detection. This model affirmed that audit probability is negatively correlated with tax evasion. Alm (1991) supported the early argument and attempted to explain the outcome by suggesting that taxpayers overestimated the probability of detection which leads them to comply more with taxes than what a pure economic model of utility would suggest. In turn, Sandmo (2005) found that empirically non-evading behaviour could be explained by taxpayers' overvaluing the risk of being detected. Bobek and Hatfield (2003) highlighted that the perceived risk of detection could overtake the actual audit or penalty rate due to the strong belief that an individual's perception of the threat of detection has a more significant effect on income reporting decisions than the actual auditing and penalty rate.

On the contrary, however, Feld and Frey (2007) denied any statistical significance to the probability of detection and tax compliance. Rather surprisingly, the authors found evidence which indicated that individuals potentially evade more, the higher the probability of detection; citing earlier supporting evidence such as Beron et al. (1990) and Slemrod et al. (2001).

It appears that the punishment system could not justify the entire compliance rate observed in reality. Indeed, the compliance rate that has been revealed by the econometrics model is far lower than the actual compliance level (Orviska and Hudson, 2003; Torgler, 2004; Feld and Frey, 2007; Lago-Peñas, 2010). This has led to tax authorities needing to consider other perspectives that could offer some understanding and potential to make citizens tax compliant.

A comprehensive study has been conducted by Elffers (2000), who described three steps, 'WBAD' (Willing, Being Able, Daring), before a taxpayer becomes a tax evader. The first step is 'a nice guy' who is willing to comply with taxes without any complaints. For the middle step, Elffers (2000) argued that not all taxpayers with an intention to evade taxes will be able to translate his intention into action due to lack of opportunity or the knowledge and resources to evade. The last step is the intention to not comply with the tax system and the seeking of an opportunity to evade. He pointed out that it is not until this stage that standard economic theory will be applied whereby taxpayers start to evaluate the expected value of evasion (benefit versus penalties & audits).

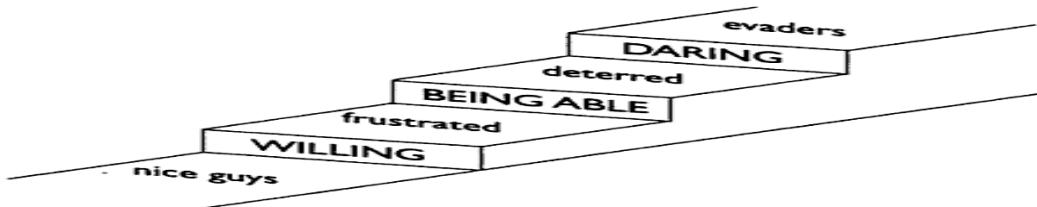


Figure 3.1: The Three Step WBAD Model

Source: (Elffers, 2000)

At earlier steps, excessive penalties on taxpayers who are unintentionally noncompliant may generate an opposite result such as creating bribery, corruption or even decreased levels of compliance and drive taxpayers into the last step of 'WBAD' (Elffers, 2000). Therefore, policy makers should bear in mind that applying higher penalties and/or increasing the frequency of audits will not necessarily work.

In summary, considering a deterrence system (punishment scheme) as the sole enforcement would result in the inappropriate implementation of taxes, and would constrain the compliance attitude if it was used in an inadequate manner (Davis et al., 2003). Resultantly, psychologists suggest adding another type of enforcement on top of the traditional deterrence system.

3. 3. 2. Social Psychology Theory

Based on daily observations and common sense, it could be argued that an individual would abstain from tax evasion, exactly as from speeding, breaking the law and polluting the environment, not only as a result of potential penalty or prison but as a result of social and ethics considerations (Sandmo, 2005). Economists could not explain the lower empirical compliance level they found compared with the actual (higher) compliance level. Hence, the econometric models used by the economists are deficient in some way and missing explanatory variables for this mismatch (Torgler, 2003). From a psychological perspective, social psychologists have developed an interesting concept which describes the relationship between tax authorities and taxpayers as a "psychological tax contract", and any break of this contract will have economic and psychological costs (Feld and Frey, 2007). Economic cost appears once the contract is breached by either the taxpayer or tax authorities. Moreover, when a contract is breached by tax authorities, the cost of collecting taxes will dramatically increase²⁰, and breaching the contract by

²⁰ As more non-compliant behaviours increase and more enforcement activities are needed to try to bring back the compliance level up.

taxpayers will likely result in a high penalty if detected. Meanwhile, a psychological cost will be incurred by taxpayers as a result of breaching the contract and engaging in any kind of tax evasion (self-blame, social stigma and feeling guilty...etc.,). Even fiscal authorities will incur a sort of psychological cost, in a sense that by breaking their part of the psychological tax contract they would provide a relatively reasonable justification to taxpayers to engage in tax evasion. Therefore, psychologists conclude from their empirical work that there is an aspect called ‘Tax Morale’ or ‘Tax Ethics’ which is believed to solve the puzzle of the inconsistency in the results of the predicted and real compliance levels from the economists (Feld and Frey, 2002; Feld and Tyran, 2002; Slemrod, 2002; Slemrod and Yitzhaki, 2002; Bobek and Hatfield, 2003; Orviska and Hudson, 2003; Alm and Torgler, 2006; Richardson, 2006; Feld and Frey, 2007; Blanhorne and Kaplan, 2008; Torgler, 2008; Lago-Peñas, 2010; McKerchar et al., 2012).

3. 3. 2. 1. Tax Morale

The notion of tax morale is not a new concept; the first introduction of this concept in the literature was by Schmolders (1959) who based it on attitudes related to tax compliance and tax non-compliance behaviours. He examined tax morale among self-employed taxpayers across Europe, and he found that those who were self-employed had lower levels of tax morale than other taxpayers (e.g., full time employees). Strümpel (1969) also examined tax morale using an international comparative survey where he compared both the tax systems across European countries and the level of tax morale and he found different levels of tax morale across different tax systems.

Drawing on the work of Schmolders (1970), McKerchar (2001) refers to three main elements that determine taxpayer attitude, namely, tax mentality, feelings of tax tension and tax morale. Schmolders (1970) defined the concept of ‘tax mentality’ as the willingness of the taxpayers to pay their taxes, and tax morale as the taxpayer’s intrinsic incentive to comply with tax law, which emerges from moral values and religious beliefs.

In tax compliance literature, tax morale has been virtually ignored until the last two decades when this concept started to attract the interests of scholars in the field. As noted by Feld and Tyran (2002: p 199) ‘*All in all, too little is known as to which motivations of citizens’ shape tax morale*’. Feld and Frey (2002: p 88-89) stated:

“...most studies treat ‘tax morale’ as a black box without discussing or even considering how it might arise or how it might be maintained. It is usually perceived as being part of the meta-preferences of taxpayers and used as the residuum in the analysis, capturing unknown influences to tax evasion. The more interesting question then is which factors shape the emergence and maintenance of tax morale.”

Due to the high losses that governments are incurring annually as a result of the tax evasion/non-compliance ‘tax gap’ (Alm, 1991), opening the black box of tax morale is expected to be a relatively easy alternative strategy (alternative to deterrence strategy) to tackle tax evasion (Lago-Peñas, 2010). Even though the premiere tool of tax compliance enforcement is the law, the ethics dimension in paying taxes is seen as a highly effective alternative tool (Torgler, 2008). Furthermore, there is a consensus among psychologists that conducting a universal enforcement mechanism will cause the fiscal authority to incur excessive costs. Clearly, it is almost certain that tax authorities would never achieve the level of compliance desired without incorporating the ethics dimension unless there is an allocated tax collector for every single house (Torgler, 2008).

Similarly, Slemrod (1992: p 7) pointed out that:

“from the tax collection standpoint, it is extraordinarily expensive to arrange an enforcement regime so that, from a strict cost-benefit calculus, noncompliance does not appear attractive to many citizens. It follows that those methods that reinforce and encourage taxpayers' devotion to their responsibilities as citizens play an important role in the tax collection process.”

In his later study Slemrod (2002) illustrated again that the cost of collecting taxes is definitely lower when taxpayers exhibit more willingness to pay their taxes voluntarily. So, tax morale has become a central focus of discussion in tax compliance. Tax morale is believed to be strongly related to another concept, that of ‘taxpayer ethics’ defined by Song and Yarbrough (1978: p 444) as:

“Tax ethics, by which is meant the norms of behaviour governing citizens as taxpayers in their relationship with the government, will have a significant effect on compliance behaviour”.

Tax morale could be described as the ethics principles or values which individuals hold about paying their tax (Torgler and Murphy, 2005). Another definition of tax morale widely accepted by many authors is that tax morale is the intrinsic motivation to pay taxes (Feld and Frey, 2002; Orviska and Hudson, 2003; Torgler and Murphy, 2005; Alm and Torgler, 2006; Richardson, 2006; Blanhorne and Kaplan, 2008; McGee et al., 2011; McKerchar et al., 2012).

Tax morale could be expressed from two different dimensions: attitudinal and behavioural. From a behavioural dimension, tax morale is about taxpayer compliance with respect to the tax laws.

The attitudinal dimension of tax morale describes the normative attitudes of taxpayers with regards to their tax obligations (Song and Yarbrough, 1978). Hence, the current research defines tax morale as intrinsic motivations to comply with tax system and adopted the social psychology school of thought that provides a myriad of models that predict and attempt to understand how taxpayers make decisions using a number of methodological approaches such as compositional modelling, attribution theory and equity theory (McKerchar and Evans, 2009).

For instance, compositional modelling considers individuals to be autonomous; undertaking deliberate actions and rationalising those actions according to their belief systems. This theory argues that individuals consider the implications of their behaviours before taking the decision or establish their intentions²¹ to engage in certain actions and behaviours.

3. 3. 3. Fiscal Psychology Theory

According to Alm (1991: p 584) “*compliance can be encouraged by rewards as well as penalties*”. Psychologists appear to agree that utilising a rewards system offers an extra explanation of the actual compliance rate (Lago-Peñas, 2010). This again reinforces the concept of ‘psychological tax contract’ brought by Feld and Frey (2007), who stressed that this contract has to be the foundation of any relationship between taxpayers and tax authorities. In order to uphold this contract, the rewards system must accompany a deterrence system. Indeed, Feld and Frey (2007) pointed out that the rewards system is a tool that has to be part of the whole system of implementing taxes within a society. In fact, honest taxpayers should not get any sense that they have been exploited by the dishonest taxpayers (horizontal/vertical fairness, see section 3.4.2.2 for more detail). Therefore, the punishment scheme system still plays an essential role by providing a deterrence atmosphere.

At the same time, Feld and Frey (2007) emphasised that taxpayers could make a mistake, and this mistake should be treated as a minor offence (allowing for doubt), so it ought to be penalised less severely without undermining the ‘psychological tax contract’ (restorative fairness²²).

In summary, a non-linear punishment strategy which contains low fines for a minor mistake²³ and high penalties for tax fraud (tax evasion) would perfectly maintain the covenants of this contract (Feld and Frey, 2007).

²¹ Theory of planned behaviour developed by Ajzen (1991) illustrates the point view of this methodological approach.

²² For more details on ‘restorative fairness’, see table 3.1.

3. 4. Tax Compliance Determinants

There is no consensus in the tax compliance and evasion literature on the factors that may have a direct or indirect impact on reporting decisions of taxpayers. One of the first literature reviews in tax evasion conducted by Jackson and Milliron (1986) listed fourteen factors that determine tax evasion, whereas, Alm (1991) argued that the Internal Revenue Service²⁴ recorded about sixty-four factors that could influence the compliance decision of a taxpayer. Clearly, many variables are considered to be involved in shaping tax compliance. However, it is impossible to incorporate all of them into one single model. The limited ability to involve all the factors in one model is due to the complexity of separating the effect of each factor from the others. In other words, it is almost impossible to isolate and test each factor by itself (McKerchar et al., 2012). Furthermore, the incapability of including all the factors in theoretical models causes scholars to question the ability of theories behind these factors to explain, in a meaningful way, their effects on tax compliance behaviour of taxpayers (Alm, 1991). There have been calls for more studies to incorporate all factors within a single model.

Scholars have attempted to group those factors around themes. For instance, a comprehensive study was performed by Lago-Peñas (2010), where he categorised the factors that shape tax compliance into 3 groups:

- 1) Socio-demographic characteristics (e.g., gender, age and religion ...etc.)
- 2) Political and social attitudes (e.g., trust in the courts, legal system and politicians...etc.)
- 3) Variables measuring the fiscal parameters that determine deterrence (e.g., tax rates, the fine rate, audit probability and risk aversion...etc.)

Scholars from the ethical behaviour and ethical decision-making literature grouped the factors that impact the decision-making process around the source of those factors (Hunt and Vitell, 1986; Dubinsky and Loken, 1989; Ferrell et al., 1989; Jones, 1991). For instance, Jones (1991) argued that on top of the moral agent characteristics (e.g., socio-demographics factors, personal standards...etc.) and environmental characteristics (e.g., situational factors, organisational factors, society factors...etc.), the issue characteristics (moral intensity dimensions) have a

²³ For instance: unintentionally underreport taxable income or unintentionally overstate tax deductions due to unexperienced or lack of understanding of tax system.

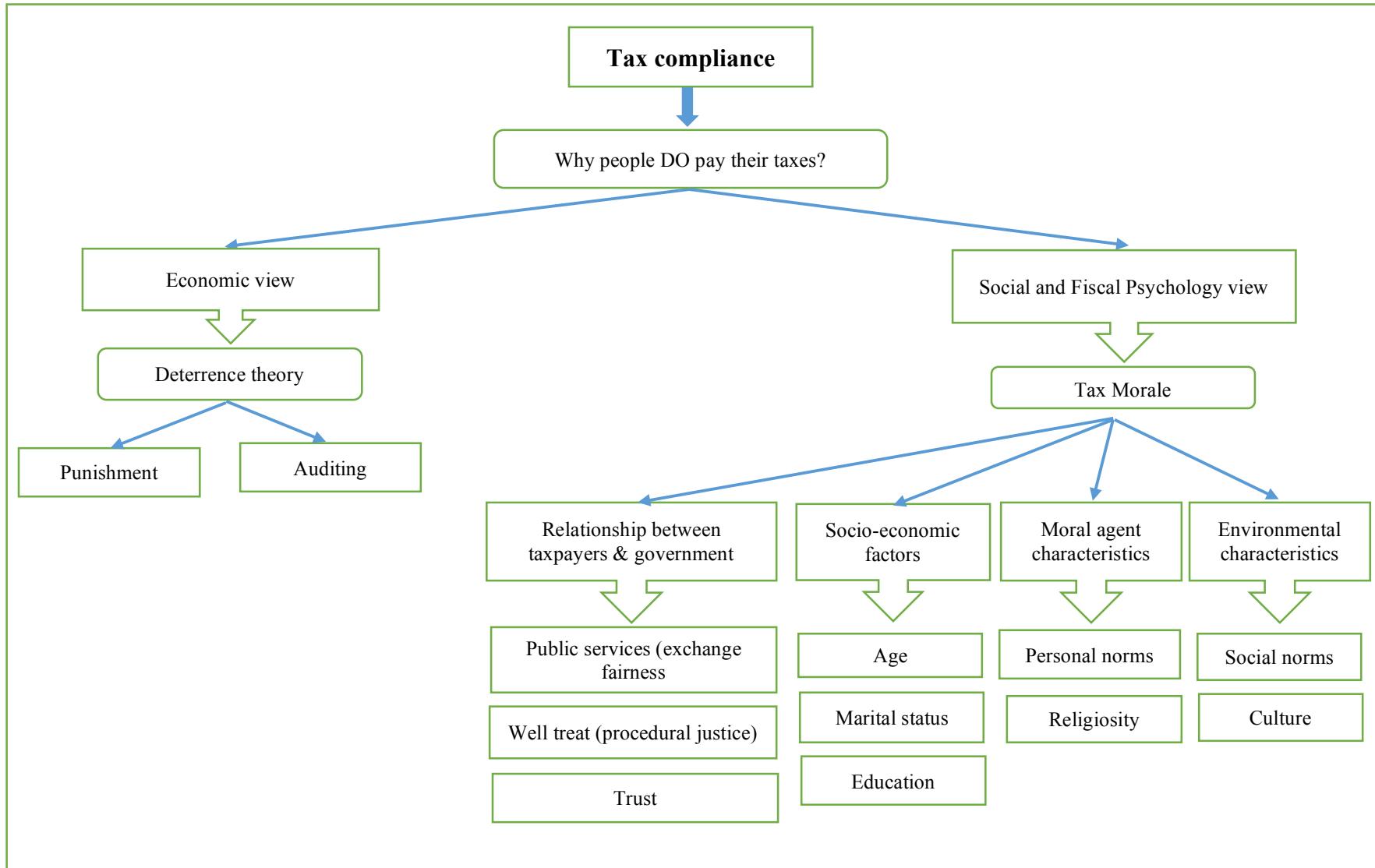
²⁴ IRS records in 1978.

significant role in any ethical behaviour situation (tax compliance in the context of this study). Therefore, in this study, the factors that have the potential to impact on the tax behaviour decision of taxpayers, drawing significantly of Jones (1991) and other scholars from EDM area, are categorised around their nature:

- 1) Moral agent characteristics (personal norms, socio-demographic factors, and religion);
- 2) Society, environment or organisational characteristics (social norms, interaction between taxpayers and government, tax systems...etc.)
- 3) Issue characteristics (moral intensity dimensions)

These factors are all included in the research synthesis model as developed in this study (Section 4.2.3). The following sub-sections described the first two categories while the third category was described previously in Section 2.4. Furthermore, figure 3.2 demonstrates the diagram of the literature in tax compliance which details the factors that impact; tax compliance and tax morale.

Figure 3.2: The Diagram of Tax Compliance



3. 4. 1. Moral Agent Characteristics

As well as socio-demographics factors (age, gender, marital status, education, and experience), personal norms and religion are the main factors of this group of characteristics.

3. 4. 1. 1. Personal Norms

According to the academic literature, personal beliefs and norms are key elements in tax compliance. Indeed, it appears to be agreed upon among psychologists that personal belief is one of the pillars that tax compliance is built on among others such as social norms, demographic characteristics and the interaction between taxpayers and government (Jackson and Milliron, 1986; Ajzen, 1991; Cialdini, 1998; Alm and Torgler, 2006; Lago-Peñas, 2010; McKerchar et al., 2012). Feld and Frey (2002) argued that the decision to comply or evade tax is not only about the sanctions; but rather personal attitudes and norms also impact highly on reporting decisions. Although there is no doubt that some taxpayers do approach their reporting choices under sanctions and deterrence systems, there is strong evidence that others seem to be naturally honest and are simply not impacted upon by sanctions. Long and Swingen (1991: p 44) argued that “*some individuals are simply predisposed not to evade*”. Moreover, Erard and Feinstein (1994: p 3) stated that many taxpayers appear to be inherently honest, “*Willing to bear their full tax burden even when faced with financial incentives to underreport their income*”. Torgler (2003) claimed that some individuals comply with the tax system even without (or with low) penalties and audits. Again, Alm (1991) pointed out that a significant number of taxpayers do pay their taxes simply because they believe (personal belief) that evading taxes is morally unethical. Similarly, Baldry (1986) confirmed the concept that some taxpayers avoid cheating in taxes for ethical reasons. Meanwhile, Bobek and Hatfield (2003) illustrated that taxpayers who did not engage in any tax evasion were most probably those with a high moral obligation and unfavourable attitude toward tax evading. Hence, personal belief and attitude towards taxes do matter when considering the decision of complying or not, so it will be included in the research model used in this study.

Personal beliefs and norms sometimes are referred to as personal attitude or moral obligations. Here, it is necessary to distinguish between attitude and moral beliefs. An attitude towards a

particular behaviour is believed to be the result of an individual's belief about the outcome of engaging in such behaviour. In other words, personal attitude is what classifies the personal actions into favourable or unfavourable actions. Bobek and Hatfield (2003: p 17) explained that: "*Individuals' attitudes are a function of their underlying beliefs regarding the outcomes they expect to achieve by engaging in the behaviour and the value they place on these outcomes*".

Moral obligation is defined as a boundary system that inhibits individuals from engaging in behaviour that would compromise their moral beliefs (Reckers et al., 1994). According to this definition, a taxpayer with a high level of moral obligation will basically comply and ignore the evasion opportunities.

In summary, an individual's personal attitude needs to be differentiated from the individual's perception of the moral obligation of whether to engage in a particular behaviour or not (Ajzen, 1991). Although the two are highly correlated, Ajzen (1991) emphasised that the two constructs are well separated and based on his article, 'The Theory of Planned Behaviour', each has an exclusive impact on a taxpayer's compliance decision (Bobek and Hatfield, 2003). Both concepts are measured in this study (see Chapter 5).

3. 4. 1. 2. Religiosity Level

Over the years, tax compliance literature started to focus on religiosity as an imperative factor that has a significant impact on shaping tax morale and tax compliance. In fact, the relationship between taxation and religiosity could be traced back to the 17th century, precisely to Adam Smith who considered religiosity as an internal moral enforcement scheme (Torgler, 2006). Similarly, McGee (2006) argued that moral and cultural motivations of paying taxes and especially the religiosity level of individuals are expected to play an effective role in fostering the level of compliance.

However, despite the high theoretical expectations of the potential contribution of religion to conformity across society, some studies did not find supporting evidence for this (Albrecht et al., 1977; Stack and Kposowa, 2006; McKerchar et al., 2012) and argued that religiosity level has a limited impact on inhibiting the deviant behaviours (Tittle and Welch, 1983). In fact, a study which was conducted in 1969 by Hirschi and Stark, argued that religiosity had no impact on deviance and was accepted by several scholars in the field (as was cited by Tittle and Welch,

1983). For instance, the extreme views on secularisation consider the religiosity as purely the reflections of fear and ignorance and that the authorities' system should tackle those effects by increasing the level of education and science. This will eventually lead to decreasing the level of religiosity hence increasing stimulation of economy and urbanised economies (McCleary and Barro, 2006). However, Tittle and Welch (1983) challenged these studies that underestimate the effect of religiosity as a driver of conformity. They asserted that the poor quality of most research caused the mixed and contradictory findings. Indeed, the latter argument was supported by many authors that emphasised the fact that religion is an important instrument that enhances social integration and prevents the deviant behaviours like tax fraud and crimes that reduce annual revenues (Tittle and Welch, 1983; Alm and Torgler, 2006; Torgler, 2006; Torgler, 2008). For instance, Heiner (1983) emphasised that the appropriate use of religion could lead to simplifying the individual's actions and relaxing their behaviours which would cause the cost of enforcement and transaction to reduce. Furthermore, it is believed that religion could be utilised to change the direction of an individual's behaviour within a society in a way that could contribute to the social welfare (Torgler, 2006). Hence, it could be considered as a useful tool that fiscal authorities can leverage in the tax compliance challenge.

As generally known, religious persons are more concerned with right and ethical behaviour which implies that they are more accepting to carry out some duties such as paying taxes as long as their religiosity beliefs support those behaviours (Lago-Peñas, 2010). McCleary and Barro (2006: p 50-51) pointed out the mechanism under which religiosity affects the behaviour of the individual:

"It is by fostering traits such as work ethic, honesty (and hence trust), thrift, charity, hospitality to strangers and so on. By enhancing these traits, greater religiosity could spur investment and economic growth".

In addition, McCleary and Barro (2006) argued that most of the worldwide religions support the concept of salvation which in turn provides economic and moral incentives to comply with the rules and policies. The concept of salvation offers the person incentive to comply more even if the rules and policies are considered as unsatisfactory. In fact, belief in afterlife and salvation appears to be crucial as an economic influence due to the compensation that the concept of the afterlife promises. In other words, concepts such as salvation and damnation are key sources of behaviour's motivation which can enhance productivity by raising individual traits like honesty, work ethic and thrift. Hence, the powerful force that is driven by these beliefs can tackle anti-

social actions such as tax evasion (McCleary and Barro, 2006). In addition, Tittle and Welch (1983) indicated that religious institutions supply moral constitutions for society, and by society's acceptance of these moral constitutions, they can become an enforcement power which behaves as a 'supernatural police' that enforces morality into society.

From another perspective, religion is thought to function as a mechanism of constraint which restrains deviant behaviours in an environment that are expressed by low social integration, low peer conformity and relatively high levels of religious non-affiliates (Tittle and Welch, 1983). The majority of contemporary scholars affirmed that religiosity must inhibit deviance to the greatest extent in an environment characterised by some external guides for behaviour (Alm and Torgler, 2006; Torgler, 2008; McKerchar et al., 2012).

In order to achieve conformity, religiosity offers three key elements; 'moral guidance' in situations where there is a lack of it in society; a 'supportive social network' where there is an absence of integration within the community and a promising 'reward' for conformity either in this life or afterlife (Tittle and Welch, 1983). Regarding the substantial effect of religiosity on inhibiting deviant behaviour, there are two strands of arguments in the academic literature about the best conditions for observing this religiosity effect. While Stark (1969) assumed that the effect of religiosity was more effectively noticed when the outside environment is characterised by a high number of religious individuals, Tittle and Welch (1983) found just the reverse results and argued that individuals should encounter the maximum level of conformity (inhibiting deviant behaviour) if the surrounding society is considered as non-religious. In the context of the current study, both atmospheres could be experienced. The study examines members of the same religious affiliation "Muslim community²⁵" and non-members of this community (different religion affiliations).

In summary, there is significant evidence from the literature that supports the proposition that the individual's religiosity level shapes the decision-making of individuals when they face an ethical dilemma. Hence, religiosity level will be considered in the research synthesis model used in this study.

²⁵ This group could arguably assume to be characterised as an environment with a high number of religious individuals since the survey was distributed mainly at a religious place where the participants were approached (e.g., mosques).

3. 4. 1. 3 Socio-Economic Demographic Factors

There is a myriad of socio-economic demographics featured in the literature as factors which influence tax compliance behaviour. These factors include gender, marital status, age, occupation, opportunity, income, and education (Richardson, 2006). The most dominant socio-economic demographic factors that any tax compliance study, including this study, needs to consider are outlined below.

Age

There is a consensus amongst the researchers that there is a strong correlation between age and tax compliance levels. Many studies²⁶ cited by authors McGee et al. (2011) and Richardson (2006), confirmed that older taxpayers are generally more compliant than younger taxpayers and that taxpayers become more ethical with age.

Gender

Most studies that investigate the effect of gender on taxpayer compliance behaviour affirmed that women have a higher tax morale than men (McGee, 1997; Torgler, 2004; Alm and Torgler, 2006; McGee et al., 2011). Moreover, social psychology researchers argue that females are more compliant and less self-reliant than men (Torgler, 2004). However, one interesting finding was obtained by McGee et al. (2011) who found that male accounting practitioners were more compliant than their female counterparts Turkey. In addition, McGee et al. (2011) referred to another study by Ömürbek, Çiçek & Çiçek (2007) which, despite using a different methodology (the study of university student views), still confirmed his findings . These findings could be explained by the assumption that different cultures and social norms, may affect the perception that females are more ethical than males with respect to tax perspective.

²⁶ For instances: Tittle1980; Witte & Woodbury, 1985; Barnett & Karson, 1987; Dubin & Wilde, 1988; Wood et al., 1988; Longenecker, McKinney & Moore, 1989; Harris, 1990; Kelley, Ferrell & Skinner, 1990; Serwinek, 1992; Feinstein, 1991; Hanno & Violette, 1996.

Marital Status

Again, most research in tax morale and tax compliance that studied the impact of marital status on the level of compliance concluded that married persons would have a higher compliance level than unmarried/single persons (Torgler, 2004; Alm and Torgler, 2006)

Education

One of the most challenging factors to measure and to observe is that of education. According to Kaplan et al. (1997), the individual's level of tax morale and compliance is significantly related and influenced by certain educational communications²⁷ and could be used to improve the level of compliance. Indeed, Torgler and Schneider (2007) asserted that with higher educated taxpayers, higher compliance levels could be achieved by increasing taxpayers' awareness of tax law and its objectives, and the appreciation of the reward system that the state provides as a result of honestly complying with the tax rules (tax benefits and public services). However, at the same time, it could lead to critically assessing the governments. Hence, enhancing education comes with two contradictory effects. On the one hand increasing education levels leads to an increase compliance through increasing the awareness of the benefits and services the state provides, whereas, it may have a negative impact on the compliance level through the critical assessment of the use of tax revenue by the state, and an increasing in familiarity with opportunities to evade taxes. In fact, it has been argued by other studies that individuals with the highest education levels have the lowest tax morale (Torgler, 2006; Torgler and Schneider, 2007). Furthermore, Jackson and Milliron (1986: p 132) brought a comprehensive argument about the effect of education on tax compliance level. They distinguished between two types of education: general knowledge of the fiscal system and the specific level of knowledge about tax evasion opportunities. By raising the level of general knowledge of the fiscal system, tax compliance levels increase due to a positive appreciation of taxation whilst enhancing the level of knowledge of tax evasion opportunities leads to a negative impact on tax compliance as it supports non-compliance acts (as mentioned by Richardson, 2006).

²⁷ Such as: Educational messages; educational programs; and educational interventions...etc.

Other factors

As mentioned earlier (section 3.4), many factors are thought to impact the compliance decision of taxpayers. However, scholars are still struggling empirically to include all of them in one model due to the impossible task of separating the effect of each factor. Bobek and Hatfield (2003) discussed the concept of ‘commitment to obey the law’ as one of the factors that have some impact on the compliance level of taxpayers. Richardson (2006) found in his empirical work that the level of complexity of the tax system within a country will affect the taxpayers’ compliance. Lago-Peñas (2010) provides some evidence that ethnic fractionalisation has a significant negative relationship with tax compliance. In addition, Torgler (2004) shows that the financial situation of a household is related to tax honesty, and a poor financial situation leads to difficulty in complying with a tax system. Other researchers, such as Alm and Torgler (2006), Richardson (2006), and Torgler (2004) argued that usually taxpayers with greater opportunity to evade (in functions such as agriculture, independent trade and self-employment) should be treated differently than taxpayers with less opportunity (such as taxpayers with dependent wages or salaries). Likewise, Torgler (2004) found that employees have a higher tax morale than the self-employed. Unsurprisingly, Alm and Torgler (2006) who measured the level of tax declaration among different types of taxpayers, found that compared to self-employed, full-time employees report 6.5% points higher. Similarly, it has been argued that unemployed individuals tend to hold a higher incentive to act in the shadow economy, which would impact the way they evaluate tax evasion (Torgler, 2004). Inconsistent evidence has been found regarding the effect of income on tax compliance and tax morale. Frey and Feld (2002) argued that the effect of income is still ambiguous. Generally, measuring the effect of income on tax compliance is very challenging to perform theoretically (Torgler, 2004). Virtually all theoretical models of tax compliance assumed that higher income leads to higher tax evasion (Orviska and Hudson, 2003). In fact, Torgler (2004) found that a better economic situation typically indicates a lower tax morale. Witte and Woodbury (1985) found that middle-income taxpayers are usually more compliant with tax laws than low and high-income taxpayers.

Again, due to the myriad of factors that are highly linked to tax morale and thought to have some sort of effects on tax compliance level, the current study will include only some of those socio-economic demographic factors in the model: age, marital status, education, gender, experience.

3. 4. 2. Environmental Characteristics

Considering moral agent characteristics without acknowledging social and cultural environment characteristics would deliver an incomplete image on the effect of moral agent characteristics on tax behaviour in particular, and tax compliance in general. In this section, determinant factors deemed to be related to the social and cultural environment characteristics such as general social norms toward tax systems and compliance, and interaction between taxpayers and tax authorities and government are discussed.

3. 4. 2. 1. Social Characteristics

In a review of factors effecting compliance, many studies provide strong evidence that the compliance behaviour of a taxpayer's peers is significantly correlated with individual compliance level (Scholz et al., 1992; Bobek and Hatfield, 2003; Wenzel, 2004; Sandmo, 2005; Torgler, 2008). Earlier studies indicated that a taxpayer's perception of the importance of others is related to compliance intentions (Bobek and Hatfield, 2003). Indeed, a study conducted by Scholz et al. (1992) found that the opinions of others are extremely important for the taxpayer's decision to comply. Again, Sandmo (2005) confirmed that the tax evasion decision is related to the individual's perception of the behaviour of others. Furthermore, Torgler (2003) found that interactions between taxpayers themselves are significantly important in the decision of tax compliance. He asserted that taxpayer's decision to comply is not isolated from the other taxpayers' decision and affirmed that by stating that "*individuals with tax evaders as friends are more likely to be evaders themselves*" (Torgler, 2008 : p 1251). Related to this, Davis et al. (2003) emphasised that suspicion that relatives and acquaintances are evading will definitely enhance the probability of engaging in tax evasion.

Social psychologists attempted to explain the reasons why knowledge of tax evaders lead honest taxpayers to start considering evading tax themselves. For instance, Montada and Lerner (1998) explained it by the feeling of justice, whereby individuals need to believe that the world is just and that justice is enforced by punishing the harm-doer; compensating, blaming, or at least denying injustice, and supporting it with justice in the afterlife. If not, taxpayers will engage in tax evasion to seek justice by themselves (Spicer and Becker, 1980; Tyler, 1990). An alternative

view presented by Cooter (1988) suggested that, in general, individuals choose conformity as a behavioural standard, and that violating this standard will incur a psychological cost of guilt even if the violation is not observed by others. In the case where the violation was made by a high moral character, it may cause the taxpayer to change his/her behavioural standard. Indeed, Kaplan and Reckers (1985) confirmed the previous view and provided evidence that the probability to evade will increase when a taxpayer observes a high moral character²⁸ evade.

Recalling the gap between the low tax compliance rate which the deterrence theory suggested, and the actual higher tax compliance rate (section 3.2.2), psychologists argued that the misperception of the detection risk by taxpayers could explain the differences. Moreover, taxpayers' perceptions of the probability of being caught when evading tax are much higher than actual probabilities of detection (Feld and Frey, 2007). It seems that this misperception is not sustainable over a long horizontal time, as the interaction of individuals and the sharing of knowledge about the abilities to evade taxes by others will impact the personal behaviour of compliance (Feld and Frey, 2007). This argument was supported by Orviska and Hudson (2003) who provided evidence that tax evasion is actually condemned by the majority of taxpayers, who are at the same time ready to reconsider it in case they observe others evade.

In contrast, another argument was presented by Wenzel (2005) who argued that taxpayers generally overestimate other taxpayers' acceptance of tax evasion. So, taxpayers become evaders under this misperception, which was built on the perception of the behaviour of others. This view was supported by a number of studies that suggested that individuals with more non-compliant behaviours perceived tax evasion to be more prevalent among their acquaintances (Spicer & Lundstedt, 1976; Porcano, 1988; De Juan, Lasheras, & Mayo, 1994;)²⁹.

There is no consensus amongst scholars about how society motivates the compliance or non-compliance of taxpayers. Torgler (2004) argued that the contribution of society is the main driver behind the taxpayers' compliance with taxes, whilst Davis et al. (2003) concluded that the pressure that honest taxpayers impose on evaders would force them to comply. They found that the greater the proportion of honest taxpayers within a population, the greater the pressure on tax evaders to switch back to the honest compliance behaviour. At the same time, honest taxpayers

²⁸ In their study Kaplan and Reckers (1985: p 100), they manipulated the moral character in which a high moral character refers to "the taxpayer who generally is regarded as an 'upright' businessman". Whereas, a low moral character refers to 'the taxpayer who generally is regarded as a 'shrewd' businessman'.

²⁹ Those studies were cited by Wenzel (2004).

should be protected as Frey and Feld (2002) emphasised that if honest taxpayers comply with tax rules and realise that other society members are evading taxes, they may feel cheated by those evaders who disrespect the basic rules and duty of citizenship (Frey and Feld, 2002). On the other hand, the effect of the cultural environment factor on tax morale has been neglected by scholars for many years. Specifically, in an economic area, there is often a lack of evidence of the impact of culture on tax compliance (Alm and Torgler, 2006). Ignoring the cultural aspects of a taxpayer would mislead any researcher who is interested in understanding the taxpayers' behaviours. Hofstede and Minkov (1991) concluded that ethical values are part of a culture which may contribute to ethical decision making, and Torgler (2004) claimed that differences of tax morale values between Asian and OECD countries were due to cultural differences. Stack and Kposowa (2006) claimed that living in a nation with a specific moral community such as an Islamic nation would have an impact on the individual-level of tax compliance. Likewise, Sandmo (2005) assumed that tax evasion in a country where evasion is widespread would be less risky as evasion is arguably more acceptable. Torgler (2008: p1251) affirmed that, "*compliance is greater in societies with a stronger sense of social cohesion*".

3. 4. 2. 2. Organisational Environment Factors

A neglected aspect of tax morale and tax compliance is the relationship between taxpayers and tax authorities. The interaction between the government and taxpayers is considered to have a great effect in shaping tax morale and improving tax compliance (Feld and Frey, 2002; Torgler, 2004; Feld and Frey, 2007; Lago-Peñas, 2010). It has been argued that tax compliance is likely to be affected by many factors such as trust in the tax system, the fairness of taxation, and the interaction between taxpayers and government (Alm and Torgler, 2006).

Wenzel (2003) comprehensively discussed the concept of justice and its four areas, namely, (1) distributive justice, (2) procedural justice, (3) restorative justice, and (4) retributive justice.

Distributive justice is related to the fair exchange of resources, benefits and costs (Kirchler and Braithwaite, 2007). Wenzel (2003: p 45) defined it as "*the fairness of the outcomes of a resource allocation or distribution and has the longest research tradition in social psychology*". It can be distinguished into three types: vertical, horizontal, and exchange fairness. Vertical fairness concerns the distribution of benefits and costs across taxpayers' income groups (from low to

high), horizontal fairness concerns fair distribution of benefits and costs within taxpayers' income groups (at the same income group such as 'middle-income') and finally, exchange fairness concerns taxpayers' tax burden and the provision of public goods by the government (discussed in the next sub-section). Many studies have examined the impact of distributive justices on tax compliance. For instance, Spicer and Becker (1980) conducted a simulation study and found that advantageous inequity decreased tax evasion, whereas, disadvantageous inequity increased tax evasion (horizontal fairness). A study by Kinsey and Grasmick (1993) found a strong relationship between vertical unfairness and the intention to engage in tax evading (vertical fairness). Porcano (1988) examined the perceived exchange fairness among taxpayers. He found that the self-reported past evaders perceived the exchange relationship as more unfair than non-evaders did (exchange fairness).

Procedural justice is related to the process of resource distribution. Wenzel (2003: p 45) argued that "*While distributive justice concerns decision outcomes, procedural justice pertains to the way, modes and procedures of reaching the decision*". Hofmann et al. (2008: p 4) claimed that "*procedural justice is high when individuals perceive the rules applied for the distribution of benefits and costs as fair, and treatment by tax authorities as friendly, respectful and supportive*". Research on the impact of the procedural justice on tax compliance are scarce. Alm et al. (1993) experimentally examined the relationship between procedural qualities of the decision of how tax revenue should be spent and the level of tax compliance. They found that the tax compliance level dropped when the decision was imposed on the participants rather than based on the majority rule.

Restorative justice is related to repairing the harm caused by the crime. It is concerned with finding a middle ground between all tax systems' stakeholders such as: tax authorities, taxpayers, and policy makers (Braithwaite, 2002). Braithwaite (2002: p 1) defined restorative justice as 'a rational form of justice' and it is related to "*the selection of problem-prevention strategies that empower stakeholders by putting the problem in the centre of a circle of deliberation, rather than putting the person alleged to be responsible for it in the dock*".

Retributive justice is related to the fairness of sanctions and reactions to the breaking of social norms (Wenzel, 2003). While distributive and procedural justice concerns the decision outcomes and the procedures of reaching the decision, retributive justice concerns the treatment and degree

of sanction the rule-breaker deserves. For instance, if the norms of retributive justice have been violated, that norm would only require the restitution of the just situation (Braithwaite, 2002).

A more detailed demonstration of these concepts (distributive, procedural, and retributive justice) and how these concepts are related to tax burdens, tax-based benefits, and avoidance/evasion opportunities at the societal, group, and individual levels can be found in the following table 3.1.

Level of analysis	Societal level	Group level	Individual level
Distributive justice in tax research			
Tax burdens	Tax level, distribution, progressivity	In-group's tax burden, compared to other groups, other times, its relative income.	Personal tax burden, compared to others, other times, one's relative income
Tax based benefits	Level of spending, efficiency, distribution over different policies	In-group's benefit, compared to other groups, other times, its relative income.	Personal benefits compared to others, other times, one's relative income.
Avoidance/evasion opportunities	Level, distribution of opportunities	In-group's options relative to other groups	Personal options compared to others, other times
Procedural justice in tax research			
Interactional treatment	Rights for taxpayers and service standards	Respect for the in-groups consistency relative to other groups	Respect for the individual, consistency relative to other individuals
Process and decision control	Consultation of taxpayers in general, democratic structures	Voice, control, consultation and representation of in-group	Respect for the individual, consistency relative to other individuals
Information and explanation	Transparency, presentation in media	Explanation and justifications for decisions affecting the in-group	Explanations and justifications for decisions affecting the individual
Compliance costs	Administration and compliance costs, complexity of the tax system	Efficiency, service versus costs for the group	Efficiency, service versus costs for the individual
Retributive justice in tax research			
Penalties	Severity of penalties, distribution penalties for different offences, quality of penalties	Appropriateness of penalty for in-group (relative to offence, others)	Appropriateness of penalty for individual (relative to the offence, others)
Audits	Rigidity or inconsiderateness of audits in general	Rigidity or inconsiderateness of audit for in-group case	Rigidity or inconsiderateness of audit for individual case

Source: Wenzel (2003: p 49)

Table 3.1: Distributive, Procedural, and retributive justices by individual, group, and Society.

Although, the perceived fairness of tax systems is deemed to be of significance in improving the individual's tax compliance, further in-depth discussion and examination of the direct relationships between the distributive, restorative, retributive and the individual's tax compliance are beyond the scope of this study.

According to Feld and Frey (2002), the interaction between the tax authorities and taxpayers could be modelled as an implicit relationship or as a 'psychological tax contract'. For instance, states and their citizens have to build up a fiscal relationship according to a psychological tax contract that determines the future fiscal exchange between tax authorities and citizens. In this context, the psychological tax contract goes beyond the normal deterrence theory that explains tax compliance as solely as a deterrence system, and explains it as the relationship developed between taxpayers and governments; which is influenced by government policy (how tax revenues are spent), tax authorities' behaviour (the treatment of taxpayers by tax authorities), and political institutions (political procedure), all of which in turn affect tax morale/tax compliance (Feld and Frey, 2002). This contract is basically based upon a mutual agreement that tax authorities are supposed to treat taxpayers respectfully, as if they declare their true income honestly, and taxpayers are supposed to honestly report their true income to tax authorities. Positive actions³⁰ by the state attempt to generate a positive reaction from taxpayers, enhance the commitment to the fiscal system and raise the compliance level (Smith and Stalans, 1991). In addition, evidence was found that positive rewards (such as a good/free public services) for honest taxpayer behaviour, can lead to increasing the compliance level (Smith and Stalans, 1991).

Thus, the interaction between government and taxpayers could be categorised as positive actions (exchange fairness) from the government toward taxpayers (reward system), trust in the government and legal system, and treatment of taxpayers by the fiscal authorities (horizontal fairness). There are discussed further as follows.

³⁰ Offering honest taxpayers advantages in accessing public services would likely induce their tax morale more than providing money (Feld and Frey, 2007).

Reward System (Public services)

Alm (1991) stressed that taxpayers pay more taxes and comply honestly in response to receiving compensation for their tax payments. Indeed, major studies recently have agreed that tax morale is a function of a fiscal exchange between taxpayers and tax authorities where taxpayers receive public services for their tax payments (Alm, 1991; Smith and Stalans, 1991; Alm et al., 1992; Alm et al., 1992; Feld and Frey, 2002; Güth et al., 2005; Feld and Frey, 2007; McKerchar et al., 2012). Theoretically, taxpayers' dissatisfaction with the provision of public goods provided by government (exchange fairness) would incline them more to engage in tax evasion behaviours (Hofmann et al., 2008). Empirically, as governments provide a rewards system and public services in exchange for tax payments, more compliance behaviour will be observed (Feld and Frey, 2007). Repeatedly, Alm et al. (1992) showed that introducing public services led to augmenting the compliance level in his experiments. In a standard model of tax evasion, using just a punishment system and increasing tax rates and fines creates a high burden for taxpayers and drive taxpayers toward non-compliance behaviour. Those actions by the government can be taken as moving away from a restorative fairness as they are one sided actions that fail to take into account the other side (taxpayers' community). Hence, following a rewards system along with a deterrence system would change the taxpayers' perception in favour of paying taxes and improve compliance (Feld and Frey, 2007).

Trust in government and fiscal authorities

Revisiting the concept of the 'psychological tax contract', in order to maintain this contract between taxpayers and the government, the latter is requested to act positively by treating a taxpayer respectfully; ensuring the fairness of the fiscal system (horizontal and vertical fairness), motivating taxpayers with public services and building a trust atmosphere, while utilising also the negative actions (deterrence system) to prevent any potential breach of this contract (Feld and Frey, 2002). The rewards system (positive actions) needs to be interpreted in a broader sense going beyond the absolute exchange of tax payments with public services (exchange fairness). Feld and Frey (2007) argued that individuals are willing to accurately declare their true income even without receiving an equivalent value of public services to their tax payments as long as

other factors such as tax authority are felt to be fair, legitimate and trustworthy as part of ‘exchange fairness’ (Torgler, 2004; Feld and Frey, 2007). Torgler (2004) affirmed the previous argument and added that building trust in governments could be an alternative system to the deterrence system, which would have the great advantage of assurance that there is no crowded out effect on tax morale, such as that which may be seen with a rewards system. In this respect, it was pointed out that the likelihood to enhance or maintain compliance is higher by providing reassurance by the government (Torgler and Murphy, 2005). In other words, “*the psychological contract is based on a relationship of trust*” (Feld and Frey, 2002 : p 97).

The treatment of taxpayers by the tax authorities

In order to better understand the important role of how fiscal authorities treat taxpayers, Feld and Frey (2007: p 107) draw an interesting scenario;

“If you can purchase a product from two different suppliers, would you choose the one that is more friendly and respectful when treating customers? The answer would be yes, providing the price differential was not too high. In a similar fashion, the way the tax office treats taxpayers plays a role.”

Feld and Frey (2002) found empirical evidence in Switzerland showing that as long as tax authorities treat taxpayers in a respectful manner, the latter holds up their part of the psychological tax contract. Interestingly, Frey and Feld (2002) distinguished between two different elements of respectful treatment. The first treatment is that when auditors investigate taxpayers’ accounts; it has to be transparent and clear as any arbitrary procedure will cause taxpayers to feel hopeless and suspicious. The second treatment is the manner with which tax officials treat taxpayers; it must be in a direct personal fashion where taxpayers are not treated as inferiors, rather, they are treated respectfully. Interestingly, Frey and Feld (2002) challenged other studies in the field and argued that administrative costs are not just audit costs. Rather, consideration should be given to how tax officials treat taxpayers can have a serious impact on the perception of the tax system which in turn affects the individuals’ tax morale so their willingness to pay taxes decline, which therefore increases the costs of collecting taxes and increase tax evasion. Hence, the optimal approach to minimise tax costs (minimise evasion) is by maximising the respectful treatment of taxpayers. In addition, friendly and respectful treatment of taxpayers by fiscal authorities in auditing processes enhances tax morale (Feld and Frey,

2007). In cases where tax authorities treat taxpayers as inferiors or with disrespect, it could be considered as a breach of the psychological tax contract and taxpayers would have an argument to dishonour their part of the contract and consider tax evasion as an act of revenge (Feld and Frey, 2007). So, in order to avoid any conflict that will lead to breach the psychological tax contract, revenue authorities need to: avoid any earlier suspicion of taxpayers without a full investigation, encourage respectful treatment, and treat taxpayers as partners.

3. 5. Chapter Summary

This chapter has reviewed the bodies of literature associated with the concepts and variables that are the focus of this study. Specifically, it has reviewed the conceptual and empirical research on tax compliance. The first section has focused on defining the concept of tax compliance, followed by reviewing the three schools of thought on the motivation for tax compliance; that is, the deterrence view, social psychology view, and fiscal psychology view. Consistent with the objectives of this thesis, it then focused on the social psychology school of thought. The third section of this chapter focused on tax compliance determinants. It discussed the moral agent characteristics such as personal norms, religion, and socio-economic demographics. The decisive role of personal norms and religion on the tax compliance level of taxpayers was illustrated based on the body of literature on those two factors. Following that, the focus was on the social, cultural, and environmental characteristics. In particular, it has reviewed the role of social and cultural environment factors on the taxpayers' decision to comply. This was followed by a reference to the relatively recent body of literature on the impact of the interaction of the taxpayers with organisational institutions such as tax authorities and the government. The next chapter will develop a conceptual model integrating the moral agent characteristics, environmental characteristics, and issue characteristics in tax compliance decision, and will generate testable hypotheses based on the research synthesis model.

Chapter 4: Development of Research Objectives and Conceptual Model

4. 1. Introduction

The previous three chapters outlined the motivations behind the study (chapter 1), identified the conceptualisation context (chapter 2) and reviewed the focal literature related to the study's topic (chapter 3). This chapter builds on the gaps in the literature that were acknowledged in the previous chapter, and applies the contextual setting to present the conceptual model, develop the research objectives, and generates research hypotheses that will be tested in the Findings Chapter. Building on the contextual backgrounds, this chapter will develop the conceptual model labelled as 'The research synthesis model'. This conceptual model will consist of two models: the well-established framework of the ethical decision-making 'EDM' (Rest and Barnett, 1986) and the issue-contingent model (Jones, 1991). The research synthesis model will also include the moral agent and environmental characteristics and seeks to provide evidence of their role in the tax compliance behaviour. The main focus of this chapter is to identify the relationships the three characteristics³¹ are hypothesised to have with the three stages³² of EDM.

Section 4.2 presents the research objectives and the conceptual model of the research. Then a detailed discussion of each of the four objectives of the study is provided in Section 4.2.1 to Section 4.2.4. The empirical schema that illustrates the relationships between the research variables is presented in Section 4.3. Finally, Section 4.4 present a brief summary of the chapter.

4. 2. Research Objectives and the Conceptual Model

The theoretical perspectives of this research are based on two bodies of literature. The first perspective arises from the EDM literature (Chapter 2). It is concerned with the process the individual applies when he/she faces an ethical situation (section 2.3). It also discusses the

³¹ Issue, moral agents, and environmental characteristics.

³² Ethical recognition, ethical evaluation, and ethical intention.

factors that have the potential to affect this process, which are grouped around their nature, issue characteristics (Section 2.4), moral agent and environmental characteristics (Section 2.5).

Jones (1991) argued that the issue's characteristics will have a potential impact on the EDM stages and other scholars from psychology and sociology claimed that moral agent and environmental characteristics also have a significant impact on EDM stages (Hunt and Vitell, 1986; Trevino, 1986; Ajzen, 1991; Henderson and Kaplan, 2005; Torgler and Schneider, 2009).

The second perspective arises from the tax compliance literature, in particular, from the socio-psychology view of tax compliance (Section 3.2.2). This view claims that tax compliance decisions are not just a matter of deterrence systems (Section 3.2.1), but there are other factors which, on top of the punitive systems, are impacting the compliance decision of taxpayers. For instance: personal norms (Section 3.3.1.1); social norms (Section 3.3.2.1); and the relationships between the taxpayers and tax organisations (Section 3.3.2.2). So, in order to accurately predict the compliance level, psychological factors and other factors need to be examined.

To facilitate and structure the presentation of the research conceptual model and generated research hypotheses, this study will address four separate objectives, each of which is outlined in the following subsections.

4. 2. 1. The Process of Tax Compliance Decisions

Within the tax compliance literature, there is a lack of empirical studies that fully clarify the mechanisms or the processes through which taxpayers form their tax compliance decision (Henderson and Kaplan, 2005). Understanding the process of tax compliance decision-making is considered to be the starting point to determine the factors that have the potential to impact this process (tax compliance decision).

Therefore, the first objective is stated as follows:

'To examine the process by which taxpayers make an ethical decision and engage in tax compliance behaviour.'

In order to achieve the first objective of this study, the current research adopted the EDM process of Rest and Barnett (1986). This process consists of four stages which are collectively called the four stages of Rest and Barnett's (1986) model, or the four stages of EDM process whereby a taxpayer must: recognise the moral dilemma of tax compliance decision 'ethical recognition';

assess tax reporting choices ‘ethical evaluation’; establish afterwards a moral intention towards tax reporting ‘ethical intention’; and act/pay a certain amount of taxes ‘ethical behaviour’ (see Section 2.3).

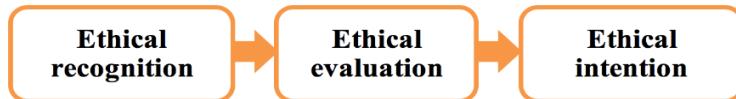


Figure 4.1: The Three Stages of EDM

In tax compliance and tax moral literature, most attention has been paid only to the concept of ethical evaluations and ethical intentions as the basis for EDM (Kaplan et al., 1997; Henderson and Kaplan, 2005). Following the suggestions of the EDM literature such as Rest and Barnett (1986) and Jones (1991), this study claims that ethical evaluation and intentions, while important, are neither the most significant nor the most exclusive stages of EDM process. Hence, ethical recognition as a distinct stage is also included in the framework to investigate the process of tax compliance decision (on top of ethical evaluation and intention). Although these stages are arranged logically, they are not in a fixed order. Each stage is conceptually distinct, in a sense that success in one stage does not essentially imply success in the following or any other stage (Rest and Barnett, 1986). For example, a taxpayer will establish an ethical intention to report a certain amount (moral intention stage) and pay completely different amount than the intended amount (tax behaviour), or they might judge a tax compliance opportunity (moral judgment) and act on it directly.

Corresponding to the relationships shown in Rest framework (figure 4.1), the following section highlights the rationality of these relationships (hypotheses).

Generation of hypotheses related to the first objective

The EDM model of Rest has been extensively studied in the literature. It has been the basis of several frameworks from different disciplines such as marketing, psychology, and management (Hunt and Vitell, 1986; Dubinsky and Loken, 1989; Ferrell et al., 1989; Ajzen, 1991; Lincoln and Holmes, 2011). While there is consistent evidence of the effect of ethical recognition on ethical intention (Singhapakdi, 1999; Singhapakdi et al., 1999; Singhapakdi et al., 2000; Haines et al., 2008), little evidence was found for the relationship between ethical recognition and

ethical evaluation (Singhapakdi et al., 1996). For instance, Chan and Leung (2006) found no significant relationship between ethical recognition and ethical evaluation among accounting students. Valentine and Fleischman (2003) reached the same conclusion of no relationship between the two stages. The current study will attempt to provide some empirical evidence for the Rest's propositions, in particular, the effect of ethical recognition on ethical evaluation. The hypotheses concerning the first objective of this study are based on the theoretical premise that an increase in perceptions that a situation involves an ethical issue will increase the probability to judge this particular situation as a unethical ' H_1 ', and will have a direct³³ effect on the way taxpayers establish their intention to behave in this situation ' H_3 ' (Rest and Barnett, 1986). While evaluating the situation to be unethical will have an impact on the intention of the taxpayers to behave similarly under the same circumstances ' H_2 '.

Hence, the expectations drawn from Rest's model are explicated as formal hypotheses below:

H_1 : Ethical recognition is positively related to ethical evaluation.

H_2 : Ethical evaluation is positively related to ethical intention.

H_3 : Ethical recognition is positively related to ethical intention.

Alternative H_3 : Ethical recognition is indirectly related to ethical intentions through ethical evaluation.

Illustrating the process through which ethical decisions³⁴ are made (1st objective) is the initial step which leads to determining the factors affecting this process (other objectives).

4. 2. 2. The Impact of Moral Intensity on Tax Compliance Decisions

According to Loe et al. (2013), Jones (1991) significantly contributed to the body of literature by synthesising the existing models and identifying an overlooked component in the body of theory: the 'moral intensity'. Jones claimed that the actual content of the issue itself would affect the EDM process. Since its introduction by Jones (1991), the components of moral intensity have been the subject of several published empirical studies in different disciplines (O'Fallon and Butterfield, 2005; Craft, 2013; Loe et al., 2013). To the best of the author's knowledge, moral intensity as a distinct concept has not been studied in the tax compliance field. Therefore, adding

³³ The alternative hypothesis is the indirect effect of ethical recognition on ethical intention through ethical evaluation.

³⁴ Tax compliance is considered to be one of these ethical decisions.

the issue-contingent component into a framework that investigates tax compliance behaviour is considered to be innovative in the current tax compliance area. It has the potential to offer a better understanding of the tax compliance behaviour by shedding some light on factors theoretically proven to have the ability to shape EDM of the moral agent. The second objective of the current research is, therefore:

'To examine the effect of issue characteristics on ethical decision-making in relation to tax compliance.'

Building upon Rest's model, Jones argued that issues with a high moral intensity are more likely to be recognised as ethical issues, to stimulate more sophisticated ethical judgements, to lead to the formation of ethical intentions, and to result in ethical behaviours (section 2.4).

Most empirical studies from different disciplines showed a significant relationship between moral intensity dimensions and the EDM's stages. For instance, Singhapakdi et al. (1996) showed an initial evidence that supports Jones' (1991) framework. Both Frey (2000) and Barnett (2001) found some evidence in favour of the importance of issue-specific variables in the EDM. However, they argued that moral intensity dimensions might load onto a smaller number of factors instead of the six dimensions³⁵. Indeed, several studies in the literature acknowledge the fact that some dimensions of moral intensity mattered more than others such as the magnitude of consequences and social consensus (Morris and McDonald, 1995; Robin et al., 1996).

For instance, in a study that examined the issue-contingent among more than 300 marketing professionals, Barnett and Valentine (2004) showed that two dimensions of moral intensity matter more than others when it comes to shaping the four stages of EDM process (magnitude of consequences and social consensus). Similarly, Harrington (1997) tried to demonstrate the effects of issue-contingent characteristics on two components of EDM (ethical judgment and intentions). His results showed the large effects of two characteristics of moral intensity, social consensus and magnitude of consequences, on both stages of EDM process. Moreover, Singer and Singer (1997) examined the effect of moral intensity on ethical judgment by using a scenarios-based technique with undergraduate students in New Zealand. They found that two of the moral intensity characteristics (perceived magnitude of consequences and social consensus) consistently impacted moral judgment. Furthermore, Frey (2000) reported results of a questionnaire-based research investigating the effects of moral intensity on decision making in a

³⁵ A full description of the six dimensions of moral intensity can be found in section 2.4.

New Zealand business context. The results supported the previous research by affirming the importance of moral intensity in general, and that of the magnitude of consequences and social consensus particularly in the perception of a moral dilemma. Frey (2000) argued that the three dimensions - the immediacy of effect; proximity and concentration of effects - were found to be of lesser importance than others.

According to Jones (1991: p 378), the concentration of effect was included just “*for the sake of completeness*” and may not be a necessary element of moral intensity. Also, in the context of taxation, the temporal immediacy and the proximity of the compliance decision is unknown or hard to track due to the complexity of the tax system (it is operationally impossible to measure it). From theoretical perspective, it is impossible to incorporate into one model all the factors that might have the potential to affect the ethical decision-making in one model due to different reasons. For instance, it is hard to differentiate the effect of each factor from another, especially, when these factors are highly correlated among themselves.

Therefore, based on theoretical and operational perspectives and following the empirical studies in the literature (mentioned above), this study will include only the dimensions of moral intensity that have extensively shown consistent evidence of their strong effects on the EDM process (Morris and McDonald, 1995; Flannery and May, 2000; Craft, 2013) and are operationally possible to measure and capture these dimensions in a tax compliance context. The dimensions that will be included in this study are: (1) the magnitude of consequences; (2) social consensus; and (3) the probability of effects. The process by which issue characteristics impact the tax compliance behaviour is explained by the issue-contingent model of Jones. As figure 4.2 illustrates, the most dominant dimensions of moral intensity are included in this study (magnitude of consequences, social consensus, and the probability of effects), along with the first three stages of Rest (ethical recognition, evaluation, and intention).

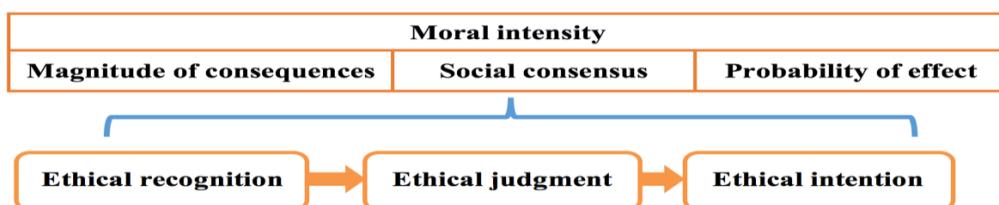


Figure 4.2: The Issue-Contingent Model

Corresponding to the relationships shown in the framework above, the following sections highlight the rationality of these relationships (hypotheses).

Relationship between moral intensity's dimensions and ethical recognition

According to Jones's (1991) moral intensity framework, high moral intensity situations should be more likely to be perceived as involving a moral dilemma than other situations with lower moral intensity. Jones (1991) justified it by arguing that moral intensity dimensions make the situation more likely to be recognised as an ethical dilemma, by increasing the salience and vividness of the issue. For instance, an issue will be salient and more vivid when it has serious consequences and/or the consequences have great chance to occur, and/or the social consensus defines it as wrong.

Many empirical studies addressed the relationship between moral intensity's dimensions and ethical recognition. For instance, Singhapakdi et al. (1996) were among the first scholars to conduct a study that attempted to investigate the impact of the moral intensity on ethical recognition. They found that the six dimensions of moral intensity were related to the ethical perception. Also, Marshall and Dewe (1997) presented some exploratory analysis and found that moral intensity plays a role in the perception of ethical problems.

In a cross-cultural³⁶ study conducted by Davis et al. (1998), within the human resources management context, evidence was found that moral intensity dimensions³⁷ have a significant impact on the way individuals perceived moral problems. Similarly, Chia and Lim (2000) asserted the significant impact of social consensus, magnitude of consequences, and temporal immediacy on the sensitivity of a moral issue, however, a marginal effect was found for the proximity and probability of effect, while no evidence was found for the concentration of effect.

Dukerich et al. (2000) examined the way managers describe both moral and non-moral problems. They concluded that managers significantly distinguished between the two types of problems using the moral intensity's components. Also, Mencl and May (2009) explored the relationship between the magnitude of consequences and various types of proximity (physical, psychological and social) on the EDM process. They found evidence supporting the significant effect that the magnitude of consequences and proximity have in shaping moral awareness. Ho (2010)

³⁶ America, Eastern European and Indonesia.

³⁷ Just three dimensions were included; social consensus; personal proximity and magnitude of consequences.

conducted an interviews-based study and found that the extent of perception of an ethical issue depends on the characteristics of the issue and the context.

Overall, the discussion above on the impact of moral intensity's dimensions on ethical recognition seems to support the original proposition of Jones (1991) in his model, and the current research hypothesis:

H4: There is a positive relationship between moral intensity and ethical recognition.

Relationship between moral intensity's dimensions and ethical evaluation

Again, evidence from empirical studies found that the moral intensity of a situation significantly influences the stage of evaluating the issue by the moral agent (Jones, 1991; Singhapakdi et al., 1996; Singhapakdi et al., 1999; Barnett, 2001; May and Pauli, 2002). In fact, when the moral intensity is high, moral agents are more likely to devote more cognitive effort in establishing their ethical judgements; while in lower moral intensity situations they should elicit less ethical reasoning into the matter. For instance, high magnitude of consequences, probability of effect, and social consensus should be associated with more sophisticated ethical reasoning of the issue (Hembroff, 1987).

Specifically, the perceived seriousness of the harmful consequences of an issue is more likely to influence the reasoning stage of the moral agent. Furthermore, individuals are highly motivated to elicit more reasoning efforts into an issue that has serious consequences and high probability of effects. Hembroff (1987) found that individuals seriously evaluated crimes that produced greater injury or economic loss to victims than crimes that have less injury or loss. Regarding social consensus, strong social norms draw more attention to the issue, which results in reducing the level of ambiguity that a decision maker may face when he evaluates the issue (Jones, 1991).

Many empirical studies support the relationship between moral intensity's dimensions and ethical evaluation. For instance, Morris and McDonald (1995) were among the first researchers who attempted to validate the proposition that moral intensity and EDM are highly correlated. They studied the impact of moral intensity and its dimensions on ethical judgment. They used a student sample and concluded that the perceived magnitude of consequences and social consensus were significantly related to the ethical evaluation. Similarly, Robin et al. (1996) found that the perceived importance of the ethical issue substantially influenced the individual's

judgment and their intention to behave either ethically or unethically. Results from Singhapakdi et al. (1999) showed a consistent evidence of direct and indirect effects of perceived moral intensity on ethical evaluation. All in all, it is reasonable to develop the following hypothesis:

H5: There is a positive relationship between moral intensity and ethical evaluation.

Relationship between moral intensity's dimensions and ethical intention

According to Jones (1991), moral intensity should impact the manner in which individuals establish their intentions toward an ethical issue. If the issue has a high magnitude of consequences, the probability of effect, and social consensus, the moral agent is more likely to form the intention to behave morally in this specific issue. According to planned behaviour theory (Ajzen, 1991), individuals tend (intention) to act in a manner consistent with their attitudes, behaviour norms, and subjective norms. Subjective norms, as was described by Ajzen (1991), are the individual's perception about whether specific individuals or groups approve or disapprove of their behaviour on a specific issue. Therefore, it is reasonable to expect the potential role of social consensus on ethical intention. Generally, a strong social consensus will clear the ambiguity of the issue which implies that the moral agent will be aware of the magnitude of consequences and probability of effect of their action.

Again, consistent evidence is reported in the literature on the relationship between moral intensity's dimensions and ethical intention. For instance, Singhapakdi et al. (1999) showed evidence of direct and indirect effects of perceived moral intensity on ethical intention. Also, both Frey (2000) and Barnett (2001) exhibited similar evidence on the impact of the moral intensity's characteristics on shaping all stages of EDM process. In an accounting context, Leitsch (2004) conducted an empirical study that suggested that the perception of the components of moral intensity contributes to a great extent to the four stages of EDM. Moreover, he conducted another empirical study in 2006 where he examined the importance of the underlying dimensions of moral issues in the EDM's process of accounting students in a small business college in the US. He classified the moral intensity into two dimensions: 'perceived corporate concern' and 'perceived involvement effect'. He found that the dimensions of moral intensity were a significant predictor of ethical intention. Hence, it is reasonable to propose that:

H6: There is a positive relationship between moral intensity and ethical intention.

4. 2. 3. The Conceptual Model of the Research

The tax compliance decision is not a simple or routine matter for most of the taxpayers. Instead, it is deemed to be a complex decision-making process that needs to incorporate several internal and external factors to arrive at the actual behaviour. In response to the complexity of tax compliance behaviour, this study aims to provide a more comprehensive model³⁸ that incorporates different factors (issue, moral agent, and environmental characteristics) in order to better understand tax compliance decision. Hence, the third objective of this research is:

'To examine the effect of the issue, moral agent, and environmental characteristics on ethical decision-making in relation to tax compliance.'

The previous section aimed to detect the relationships between moral intensity's dimensions (issue characteristics) and EDM stages. This section will proceed to add two other types of characteristics to the issue-contingent model of Jones (1991): moral agent and environmental characteristics. The majority of ethics frameworks incorporate the moral agent characteristics, such as: personal norms, socio-economic demographics, and religion, along with environmental characteristics such as culture, and social context (Ferrell and Gresham, 1985; Hunt and Vitell, 1986; Trevino, 1986; Dubinsky and Loken, 1989; Ferrell et al., 1989).

The model to be used here is a research synthesis model developed out of mainly two frameworks: (1) the EDM model of Rest (1986), and (2) the issue-contingent model of Jones (1991). Although the framework is grounded in psychology and social psychology, it also includes components of moral philosophy and applied ethics (Ferrell and Gresham, 1985; Rest and Barnett, 1986; Trevino, 1986; Dubinsky and Loken, 1989; Ferrell et al., 1989; Jones, 1991). In fact, the research synthesis model is necessary to account for the different findings from each discipline and field³⁹. It combines factors that were theorised to have an impact on EDM process such as moral intensity dimensions (see Section 2.4); and factors that tax compliance literature assumed to have a significant effect on shaping the taxpayer compliance decision, such as personal, socio-economic demographics, and environmental characteristics (see Section 3.4.1 and section 3.4.2).

³⁸ The conceptual model of this study is referred hereafter by 'research synthesis model'.

³⁹ For instance, in tax compliance context, different schools of thought were found the literature that explain the taxpayers' motivation to comply (i.e., economic view, psychology view, and sociology view of tax compliance).

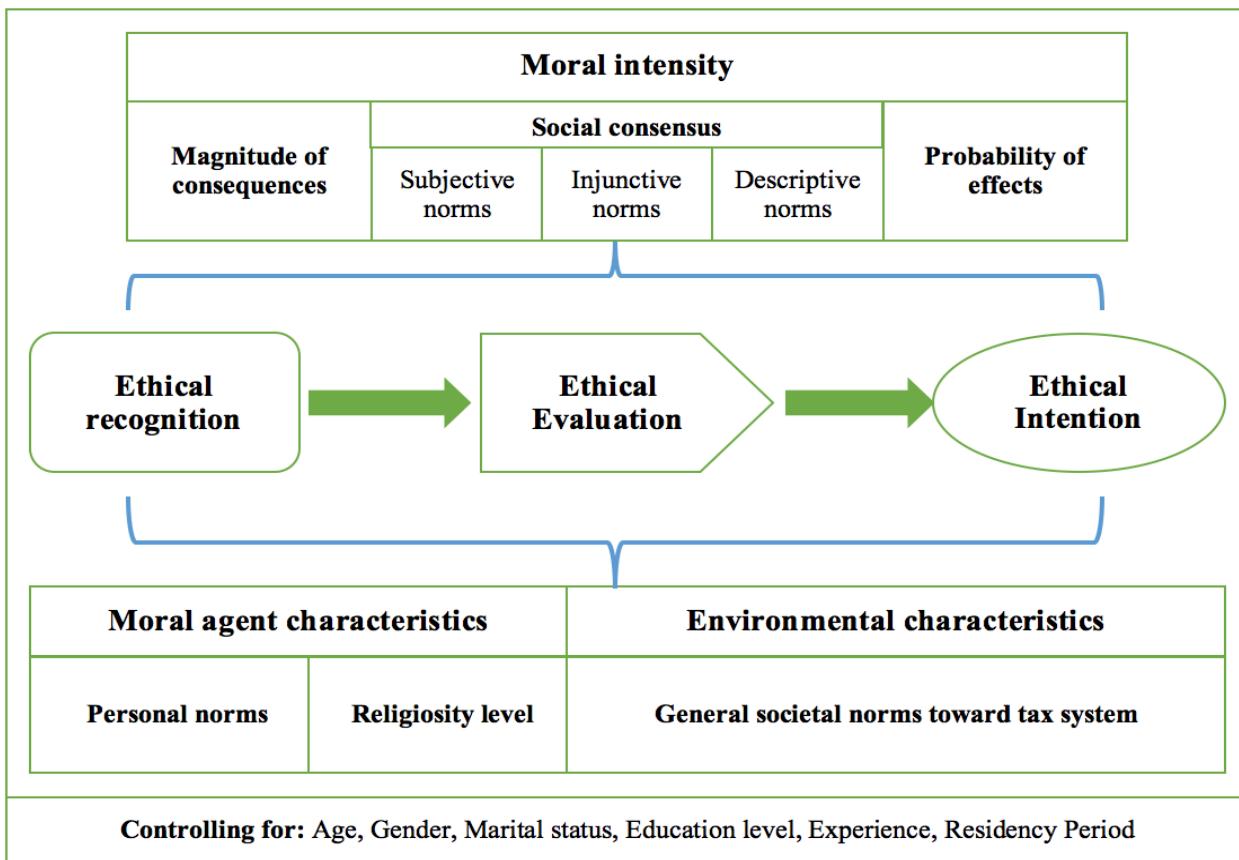


Figure 4.3: The Research Synthesis Model.

Moral agent characteristics in this study refer to three concepts: personal norms, religiosity level, and socio-demographics factors. The socio-economic demographic factors will be used as control variables in this study, while personal norms will be considered as independent variables and religiosity level will be examined as a moderator variable.

Environment characteristics in this study encompass three societal norms⁴⁰ concerning general aspects of tax systems: social norms related to honestly reporting taxable income, social norms related to overstating tax deductions, and social norms related to paying taxes (see Section 5.6.3.4).

Corresponding to the relationships shown in the research synthesis framework, the following section highlights the rationality of these relationships (hypotheses).

⁴⁰ It is worth mentioning that these social norms are concern tax systems and are not related to specific tax situations adopted in this study.

Generation of hypotheses related to the third objective

Personal norms are proposed to directly/indirectly impact the three stages of EDM: moral recognition, evaluation, and intentions. As mentioned before, Ferrell and Gresham (1985: p 90) argued that “*evaluation or intention (or even thinking about an ethical dilemma) may be influenced by cognitive factors*”. Dubinsky and Loken (1989), based on the theory of reasoned action, highlighted the role of personal characteristics (specifically attitude) on the EDM’s process. According to planned behaviour theory (Ajzen, 1991), the moral intention is influenced by individual attitudes toward the behaviour, perceived behavioural control, and subjective norms. Attitudes are a function of the underlying personal belief regarding the outcomes of engaging in the behaviour. Ferrell et al. (1989: p 62) affirmed that “*all models consider individual moderators to be an important component of ethical decision making*”.

Empirically, many studies associated personal norms with ethical recognition (Chan and Leung, 2006; Reynolds, 2006; Ho, 2010); ethical evaluation (Ashkanasy et al., 2000; Fritzsche and Oz, 2007; Watson and Berkley, 2009); and ethical intention (Flannery and May, 2000; Beams et al., 2003; Buchan, 2005; Rabl and Kühlmann, 2008; Mencl and May, 2009; Marquardt, 2010).

Hence, the study tests the relationship between moral agent characteristics (personal norms) and the three stages of EDM.

In the course of making a compliance decision, a taxpayer will use their level of cognitive development and other individual characteristics, as well as environmental characteristics. Trevino (1986) claimed, “*Moral action takes place in social context and can be influenced heavily by situational variables*”. Thus, ethical/unethical behaviour in a given situation is not simply a result of individual characteristics, but it is a product of an interaction between the individual and situational/environment characteristics (Trevino, 1986). So, it is reasonable to hypothesise that environment characteristics will have a direct impact on the three stages of tax compliance decision process, which are recognition, evaluation, and intention, and an indirect impact on moral intention through moral evaluation.

Recalling the previous section, issue’s characteristics were also hypothesised to have a direct/indirect impact on the three stages of EDM. Therefore, the set hypotheses for this objective of the current research is as follows:

H7: There is a positive relationship between ‘issue, moral agents, and environmental characteristics’ and ethical recognition.

High level of moral intensity’s dimensions (POE, MC, and SC); personal norms (PN); and societal norms related to the general aspects of tax systems (RT, OE, DNG), were expected to make it more likely that participants would recognise the described behaviour as an ethical issue.

H8: There is a positive relationship between ‘issue, moral agents, and environmental characteristics’ and ethical evaluation.

High level of moral intensity’s dimensions (POE, MC, and SC); personal norms (PN); and societal norms related to the general aspects of tax systems (RT, OE, DNG), were expected to make it more likely that participants would judge the behaviour as unethical.

H9: There is a positive relationship between ‘issue, moral agents, and environmental characteristics’ and ethical intention.

High level of moral intensity’s dimensions (POE, MC, and SC); personal norms (PN); and societal norms related to the general aspects of tax systems (RT, OE, DNG), were expected to make it more likely that participants would form intention to avoid behaving in a similar a manner to that described in the scenarios.

4. 2. 4. The Role of Religiosity Level in Tax Compliance Decisions

One of moral agent characteristics that is frequently associated with the ethical behaviour is religion. Religion is defined as a complex system of belief that provides individuals with standards to build on their motivation to behave in certain situations. Geyer and Baumeister (2005: p 425) suggest that in any given situation, religious beliefs will provide individuals with, “*Motivation, hope and comfort that can allow them to maintain virtuous behaviour*”. Furthermore, religion is argued to have the ability to, “*Reinforce the power of guilt for promoting pro-social behaviour*” due to the clear standards that religion supplies individuals which will allow them to recognise, judge and act on any given issues (Geyer and Baumeister, 2005 : p 428).

Theory of ethics that was developed by Hunt and Vitell (1986) pointed out the inclination of religion to precede moral decision-making. Geyer and Baumeister (2005: p 421) argued that “*Religion provides an array of compelling reasons for moral conduct*”, so religion logically and

theoretically affects the moral reasoning of an ethical issue (ethical evaluation), ethical recognition, and ethical intentions.

Throughout the literature, the empirical evidence is far from convincing. Several studies have documented a significant and positive relationship between religiosity and ethical behaviour (McNichols and Zimmerer, 1985; Singhapakdi et al., 2000; Ho, 2010), but many other have reported a rather weaker relationship. For instance, Hegarty and Sims (1979) found no significant relationship between religious value orientation and EDM. Kidwell et al. (1987) operationalised religiosity through church attendance, and they also reported no significant relationship between EDM and religiosity. While Clark and Dawson (1996) reported a negative relationship between religiosity and ethical behaviour.

From these mixed findings, it is clear that more empirical studies need to be conducted on this subject. Tittle and Welch (1983) argued that due to the different ways that religiosity was operationalised in the literature, mixed and contradictory findings have been reported. They emphasised the need for a better definition of the construct of religion in future studies. Furthermore, Weaver and Agle (2002) claimed that religiosity has the potential to impact the individual ethical decision processes by:

- (1) Providing a ‘moral guidance’ in situations where there is a lack of clarity, which leads, to clear the ambiguity of the issue which in turns will help the moral agent to be better aware of the magnitude of consequences, social consensus and probability of effect of his/her action (issue’s characteristics).
- (2) Providing a ‘supportive social network’ where there is an absence of integration within the society (environment’s characteristics)
- (3) Promising ‘reward’ for conformity either in this life or afterlife, which in turn fosters traits such as work ethic, honesty, and comply with tax system (moral agents’ characteristics).

Therefore, the last objective of the current study is:

‘To examine whether the impact of the issue, moral agent, and environment’s characteristics on ethical decision-making is moderated by the individual religiosity level.’

The aim of this section is to investigate how religiosity impacts the three stages of EDM, especially when there are empirical supports for the role of religiosity in shaping: ethical recognition (Singhapakdi et al., 2000; McCullough and Faught, 2005; Vitell et al., 2009; Ho, 2010); ethical evaluation (Wimalasiri et al., 1996; Tse and Au, 1997; Wagner and Sanders, 2001;

Razzaque and Hwee, 2002); and ethical intention (McNichols and Zimmerer, 1985; Singhapakdi et al., 2000; Kurpis et al., 2008). Based on the aforementioned considerations, the last of hypotheses are:

H10: There is a stronger positive relationship between three characteristics (issue, moral agents, and environment) and stages of ethical decision making for individuals with high religiosity compared to individuals with low religiosity.

4. 2. 5. Summary of Research Objectives

The ultimate objective of this study is to examine the tax compliance decision and the factors impacting this decision. The process of tax compliance decision follows a similar mechanism as any other ethical behaviour and it is well represented in the EDM's model of Rest (1986) '1st objective'. The characteristics of the issue itself are theoretically supposed to impact each of the EDM's stages and the second objective seeks to provide empirical evidence on this impact. The third objective develops a conceptual model that adds further two characteristics into the issue contingent model and seeks to provide empirical evidence on the impact of the three characteristics on the tax compliance decision. Finally, the last objective attempts to address the mixed findings on the role of religiosity level in tax compliance and provide empirical evidence on the moderation effect of religiosity level on the relationships between the three characteristics and the tax compliance decision stages. Figure 4.4 presents the integration of the four objectives of this study.

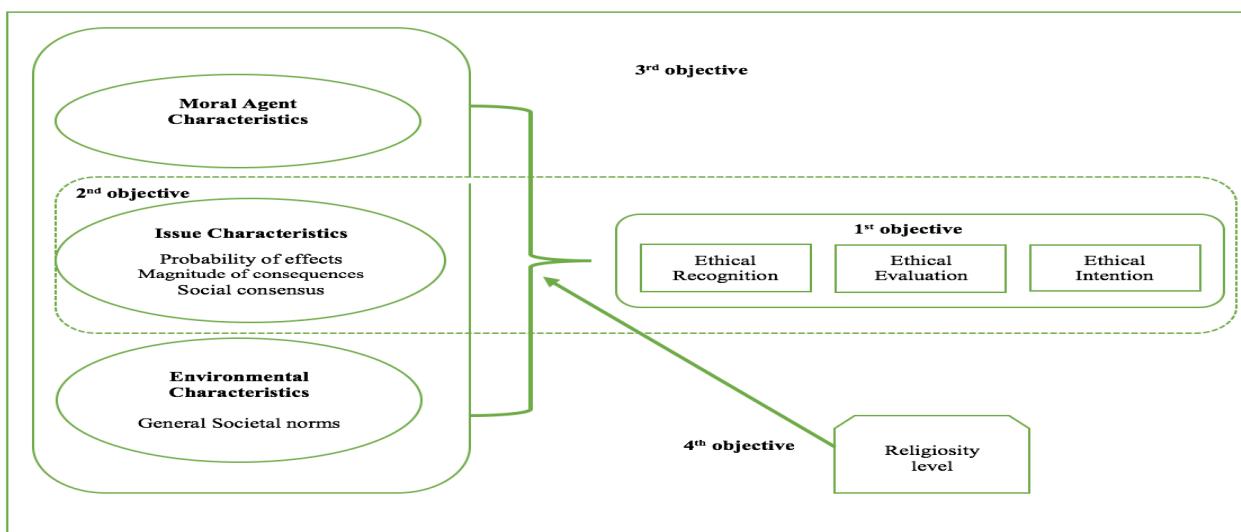


Figure 4.4: The Integration of the Four Objectives of the Study

4.3. Empirical Schema

The empirical schema that presents the mentioned hypotheses (the direct relationships) are presented in figure 4.5. Figure 4.5 illustrates the direct relationships that are proposed to exist between all of the issues, moral agents, and environment characteristics from one side, and the ethical decision-making stages on the other side. The first objective encompassed the first three hypotheses (H1, H2, and H3) and attempted to provide the base for the other objectives by illustrating the EDM's process of tax compliance decisions. The second objective attempts to link moral intensity's dimensions (issue's characteristics) with the three stages of EDM (H4, H5, and H6). The third objective attempts to integrate the first two objectives in one whole model by encompassing the EDM stages with the three types of characteristics that literature proposed to impact the EDM process (H7, H8, and H9). Finally, the last objective attempts to empirically support the role of religiosity in tax compliance decision (H10). The figure below illustrates the empirical schema (hypotheses) of this research:

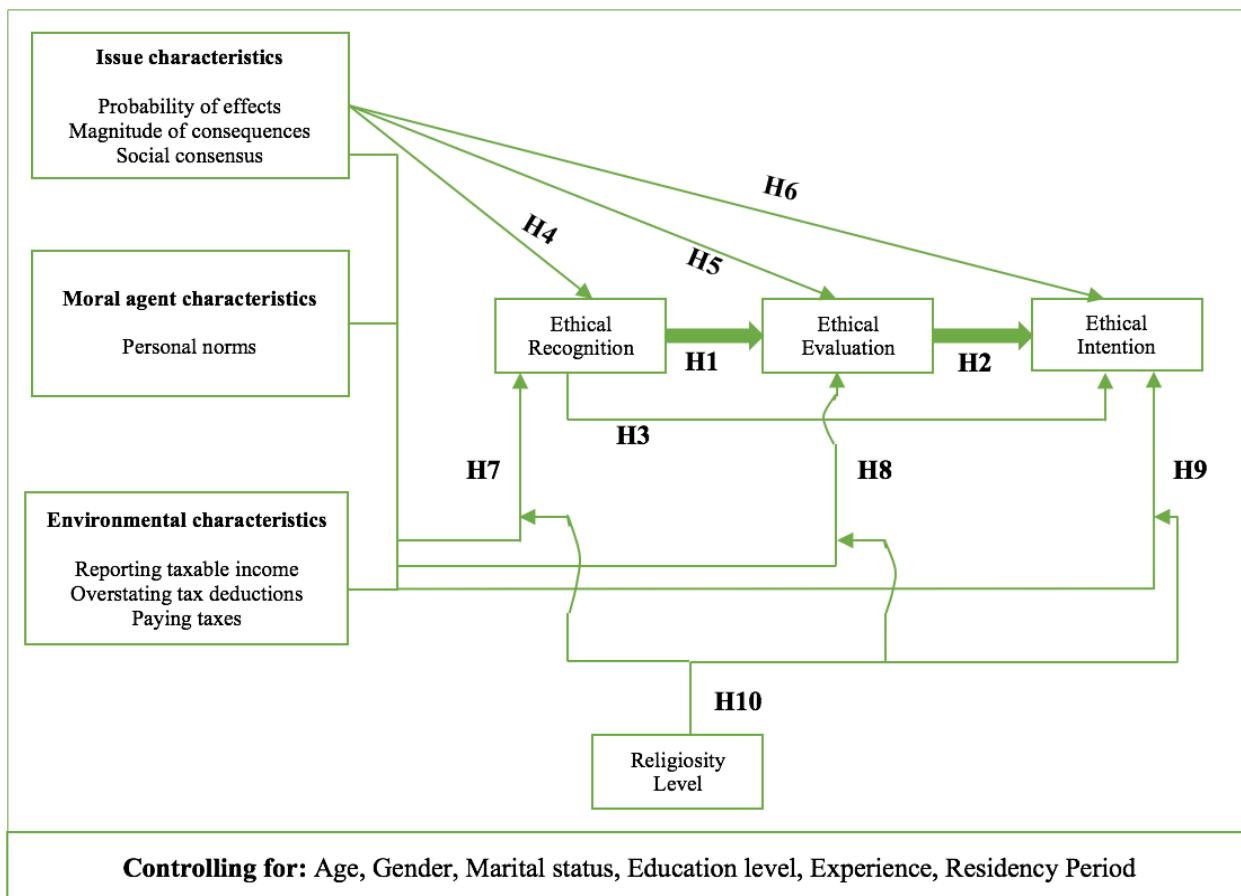


Figure 4.5: The Empirical Schema of the Research

4. 4. Chapter Summary

This chapter illustrated the conceptualisation upon which the current research is founded. It has established a conceptual framework (Research Synthesis model) built upon the theoretical perspectives of the ethical decision making's model (Rest and Barnett, 1986), and issue-contingent's model (Jones, 1991). To account for the different views⁴¹ in tax compliance, a research synthesis framework was developed that involves the three characteristics: issue, moral agents, and environmental characteristics. It also considers their role in the three stages of EDM: ethical recognition, ethical evaluation, and ethical intentions.

The ethical decision-making's model of Rest (1986) was adopted to examine the chain of reasoning (process) that taxpayers use when they face a tax compliance situation (1st objective). It then proceeded to develop several hypotheses that link the issue characteristics⁴² with the three EDM stages following the issue-contingent model (2nd objective). After validating the role of issue characteristics on the tax compliance decision, two further characteristics were included in the research synthesis model to examine their impact on the three EDM stages (3rd objective), that is, moral agents and environmental characteristics. The religiosity level of participants was considered as moderator variable which implies that the individual religiosity will affect the relationships between the three characteristics and the EDM stages by strengthening these relationships as religiosity level increases (4th objective).

Paths are drawn through hypothesised relationships between the three characteristics (issue, moral agents, and environment characteristics) and the tax compliance decision stages. These paths (hypotheses), as presented in the empirical schema, will be empirically tested in Chapter six. The next chapter will describe the methodology adopted in conducting the empirical analysis of this study.

⁴¹ Socio-psychology, economic, and fiscal psychology schools of thought.

⁴² The issue characteristics are: probability of effects; magnitude of consequences; and social consensus.

Chapter 5: Methodology

5. 1. Introduction

The four objectives of this research are: (1) to examine the process by which taxpayers make ethical decision and engage in tax compliance behaviour; (2) to examine the effect of issue characteristics on ethical decision-making in relation to tax compliance (3) to examine the effect of issue, moral agent, and environment characteristics on ethical decision-making in relation to tax compliance and (4) to examine whether the impact of three characteristics (issue, moral agent, and environment) on ethical decision-making is moderated by the individual religiosity level.

The previous chapter presented the theoretical framework underpinning the thesis and generated the hypotheses for empirical testing. This chapter sets out the research methodology and the research method adopted in this study. It also describes the statistical techniques employed, data analysis procedures and the order of operations to test the generated hypotheses.

This chapter is organised into seven sections. Section 2 provides a brief review of the philosophical approach of the research. Section 3 details the research instrument used and includes a comprehensive description of the way this instrument was developed and structured. Section 4 describes the sample selected and sampling method used. Section 5 outlines the empirical techniques used to analyse the data. Section 6 presents the pre-analysis which consists of four steps: ‘data screening’ (Section 6.1), ‘multivariate assumptions’ (Section 6.2), ‘exploratory factor analysis’ (Section 6.3), and ‘confirmatory factor analysis’ (Section 6.4). Finally, Section 7 presents the conclusion of this chapter.

5. 2. Philosophical Approach to the Research

5. 2. 1. Philosophical Assumptions

Research in social sciences and especially in accounting is established based on different philosophical assumptions. Before the researchers can start their journey of discovery, they have to clarify the assumptions they will adopt and then proceed on their journey. According to Morgan and Burrell (1979: p 1) “*All social scientists approach their subject via explicit or implicit assumptions about the nature of the social world and the way in which it may be investigated*”.

Therefore, to appropriately address the research question, the researcher has first to determine his/her position regarding certain aspects such as the nature of reality (i.e., ‘ontological assumption’), the method to capture the reality (i.e., ‘epistemological assumption’), and other assumptions. Those assumptions direct the approach that the researcher uses in investigating different phenomena (Morgan and Burrell, 1979; Tomkins and Groves, 1983; Chua, 1986; Creswell, 2012). Approaching the research question by different methodologies and assumptions would create different answers to the same question. Hence, there is no wrong answer for a particular research question since each answer reflects the application of different approaches and assumptions.

Morgan and Burrell (1979) provide a comprehensive scheme, which allows the researcher to determine his/her philosophical assumptions about the nature of social science and the nature of society. The scheme describes the four distinguished assumptions, and is summarised in the following figure:

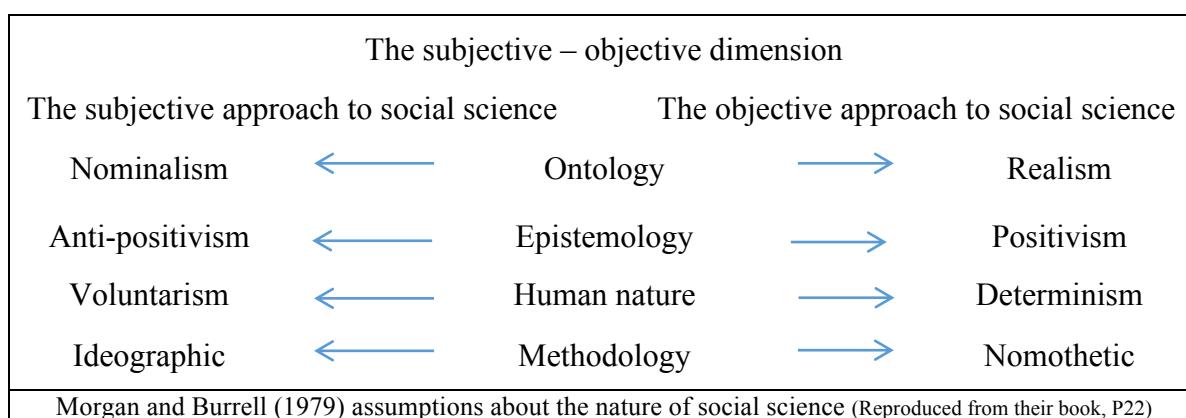


Figure 5.1: The Four Assumptions about Nature of Social Science

5. 2. 2. Research Paradigm

A paradigm could be referred to as the lens a researcher uses to view the reality and society. It could be also referred to as an implementation of specific assumptions and methods to address phenomena under investigation (Chua, 1986). Morgan and Burrell (1979: p 24) distinguished four paradigms: Functionalist, Interpretive, Radical Humanist, and Radical Structuralist. They claimed that “*each paradigm is like a map, it provides a tool for establishing where you are, where you have been and where is possible to go in future*”.

Combining the two assumptions (the objective – subjective approach) with the two other assumptions (Regulation – Radical change approach) generates the following four paradigms in social research:

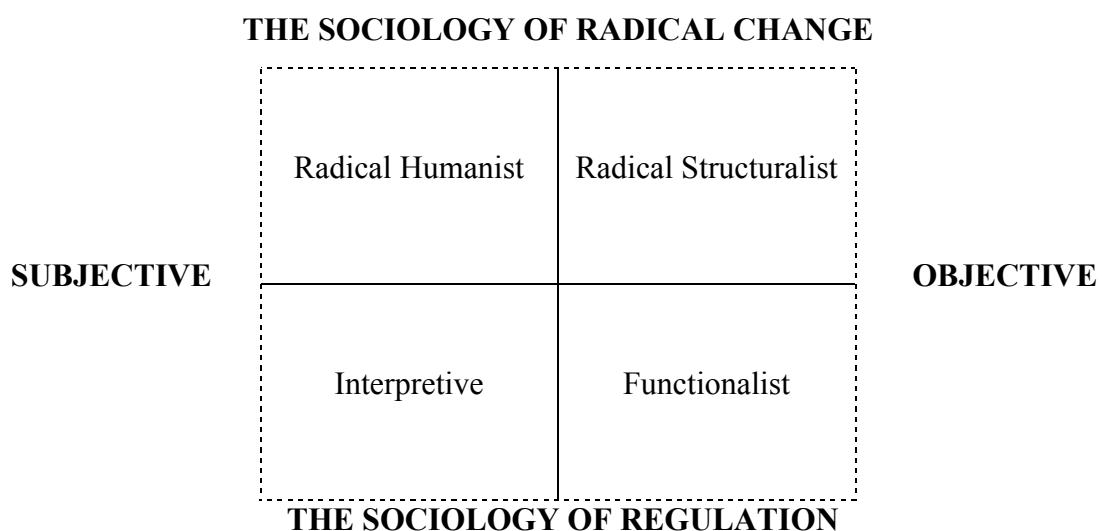


Figure 5.2: The Four Paradigms of Social Theory

Reproduced from Morgan and Burrell (1979)

The approach Morgan and Burrell (1979) used to define the four paradigms, and the social science assumptions have been heavily criticised by scholars. In particular, scholars claimed that there is no a ‘one-to-one mapping’ between the different social science assumptions (ontology, epistemology, etc.) and paradigms (functionalist, interpretive, etc.) and this has given rise to large criticism (Ahrens, 2008).

It is not the intention of this research to engage in such debate. The epistemology and ontology selected for this research were chosen based on the suitability of the research perspective for the objectives of the study. This research develops hypotheses, which are examined using data collected from a distributed questionnaire of a sizeable sample from a population of Muslim

communities in three different countries (Ireland, Canada and Scotland). This type of research design assumes that the reality can be objectively measured and is independently constructed outside the individual's consciousness. Meanwhile, the overall perspective of this research is to use a priori theories and frameworks, and establish hypotheses based on the theories, and test those hypotheses through empirical data. Hence, this study falls within the functionalist paradigm and is associated with the deductive research approach of the positivist paradigm.

5. 2. 3. Research Approach

The research questions and the desirable objectives are both important in selecting the most relevant research approach (Creswell, 2013). If the research is mainly concerned with testing a theory, the quantitative (deductive) approach would fit well in this type of research. If the research focuses more on theory development, then the qualitative (inductive) approach would be favoured. A significant number of tax compliance studies have been adopted the quantitative approach (Frey and Feld, 2002; Davis et al., 2003; Wenzel, 2004; Alm and Torgler, 2006; Feld and Frey, 2007; Lago-Peñas, 2010). This is attributable to the perceived sensitivity of tax matters and the lack of willingness by taxpayers to participate in any study that investigates their actual tax behaviour personally through qualitative methods such as interviews. Besides, taxpayers are hesitant to divulge their tax compliance information to outsiders face to face or by engaging with the researcher in a personal way. Nevertheless, the ultimate objectives of this study are to determine the chain of reasoning taxpayers use during the process of tax compliance reporting and the factors that have a significant impact on their attitudes and behaviour towards compliance with taxation.

These objectives are believed to be better achieved by adopting the quantitative approach. Therefore, the study used a quantitative tool (i.e., 'survey') to address the research questions and meet the research objectives.

5. 3. Research Instrument

Measuring compliance behaviour would seem to be a simple task to perform. However, it is very challenging to measure accurately something that by its nature every person wants to conceal, and at the same time, it is very problematic to control the myriad of factors that have the potential to impact on tax compliance decision-making. Hence, the key challenge for the academic researchers in this area is to find the appropriate method to use for their empirical studies. According to McKerchar (2010), selecting the right method to address the research questions will improve the quality of research.

Several research methods are available to the researcher embarking on a quantitative study. After considering the instruments that have been used in current ethical decision-making and tax compliance studies, there are numerous avenues for examining the behavioural decision of taxpayers aside from questionnaires, including the use of field data, experimental methods, and controlled field experiments.

To select the appropriate instrument for a study, two important selection criteria were considered: (1) the level of the reliability and validity showed in prior studies for the selected instrument; and (2) the ability of this instrument to measure the research variables.

Two instruments, widely used in the literature, showed high levels of reliability and validity in measuring the concepts which are the subject matter of this study, namely, surveys and experiments. The process of selecting surveys rather than experiments is discussed in the next section.

5. 3. 1. Purpose and Selection of the Research Instrument

Asking directly the taxpayers about their own past involvement in tax evasion or even their own compliance with tax law is not sufficient and may artificially produce an exaggerated set of results that will fail to match the actual compliance behaviour of the participants (Alm, 1991; Torgler, 2002; Bobek and Hatfield, 2003). Therefore, there is an emergent demand for an appropriate technique that could measure the actual compliance behaviour of taxpayers (McKerchar, 2010). One possibility is to design a questionnaire that contains hypothetical situations about tax compliance or tax evasion problems and ask the participants to assess the

action/behaviour in specific situations and the possibility of them to act/behave in a similar manner (Torgler, 2002). Alternatively, the experimental method could be a possibility where a controlled environment will be provided (offer real monetary rewards) and in which the participants engage in tax reporting situations (Wenzel and Taylor, 2004).

The choice between the two approaches is normally made on a theoretical basis and according to the objectives of the study.

Experiments have been heavily criticised in the literature. The most common criticism of experiments is that generally students are the typical subjects of the experiment (Torgler, 2002) and the results of the experiments are very sensitive to the specific experimental design (Alm et al., 2010). Alm et al. (2010: p 8) provided another criticism suggesting that *“It is also possible that subjects may modify their behaviour simply because they know that they are participating in an experiment, exhibiting more ‘obedience to authority’ and more ‘pro-social behaviour’ in the laboratory than in the naturally occurring world”*

Given the objectives of the research and the theoretical approach adopted, hypothetical-based questionnaire appeared to be the most appropriate method. The main concepts to be investigated and reported in the current study have been operationalized in prior research through a survey and revealed highly reliable results (Feld and Frey, 2002; Bobek and Hatfield, 2003; Orviska and Hudson, 2003; Wenzel, 2004; Torgler, 2005; Alm and Torgler, 2006; Richardson, 2006; Torgler, 2006; Blanhorne and Kaplan, 2008). Hence, this study will use a questionnaire that initially would be divided into five sections. The first section covers different hypothetical tax compliance scenarios, and the second section collects information about participants' backgrounds and attitudes. The third section deals with the Islamic taxation 'Al-Zakat', followed by a religiosity scale to measure the level of religiosity of the participants. The last section covered the general social norms toward the tax system.

5. 3. 2. Structure and Content of the Survey

The survey instrument was developed following a series of steps suggested by Dillman (2011) suggested:

- Step 1: Development of initial draft

- Step 2: Pretesting of the survey

- Step 3: Pilot testing of the survey

The next sub-sections describe each of these steps.

5. 3. 2. 1 Development of an Initial Draft

The first step in the process of developing a survey instrument for this research was the creation of an initial draft. This step was initiated by an extensive review⁴³ of the literature in tax compliance and ethical decision making pertinent to the objectives and the variables of interest to this research. Areas such as tax morale, tax behaviour, and moral intensity were particularly explored. The predominant instrument identified was scenario-based questionnaire (Singer and Singer, 1997; Wenzel, 2004; Henderson and Kaplan, 2005; Bobek et al., 2013). Most of the scales that were used in measuring the variables for this study were adopted from the current literature.

The first part of the survey consists of three scenarios. Those scenarios contained measures to capture variables such as personal norms, subjective norms, injunctive norms, and descriptive norms along with two dimensions of moral intensity (magnitude of consequences and probability of effects) and the three stages of ethical decision making (ethical recognition, ethical evaluation, and ethical intentions). The second part covered the socio-demographics measurements. It aimed at collecting general information on the participants. While the third part contained measurements related to the Islamic taxation (for the Muslim participants), the fourth part was designed to measure the religiosity level of the respondents. Finally, the last part was initially adopted from the literature to capture the four components of social norms.

In the following sub-section, the structure and contents of the survey are covered along with the source of each measurement items (questions) in the survey.

Research Scenarios

Following the works of Burns and Kiecker (1995), Henderson and Kaplan (2005), Bobek et al. (2013) and Reidenbach and Robin (1990), the first section of the questionnaire ‘the hypothetical tax-compliance scenarios’ was developed. According to Hunt and Vitell (1986), the use of the scenario technique is well established in ethical studies and is believed that it would be a suitable vehicle for the current research. Using tax compliance scenarios allow questioning whether and how ethical ‘recognition/evaluations/intentions’ would differ across diverse scenarios of

⁴³ The existing measures in the literature of tax compliance and ethical decision-making.

compliance decision. Prior scholars such as Robin and Reidenbach (1987), Reidenbach and Robin (1990), and Robin et al. (1996) have clearly argued the advantage of using scenarios based studies in business ethical research. Indeed, several empirical studies used the vignettes based approach successfully (Hunt and Vitell, 1986; Morris and McDonald, 1995; Robin et al., 1996; Singhapakdi et al., 1996; Marshall and Dewe, 1997; Chia and Lim, 2000; Barnett, 2001; May and Pauli, 2002; Barnett and Valentine, 2004). The key reason behind the popularity of scenario approach in ethics research is its ability to infuse realism into the matter investigated (Fredrickson, 1986) which was considered for a long time to be the main drawback of the other research techniques in business ethics literature (Randall and Gibson, 1990). Also, scenario-based studies require minimal effort for the participants to respond (Robin et al., 1996). Cavanagh et al. (1985) reached the same conclusion about the capacity of scenarios to create real situations and make conditions comparable for each participant. Again, scenarios have the capacity to provide a standardised decision stimulus (Flannery and May, 2000) and the use of scenarios allow scholars to more precisely make a comparison of the answers in a standardised manner with a great amount of background information (Chia and Lim, 2000).

In order to create a variety of ethical situations, multiple tax scenarios were adopted from the literature to suit the purpose of this study. The approach that was followed by this study in adopting scenarios was seeking unethical scenarios, where an individual committed a specific action, and the participants will be asked to evaluate this action (underreporting incomes or overestimating expenses). These scenarios were selected from several ethical scenarios that were prominent in current tax compliance literature. They fall under the labels of “under-reporting of income” and “over-reporting of deductible expenses” scenarios as it will be explained in greater detail later in this section.

The inclusion of both types of behaviours was recommended by prior studies such as Henderson and Kaplan (2005) who suggested that taxpayer behaviour varied across these different types of evasion.

Participants are asked to read the three ethical decisions’ scenarios that contain tax compliance dilemmas (two under-reporting of income and one over-reporting of deductible expenses) and then rate the action described in the scenario on each of the study’s 7 Likert-scales. Given the sensitive nature of the tax compliance matter, the participants are asked for indirect (3rd person) and direct (1st person) tax evasion opinions for each scenario (Torgler, 2002; Alm et al., 2010).

The indirect question approach is used to mitigate the sensitive nature of the question (Kaplan et al., 1997). The main purpose of the direct question is to build some intuition about the participant intention to behave similarly to the hypothetical scenario.

The three research scenarios were adopted from the work of scholars in tax compliance literature (Burns and Kiecker, 1995; Kaplan et al., 1997; Bobek and Hatfield, 2003; Trivedi et al., 2005; Bobek et al., 2007; Bobek et al., 2013). The purpose was to enhance, as much as possible, the comparability and validity of the scenarios with those previously used in the literature. However, due to the limited⁴⁴ language ability of the participants and to increase the understandability of the hypothetical dilemmas, the scenario included additional contextual details to make the described behaviour more realistic and true to life situation. The other aspect taken into consideration in modifying the scenarios was “the better than average” effect. Usually, the participants show this type of behaviour when evaluating a comparison target. Alicke et al. (1995: p 804) pointed out *“the better-than-average effect can be viewed as a type of self-serving bias in which people evaluate their characteristics and prospects more favourably than those of others”*. In other words, it means that participants may respond to the questions in the survey in a way that they maintain relatively high levels of self-esteem. This effect could be reduced by presenting basic information about the people in the scenario and not revealing too much personal information about the character in the scenario (Oppenheim, 2000; Dillman, 2011).

For the first scenario, the original text was adopted from Kaplan et al. (1997) and Bobek et al. (2007). However, the context was largely amended to facilitate the perception of the scenario and to shed more reality into the dilemma. The text of the first compliance scenario is presented below:

“Jack is a 40-year-old married father of two boys. He is a full time employee in a small company and his wife, Laura, works part-time. Jack was paid €6,000 in cash earlier this year for work that was outside his regular job. Because the payment was in cash and not recorded anywhere, he chose not to report it on his annual tax return.”

While the second scenario was adopted from the work of Trivedi et al. (2005), the context of the dilemma was slightly changed from the original text. The amounts of underreporting behaviour were altered in the current and previous scenario to capture the magnitude of the consequences

⁴⁴ Participants are mainly Muslim immigrants where English is not their first language.

and the dimension of moral intensity (€6,000 vs. €500). The text of the second compliance scenario is presented as follows:

“Julie, a university student, is a waitress at a popular local restaurant located near her residence. Julie’s income from the restaurant helps her to finance her university education. In addition to her wage income, this year Julie received income of €500 in the form of tips which is taxable. Julie neither keeps a record of the tip income, nor reports it on her annual tax return.”

The final scenario is the overestimated expenses scenario. It was adopted from Kaplan et al. (1997) and Bobek et al. (2013). A different type of underreporting was tested (overestimated expenses vs. underestimated taxable income) to capture any potential variation between the two behaviours (Henderson and Kaplan, 2005). Similar to the second scenario, the context of the dilemma was slightly changed.

“James has a car/van, which he uses for business and personal reasons. The tax laws provide that automobile expenses are deductible to the extent that the automobile is used for business. In preparing his tax return, James calculates that the automobile was used 50% for business. However, James knows that if he falsely claimed it was used 80% for business, he could deduct an additional €1,400 in expenses. At the end of the year, James claimed that the automobile was used 80% for business, and as a result, he claimed an additional expense of €1,400.”

The selected order of the three scenarios was decided after the pre-test results, which showed the order of difficulties that the respondents found in answering and understanding those scenarios. The Jack’s scenario was ranked as the easiest scenario to understand followed by Julie and James scenarios. The order was kept in this way for the whole questionnaires.

Each of the scenarios was followed by a series of questions (measurement scale) to capture the interested variables. Table 5.1 shows the source of each scale that was included in the questionnaire and how each variable was operationalised in this study.

Table 5.1: The Source of each Measurement Scales

Type of variables	The operationalisation of variables in the survey	Source
Ethical recognition	To what extent do you agree there is a moral (ethical) issue involved in person's behaviour in the scenario	Barnett (2001)
Ethical evaluation	Overall, how would you rate the person's decision in the scenario (R)	Henderson and Kaplan (2005)
Ethical intention	If you were responsible for making the decision on whether to report the taxable cash/tips/false claim the additional automobile expenses described in the scenario: 1. How likely would you be to make the same decision as the person in the scenario and <u>underreport</u> (NOT report) the cash/tips/ <u>took the additional</u> \$1,400 deduction? (R) 2. Which of the following amount of the \$6,000/\$500/\$1,400 cash/tips/additional expense deductions do you think is closest to the amount you would <u>underreport/deduct</u> ? (R)	Henderson and Kaplan (2005)
Personal norms	1. You would definitely feel guilty if you did <u>underreport/ took additional</u> deductions 2. You would definitely feel justified if you did <u>underreport/ took additional</u> deductions (R) 3. You would definitely feel ashamed if you did <u>underreport /took additional</u> deductions	Bobek et al. (2013)
Injunctive norms	1. Most people would definitely feel guilty if they did <u>underreport</u> the \$6,000 cash or \$500 tips/ <u>took</u> the additional deductions 2. Most people would definitely <u>NOT</u> feel ashamed if they did <u>underreport</u> the \$6,000 cash or \$500 tips/ <u>took</u> the additional deductions (R)	Bobek et al. (2013)
Probability of deductions	If you decided to underreport/took additional deductions: 1. You would definitely be audited by the tax authorities 2. They would definitely discover that you had engaged in underreporting behaviour/over claiming expenses	Bobek et al. (2013)
Subjective norms	1. Your family would definitely NOT think it is okay (i.e., morally right) to <u>underreport</u> the \$6,000/\$500 or <u>took</u> the additional \$1,400 expense deduction 2. Your friends would definitely NOT think it is okay (i.e., morally right) to <u>underreport</u> the \$6,000/\$500 or <u>took</u> the additional \$1,400 expense deduction	Bobek et al. (2013)
Magnitude of consequences	If you were audited by the tax authorities, how would you rate the seriousness of the consequences (fines, self-image, reputation, social stigma..., etc.)?	Singer and Singer (1997)
Descriptive norms	What percentage of \$6,000/\$500/\$1,400 do you think is the closest to the amount that average Irish/Canadian/Scottish taxpayer would report/deduct (R)?	Bobek et al. (2013)

Tax compliance intentions “INT”; Personal norms “PN”, Subjective norms “SUN”; Injunctive norms “IUN”; Probability of effect “POE”; are measured on a 7-point Likert-type scale with the higher values in favour of more compliance behaviour. For Magnitude of consequences “MC” the higher the values indicating a severe consequence in case of under-reporting/overstate expenses. Specific descriptive norm “DN” was measured in 6-point scale with 0% means a general perception that ordinary taxpayer report/deduct nothing from the \$6,000/\$500/\$1,400, 100% means a general perception that ordinary taxpayer report/deduct the full amount of \$6,000/\$500/\$1,400. Ethical recognition “ER” and ethical evaluation “EE” were measured in 7-point Likert-type scale with higher value indicating that the respondent recognise that there is an ethical issue in the behaviour described in the scenario, and likewise a higher value in ethical evaluation question indicates that respondent view that the behaviour is ethical (this scale was reversed, so a higher value will be aligned with more favourable intention to compliant). (R) means that the scale was reversed.

Socio-Economic Demographic Measures

The second part of survey covers the socio-demographics characteristics where general information about participants was collected. Including control variables in the analysis is essential because they might affect the results and exclude them may cause uncertainty on interpreting the potential impact of the independent variables on the dependent variables (it will be open to the possibility of other factors influencing the dependent variables). Selecting the control variables is usually done according to theories and literature. Because prior studies have indicated the potential effects of some demographic variables⁴⁵ on the individual's ethical decision making and behaviour processes, information about age, nationality, country of birth, period in Ireland/Canada/Scotland, gender, marital status, education level and field, experience, job status, and religious affiliation were collected and controlled for in the analysis (Hunt and Vitell, 1986; Torgler, 2002; Wenzel, 2004; Torgler, 2006; Bobek et al., 2007; Blanthorne and Kaplan, 2008; Bobek et al., 2013).

Islamic Taxation Measures

The third part of the survey consisted of the Islamic taxation related questions. This was mostly developed to suit the specific research objective of studying and exploring the Islamic religious taxation behaviour which is Al-Zakat. This objective is not part of the current research objectives.

Religiosity Level Scale Measures 'RCI-10.'

The fourth part of the survey measured the religiosity level of the participants. Throughout the literature, religiosity level has been operationalised and captured in different ways such as membership or non-membership in a religious organisation, the degree of participation in religious services and activities, and the belief in religious creeds (Stack and Kposowa, 2006; Torgler, 2006). The suitability of a particular measurement scale is an issue that requires thoughtful consideration before selecting the scale (Worthington et al., 2003). Two criteria were taken into consideration when selecting the religiosity level scale for this research. First, the

⁴⁵ Full details of all control variables' questions can be found in the context of the survey itself (appendix B).

reliability and the validity of the scale that was manifested by prior studies. The scale has to demonstrate a high level of reliability and validity to ensure the robustness of the study. Besides, the measurement scale had to be tested before and retested to confirm its reliability and validity. On the other hand, measuring the level of religiosity is generally a complex task to achieve due to the different perspectives that each individual has on religion. To account for all those various perspectives and dimensions, multiple measurement items are recommended (Stack and Kposowa, 2006).

Taking those two criteria into consideration, this study adopted the ‘religious commitment inventory’ RCI-10 scales that were developed by Worthington et al. (2003). These 10 measurement scales are measured in a 7 point Likert-scale and are divided into two types of religiosity commitments: intrapersonal and interpersonal. All the respondents who scored higher than 53 out of 70 (75%) are considered to be highly religious. Table 5.2 exhibits the RCI-10 scale of Worthington et al. (2003)

Table 5.2: The RCI-10 Religious Commitment Inventory Scale

Variable	The Scale Item		Source
Intrapersonal religiosity scale	1	My religious beliefs lie behind my whole approach to life	Worthington et al. (2003)
	2	I <u>rarely</u> (<i>not often</i>) read books and magazines about my faith (R) ^a	
	3	Religion is very important to me because it answers many questions about the meaning of life.	
	4	It is <u>NOT</u> very important for me to spend periods of time in private to think and reflect on my religion. (R)	
	5	I spend time trying to enhance my understanding of my faith.	
	6	Religious beliefs do <u>NOT</u> influence all my dealings in life. (R)	
Interpersonal religiosity scale	7	I enjoy spending time with others of my religious affiliation	Worthington et al. (2003)
	8	I <u>rarely</u> (<i>not often</i>) join the activities of my religious organisation. (R)	
	9	I keep well informed about my local religious group and have some influence on its decisions.	
	10	I make financial contributions to my religious organisation.	

All the items were measured on a 7-point Likert-type scale with the higher values in favour of being more religious.

^a (R) means that the scale was reversed.

General Social Norms Toward Tax Compliance

In the last part of the survey, the general perception of social norms was covered. Four aspects of taxation were selected and the social norms' perception of those aspects were measured. Those four aspects were: (1) reporting honestly all taxable incomes; (2) overestimated tax expenses; (3) working for cash in hand; and (4) paying the due taxes. The aim was to capture the social norms and its four components (personal norms, subjective norms, injunctive norms, and descriptive norms). However, the results of the exploratory factor analysis on these items revealed unexpected outcomes which are highlighted in the following section. The Table 5.3 below exhibits the source of the scales and the theoretical role of each scale in measuring specific variable.

Table 5.3: The Source of each Measurement Scales for the SNG

Variables	Operationalise the Variable in The Survey	Source
Personal norms^a	1. I think I should honestly report cash earnings on my tax return. 2. I think it is acceptable to overstate tax deductions (Claim higher than it should be) on my tax return. (R) 3. I think working for cash-in-hand payments without paying taxes is a trivial offence (minor crime) (R)	Wenzel (2004)
Subjective norms^a	1. The people closest to me (e.g., family and/or friends, etc.) think they should honestly report cash earnings on their tax return. 2. The people closest to me (e.g., family and/or friends, etc.) think that it is acceptable to overstate tax deductions (Claim higher than it should be) on their tax return. (R) 3. The people closest to me (e.g., family and/or friends, etc.) think that working for cash payment without payments without paying tax is a trivial offence (minor crime). (R)	Wenzel (2004)
Injunctive norms^a	1. Most people in Ireland/Canada/Scotland think they should honestly report cash earnings on their tax returns 2. Most people in Ireland/Canada/Scotland think it is acceptable to overstate tax deductions (Claim higher than it should be) on their tax returns (R) 3. Most people in Ireland/Canada/Scotland think working for cash payments without paying tax is a trivial offence (minor crime) (R)	Wenzel (2004)
Descriptive norms	1. In your opinion, what percentage of Irish/Canadian/ Scottish taxpayers do you think deliberately pay less taxes than they legally owe? (R) 2. In your opinion, what percentage of Irish/Canadian/ Scottish taxpayers unknowingly through lack of care pay less taxes than they legally owe? (R)	Bobek et al. (2013)

^a The outcomes of EFA revealed different factors than the ones anticipated. The new factors are social norms toward reporting all taxes “RT”; and overestimate expenses “OE” and working for cash in hand “CH”. The general descriptive norms “DNG” which is aligned with theory. All those variables were measured in 7-point Likert-type scale with higher values in favour of more compliance behaviour.

^b (R) means that the scale was reversed.

General Instructions for Completion of the Survey

Instructions were presented on the first page of the survey which requested respondents to answer all the questions in the survey as honestly as possible and to the best of their ability (Oppenheim, 2000; Dillman, 2011). Besides, they were requested to circle the response considered most accurate. The last page of the questionnaire was for the “comments and suggestions” to ensure that all respondents were given an opportunity to express their views and elaborate more about any specific area in the survey or tax system in general.

In order to ensure the confidentiality of the survey, the respondents were requested not to write their names or any information that could be traced to them. This instruction was added to increase the response rate for the survey since this survey is covered sensitive information.

The responders were requested to return the completed questionnaires to some specifics places (the names of the places were clearly indicated in the first and the last page of the questionnaire, in the cover letter, and verbally by the researcher when they were given the questionnaire). Labelled boxes were installed into those places to facilitate the return of the surveys and once more to ensure the anonymity of the survey.

Covering Letter

According to Dillman (2011), the questionnaire has to be accompanied with a cover letter that includes: (1) the purpose of the study; (2) the importance of participating in the research; (3) ensures the confidentiality of the research; (4) information on the way the participants can contact the author if any problems comes up; and (5) the estimated time required for completing the survey.

All those points were taken into consideration in designing the cover letter for this study. In addition to those points, the length of the cover letter was within the advisable length [not exceeding one page] (Dillman, 2011). The importance of completing the survey to the researcher succeeding in accomplishing his PhD was highlighted along with disassociation of the study from any relation to the tax authorities to ensure the confidentiality, and to increase the response rate. The full version of the survey cover letter can be found in Appendix A.

The Appearance of the Survey

As important as making the self-completion questionnaire look shorter (to increase the response rate), the layout of the questionnaire needed to be easy in the eye to facilitate the answering of all questions that were relevant to the participants. Following the recommendation of Bryman and Bell (2011), print styles were varied (between questions and answers) and consistent throughout the questionnaire. The presentations of answers were in horizontal style to avoid any potential confusion that may arise if a vertical style was used and to fit the questions and answers in short space.

In order to ensure the clarity of the questionnaires and to reflect that this questionnaire was professionally conducted by an academic body, the questionnaires were printed in high quality, in booklet style and the logos of the National University of Ireland Galway “NUIG” and the Irish Accounting and Finance Association “IAFA” were printed on both the front page of the questionnaire and the cover letter (refer Appendix A and B).

The reasons of acknowledging the logo of these bodies “NUIG” and “IAFA” in the front page of the questionnaire and cover letter were to reflect: (1) the professionalism of the researcher; (2) the thorough process of revision and evaluation this questionnaire has gone through; (3) the confidentiality of the questionnaire; and (4) that non-existence of links between the researcher and tax authorities.

The cover letter stated clearly the purpose of this study in simple terms and attempted to ensure the independence of this questionnaire from any tax authorities involvement and strictly guaranteed the anonymity of the questionnaires. In attempting to reduce the bias of the responses both the front page and the cover letter mentioned that the participation in this study was voluntary and no risk was associated with completing the questionnaire.

Once the initial draft of the survey was developed, the next step was to pre-test it to assess the validity of the instrument (Dillman, 2011). This step is covered in the next section.

5.3.2.2. Pretesting of the Questionnaire

There is a general consensus among the methodology literature about the importance of pretesting the questionnaire before conducting a pilot test and printing its final version (Oppenheim, 2000; Dillman, 2011). Cooper et al. (2003) claimed that the pretesting of the questionnaire is an opportunity to assess a number of issues such as the level of understanding of the meaning of the questions by the respondents, the continuity and the flow of the questionnaire, the length and the time of completing the questionnaire; the sequence of questions in the questionnaire, and the effectiveness of the instructions in guiding the participants.

According to Dillman (2011), the version and the style of the pre-test questionnaire should give the impression that it is conclusive, yet, not the final version (more provisional version). He also suggested that the pretesting should be conducted on three different groups of respondents: (1) colleagues; (2) potential respondents from the population; and (3) the users of the data.

Following those recommendations, the questionnaires were given to three academic colleagues (three economists) experienced in conducting surveys. Those academic colleagues gave their comments in writing about the understandability, clarity, ambiguity, face validity of each of the questions in the instrument and the overall survey. A meeting was held afterwards with one of those colleagues, and additional detailed notes were taken on her comments. Besides, the researcher's supervisors reviewed the first draft of the questionnaire and requests some changes.

The sample of respondents drawn from the population were 8 individuals: 2 Muslim non-students; 2 Muslim students; 4 non-Muslim students in Ireland (Galway). Those diversified groups were selected following the recommendation of Dillman (2011). He also suggested that each selected individual should fill out the questionnaire under the supervision of the researcher.

Overall, pretesting of the survey was considered very beneficial because allowed to:

- Change the sequences of scenarios in the questionnaire.
- Modify some ambiguous words and highlighted some keywords (bold the words)
- Estimate the average time of completing the survey to be around 17 minutes.
- Restructure of the questions that follow each scenario.
- Modify a some of questions in the socio-demographic characteristics section.
- Edit and change some questions on general social norms 'SNG'.
- Add a 'Suggestion and comments' box at the end of the questionnaire.

5. 3. 2. 3. Pilot Testing of the Questionnaire

“Questionnaires have to be composed and tried out, improved and then tried out again, often several times over, until we are certain that they can do the job for which they are needed.”

Oppenheim (2000: p 47)

Again, the literature in methodology argued the key role of pilot testing in finalising the survey before administering the questionnaire. A pilot test refers to the process of evaluation and testing and retesting the questionnaire beforehand to make sure that it functions as intended. It is considered as a small-scale replica of the actual questionnaire and it should be performed before the actual questionnaire has been administrated. Dillman (2011) claimed that the pilot test should be performed in addition to the pretesting. According to Oppenheim (2000), all the studies that ignored or inadequately conducted a pilot test will risk to end up with unquantifiable responses of unintelligible questions. Besides, even the questions that were adopted from previous questionnaires should be piloted and pretested to confirm the validity in the context of the current study (Dillman, 2011).

Oppenheim (2000) listed the following reasons for pilot testing: (1) it assesses the level of variability in the responses; (2) it offers more comprehensive assessment of the clarity of the questions over the pretesting due to the larger number of the participants involved; (3) detect any potential problems in the distributions of the questionnaire; (4) offer an indication of the expected rate of response for the final survey; and (5) test the adequacy of the questionnaire.

Similar to the pretesting, the pilot test version of the questionnaire should duplicate as near as possible the actual anticipated questionnaire. The number of respondents involved in this stage of testing should be sufficient in order to account for the major variations that it is expected in the population (De Vaus, 2001). However, Saunders (2011) argued that in most situations, pilot testing a large of participants is impossible because of the time and the financial constraints. They recommended at least ten respondents to be involved in the pilot testing.

The pilot test of this questionnaire was undertaken in March 2015. The researcher attended an event organised by the Islamic Society of NUIG where 45 questionnaires were distributed among the Muslim students of NUIG, who were asked to drop the completed questionnaire back in the specific boxes installed across the NUIG campus. Following the recommendation of Oppenheim (2000), the students were informed that this was a pilot test to encourage them to provide

feedbacks on any problems they may face while completing the survey (especial “comments and suggestions” box was designed for this purpose).

The response rate of the pilot test was 55% which was considered to be satisfactory. The feedback of the respondents was analysed and taken into consideration in finalising the final version of the questionnaire. Overall, the pretesting and pilot test resulted in some conceptual modifications and shortening as well as some rewording and reordering of a number of questions. Hence, they all contributed in establishing the instrument validation.

After conducting a pre-test and pilot test on the initial draft of the survey, the final version of the survey was produced which accommodated all appropriate comments and feedback. The final survey instrument consisted of five parts (see Appendix B).

5. 3. 3. Administration of the Survey

Since this research is concerned with examining other ethnicities ‘communities’, the question remains as to whether the researcher needs to be an insider or outsider of the communities under investigation. The advantages of research being carried out by a researcher from the same communities include accessibility, language, better understanding and appreciation of the cultural nuances with a greater ability to interpret the responses of the participants in an authentic manner. However, the sensitivity of tax compliance may result in a lack of honesty and openness from participants of the same community as the researcher. In fact, the degree of honesty of participants could be in favour of the outsider researcher than an insider. Besides, the outsider researcher may provide different perspectives and assist some ethnic taxpayers as he/she is free of the ethnocentricity problem (Gallhofer and Chew, 2000).

In order to minimise the potential problem relating to honesty, the confidentiality of the participants was highly emphasised in the questionnaire and during distribution. The ability of the participants to drop off the complete questionnaire in different places and over a long time will mitigate the issue related to the researcher being insider.

5. 4. Statistical Approach

This section discusses the statistical part of data collection and the actual data collection for the study. It starts with identifying the population of the study and is followed by an explanation of the sampling method. In addition to defining the study population and sampling method, the sample size is also presented. Finally, a comprehensive description of the actual data collection is provided at the end of this section along with the response rates.

5. 4. 1. Research Population

In a survey based study, the target population refers to all respondents who the researchers wish to study. According to Saunders (2011: p 212), population refers to “*the full set of cases from which a sample is taken*”. Studying the entire population is called ‘census’ and requires significant amount of effort, time and financial resources. In most cases, it is impracticable to conduct a study on the entire population. Therefore, selecting a representative sample from the population is more feasible. The first step in selecting a representative sample is to identify and define the population of the study. Therefore, the inferences made about the sample could be valid for the whole population with some margin of error.

The target population of this study comprised the Irish population (including taxpayers and non-taxpayers ‘students’), and the Irish/Canadian/Scottish Muslim communities’ members (including taxpayers and non-taxpayers ‘students’).

5. 4. 2. Sampling Method

Sampling method refers to the process of selecting a relatively small number of elements from a larger defined group of elements (population) in order to draw some conclusion about the larger group using the smaller group (Saunders, 2011). Selecting a sample from a population is widely used in the research field nowadays. However, the sample must be representative of the entire population, otherwise, extrapolating the results to the whole population is inappropriate and incorrect. According to Hair et al. (2010) two concepts have to be satisfied in selecting a representative sample: (1) making the right decision in choosing the study unit (for example:

individual, products or service, etc.); and (2) ensuring that the selected sample are representative and could be used to draw some conclusion about the whole population.

In this study, individuals currently living in one of the three countries under investigation are the research study unit. For the second step, there are two types of sampling methods: probability sampling and non-probability sampling.

Probability sampling is mostly used in survey-based research where the objective of the research is to infer from the sample to the population. Probability sampling is also called a ‘representative sampling’, and as the name suggests relates to the fact that the probability of each element to be selected from the population is known and, in most cases, is equal for all elements (Saunders, 2011). To be able to use the probability sampling the following two main conditions have to be met: (1) the “sampling frame”⁴⁶ has to be identified; and (2) the probability of each element selected in the sample has to be known.

The ability to satisfy those probability sampling conditions allows the researcher to infer the results of the sample into the entire population within a margin of error through the use of statistical methods by way of ‘generalising’. There are four types of representative sampling techniques: (1) systematic random sampling; (2) simple random sampling; (3) cluster sampling; and (4) stratified random sampling.

On the contrary, the inability to meet the probability sampling’s conditions dictates the use of non-probability sampling techniques. The non-probability sampling or the ‘judgemental sampling’ is used when the probability of selecting an element from the population is unknown or when unable to provide the sample frame of the population. Usually, the researcher cannot infer the results of the sample to the entire population using this type of sampling method. However, the researcher may still be able to generalise from the non-probability samples without statistical grounds as argued by Saunders (2011: p 233). He stated that in this type of sampling method “*generalisation being made to theory rather than about a population*”.

There are five different types of non-probability sampling methods: (1) Quota sampling; (2) Purposive sampling; (3) Snowball sampling; (4) Self-selection sampling; and (5) Convenience sampling.

⁴⁶ The sampling frame refers to the complete list of all elements in the population from which the sample is being drawn.

Non-probability and convenience sampling were used in the current study due to the difficulties of obtaining the sampling frame of the whole population of each country and the sampling frame of Muslim communities' population in those countries. Besides, it is impossible to calculate the probability of selecting each individual from the population due to the approach the researcher used to distribute the survey.

The advantages of non-probability sampling over the probability sampling are (1) saving time, and (2) the opportunity to select the sample purposively and to reach difficult-to-identify individual of the population.

Despite that, generalisation from non-probability sampling should be done with caution and selecting the size of the sample is crucial in this process (Hair et al., 2010). According to Saunders (2011: p 241), the sample size has to be relatively big, and the minimum sample size has to be met before closing the data collection. He stated that "*the sample selection process is continued until your required sample size has been reached*".

The following sub-section highlights the required minimum sample size for the current study.

5. 4. 3. Sample Size

Selecting the sample size is another important issue that the researcher needs to address. In most cases, it is necessary to calculate the precise minimum sample size that the research requires. Otherwise, the uncertainty of the sample size might cause the researchers to waste their valuable time in conducting research with inadequate power as a result of low sample size.

In fact, the size of the sample should be carefully selected in order to succeed in detecting the targeted effects between variables and to generalise back to the population. In statistical terms, sample size could be calculated based on the degree of confidence and the margin of error (Saunders, 2011).

According to Jackson (2003), if the research intends to use SEM for the empirical analysis, the sample size should be considered carefully. In fact, the sample size plays a key role in the estimation and interpretation of SEM results. There is no universal agreement among researchers about the minimum sample size, however, the larger the sample is, the more stable the parameter estimates.

This study used the G*Power software program to determine the sample size needed. G*Power is a free and popular program that provides precise minimum sample size's measures for different types of analysis. Normally, G*Power is used to ascertain the sufficiency of the sample size for the study. It is also used to gather evidence that the study has sufficient sample size to detect effects of substantive interest (Balkin and Sheperis, 2011).

In order to calculate the sample size, the effect size needs to be assumed. According to Ellis (2010), “*An effect size refers to the magnitude of the result as it occurs, or would be found, in the population*”. The best method to determine an effect size is to conduct a census of an entire population but this is seldom feasible in reality. Hence, researchers generally assume the effect size that will suit their studies by taking into consideration the size of the sample which they need to achieve (Ellis, 2010). A general rule is ‘the smaller the effect size, the bigger the sample size needs to be’ (Ellis, 2010). Following the recommendation of Cohen (1992), the effect size was selected to be 0.1. Commonly, the effect size of 0.1 is considered to be a conservative estimate (Cohen, 1988). The power of the study was chosen to be 0.8 following the same recommendation of Cohen (1992).

Therefore, this study will use: (1) 0.1 as the effect size [conservative estimate], (2) 95% as the confidence interval, and (3) 0.80 as a power of analysis to measure the sample size of the study.

For linear multiple regressions and F-test distribution with the maximum number of predictors in the proposed models (10), a small effect size of 0.1, alpha equal 0.05, and power of analysis 0.80, the G*Power software program shows the minimum sample size to be 172 participants.

The actual data collection achieved the minimum sample size of 172. In fact, the total number of completed and returned questionnaires in the three countries was 679, which was considered to be very sufficient.

5. 4. 4. Data Collection

The data was collected in three countries: Ireland, Scotland, and Canada through a printed self-administered questionnaire. The questionnaire was distributed manually to the participants in each country by the author himself at different events and locations depending on the targeted groups.

In Ireland, the survey was distributed to the Muslim community primarily in two cities: Dublin and Galway. The author had access to the members of the Muslim community through the Friday prayers at different worship locations (mosques). The survey was distributed randomly to the Muslim community members who attend those services. Meanwhile, several drop boxes were installed into those mosques where the participants could drop the completed survey at any time that suits them (within 4 months). The same procedure was followed when distributing the survey in Dublin. However, the response rate was significantly low. Out of 127 questionnaires distributed at mosques, just 22 questionnaires were received back into the drop boxes.

For the Muslim students in Ireland, the survey was distributed to them at different events organised by the Islamic Society of NUIG during the academic year 2014/2015. The students who successfully filled the survey had the option to either drop the complete survey on the NUIG campus (several drop boxes were installed in the Muslim worship rooms) or at different places in the city (at some shops and mosques in Galway as previously explained).

On the other hand, the NUIG Non-Muslim students were approached differently. First of all, the survey was distributed to a class of 50 business students, where the students were asked to fill the survey after a normal lecture (the participants did not receive any type of award). The participation rate was 95%, and 43 questionnaires were completed.

Secondly, the survey was distributed to the postgraduates in the NUIG research building, where 75 questionnaires were collected out of 112 distributed questionnaires. Finally, in the light that most of the Muslim students who filled the survey were medical students (88 out of 141 completed survey by Muslim students indicated that medicine is their field of education), NUIG medical students were targeted so a representative non-Muslim students group could be obtained.

A total of 32 completed questionnaires were received from NUIG non-Muslim medical students.

In Canada, the Muslim community was approached similarly to the Irish Muslim community. The author was allowed to distribute the research survey in some mosques in Toronto and Ottawa.

The distribution took place in June 2015 during Ramadan when the members of the Muslim community jointly break their fast in the mosque at the same time. A total of 216 completed surveys were obtained in Canada.

Regarding the Muslim and non-Muslim Canadian students, the initial plan was to distribute the survey to the Ottawa University students. However, the permission was received late (after the author had left the country).

In Scotland, just 25 out 186 questionnaires were received back inside the drop boxes at the 2 mosques in Dundee (approximately 14% response rate). The Muslim students from Dundee University were approached at 2 events that were organised by the Islamic Society of Dundee University. 50 questionnaires were returned to the author after the events (the students were requested to fill the survey during the events and return them back to the author).

Thus, in summary, 388 completed questionnaires were received in Ireland; 216 completed questionnaires were obtained in Canada, and just 75 questionnaires⁴⁷ were collected in Scotland which make the total of data collection to 679 completed surveys.

The full details of the data collection in each country and the groups surveyed in each country are presented in Figure 5.3.

⁴⁷ The author was under very tight timeline to collect the research data, so a decision was made to be satisfied with the 75 completed questionnaires in Scotland (as agreed with the supervisors).

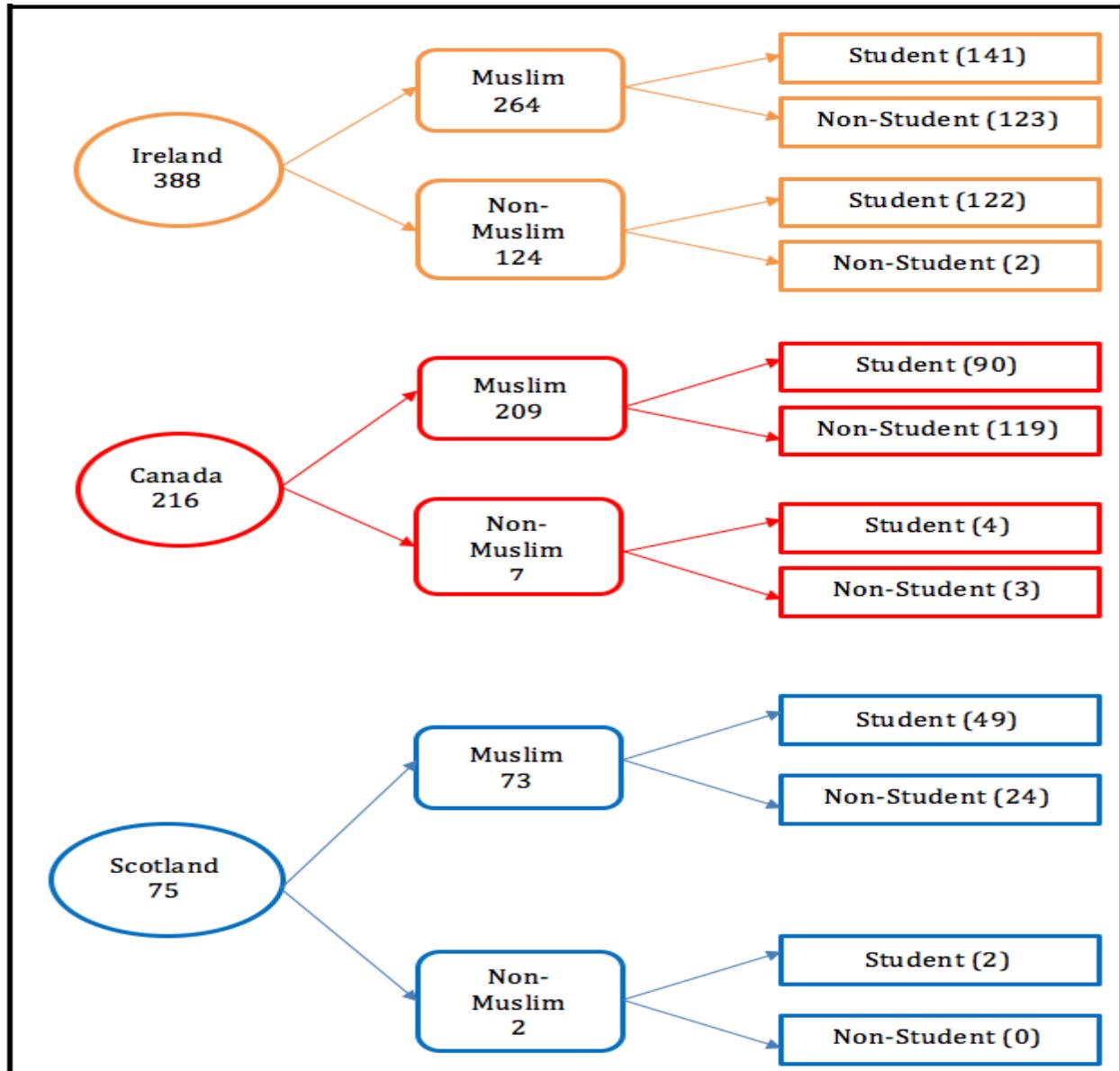


Figure 5.3: The Data Collection in the Three Countries

5. 4. 5. Response Rate

Due to the different ways, the researcher used to approach the targeted participants, the response rates were different for each country.

In Ireland, the response rate was once more different in the two cities: Galway and Dublin.

In Galway, a total of 1375 questionnaires were distributed in different ways at different events. Out of the 1375 distributed questionnaires, 366 were returned and completed which leaves the response rate to be 26.6%. However, the response rate in Dublin was 17.32% (a total of 22

completed questionnaires out of 127). Several factors contributed to the low response rate in Dublin. Those factors are: (1) the limited access to the Muslim community in the city; and (2) very tight timelines.

While the response rate seems quite low in Ireland (25.8%), it is expected in a survey of this nature. In fact, the literature (Oppenheim, 2000; De Vaus, 2001; Dillman, 2011; Saunders, 2011) argued that generally a survey with sensitive nature, it is acceptable to have a low response rate between 15 to 40%.

In Canada, the response rate was much higher than the Irish response rate due to the different data collection techniques that were used in this country. The researcher spent a significant amount of time in the locations where the Muslim community gathers (mosques) and the participants were asked to complete and return the questionnaire immediately with the option of asking the researcher about any problems that may face them in filling out the survey. Out of 300 questionnaires, 216 questionnaires were received back which makes the response rate to be equal to 72%.

In the last country, Scotland, the data collection was not completed due to the time pressure that the researcher experienced in finishing the data collection in this country. Therefore, out of the 300 questionnaires, only 75 questionnaires were received back, and the response rate was 25%. Overall, the total number of the survey printed and distributed was 2102 and the completed and received back a survey was 679 which makes the rate of the response to be 32.3%.

The total rate of the response was within the acceptable range of response rate. Hence, it is safe to consider that this research passed the data collection successfully.

5. 4. 6. Non-Response Bias

According to Oppenheim (2000), there are two types of non-response biases: (1) it is caused by significant differences between the respondents who actually participated in the survey and those who they did not; and (2) it is caused by differences between early and late respondents.

To deal with the second type of non-response bias, an independent samples t-test was conducted on the first 30 responses and the last 30 responses⁴⁸ to test for a means difference of the latent variables (Oppenheim, 2000). No significant mean differences were observed between the two groups. Thus, it can be taken as an indication of none response bias concerns (for the second type of this bias).

5. 5. Data Analysis Approach

The data analysis consists of two parts. The first part is the pre-data analysis which is concerned with preparing the data to be analysed in the second part which is the ‘SEM’ analysis (in next Chapter).

The pre-data analysis consists of four steps: (1) data screening; (2) multivariate assumptions; (3) exploratory factor analysis; and (4) confirmatory factor analysis.

Before proceeding with any of the pre-analysis (EFA and CFA) the data has to be checked and prepared first before any analysis is performed. This process is called ‘data screening’ (section 5.6.1). In addition to the data screening, the multivariate assumptions are assessed to determine the suitability of the data to be included in the SEM analysis (section 5.6.2).

The measurement scales of the research are assessed, and the dimensionality of those scales are determined using the exploratory factor analysis EFA (section 5.6.3). The main aim of EFA is to reproduce the data using the minimum number of factors and to provide the factor structure (pattern matrix) of the data. After establishing the pattern matrix, the validity and reliability of those obtained factors are initially assessed⁴⁹. The last section of pre-data analysis (section 5.6.4) presents the confirmatory factor analysis CFA. The purpose of the CFA is to assess the factor structure obtained from the EFA and to confirm the validity and the reliability of those factors as well as establishing the invariance test for the multi-group analysis. The important part of CFA is the common method bias, where the data is checked for any common method bias that might arise from using the same instrument in collecting the data. Finally, the composites of the latent variables are imputed for the following analysis and to be used in the path analysis.

⁴⁸ This test was conducted only on the survey collected in Ireland because the survey collected in Canada and Scotland was given to the participants and collected back immediately after been filed (for the most collected survey on these two countries).

⁴⁹ Establishing the full validity and reliability of the factor structure will be in the ‘CFA’ analysis.

In the second part of data analysis ‘SEM analysis’ (next Chapter), the actual data analysis will take place. The data will be analysed through three statistical forms. First, descriptive statistics will be provided for each factor in the pattern matrix. Second, univariate analysis of variance (ANOVA) will be conducted on each of the control variables to seek which control variable has a significant effect on the research dependent variables. Third, a correlation analysis is conducted to ensure the appropriateness of the generated hypotheses as well as the research framework. Finally, a structural equation modelling SEM is performed to formally asses the developed hypotheses. More specifically, a path analysis using AMOS is performed to: (1) test the research hypotheses; (2) to assess the mediation; and (3) to examine the moderation.

Here the order of operations of data analysis in the current study is as follows:

Step1: Pre-data analysis⁵⁰ which includes:

- (1) Data screening.
- (2) Multivariate assumptions.
- (3) Exploratory factor analysis ‘EFA’.
- (4) Confirmatory factor analysis ‘CFA’.

Step 2: The actual data analysis⁵¹ includes:

- (1) Descriptive statistics.
- (2) Univariate analysis of variance ‘ANOVA.’
- (3) Preliminary tests of hypotheses ‘correlation analysis’.
- (4) Formal tests of hypotheses ‘Structural Equation Modelling’.

The following sub-section introduces the SEM including its advantages and disadvantages.

5. 5. 1. Structural Equation Modelling

Structural equation modelling ‘SEM’ is the most used technique in social sciences which is considered to be very suitable to test samples size of more than 200 respondents and hypotheses of causal influences (Snoj et al., 2004). Moreover, SEM is an analytical tool that assesses the consistency of the covariance matrix with the hypothesised model. Hoyle (1995: p 1) defined the

⁵⁰ This part is covered in this Chapter.

⁵¹ This part will be covered in the next Chapter.

SEM as a “*comprehensive statistical approach to testing hypotheses about relations among observed and latent variables*”. Compared to the other statistical instruments, SEM is a relatively new and young technique. Despite that, the utility of SEM as an effective analytic tool became apparent and has expanded to many fields such as psychology, education, social behaviour, economics, marketing and too many other fields (Hair et al., 2010). The reason behind the popularity of SEM as a key element of the methodological arsenal of the social sciences is its ability to find answers to research questions that are continuously increasing in complexity and specificity. The ability to examine the structure of interrelationships (equations) between constructs involved in the analysis simultaneously makes it the most desirable technique in all disciplines (Hair et al., 2010).

In statistical terms, SEM is very close to multiple regression analysis in a sense that it tests multiple regressions, however, SEM has a valuable advantage of measuring a series of relationships simultaneously. It is an extension of other multivariate techniques such as factor analysis, and multiple regression analysis. Hair et al. (2010: p 546) confirmed this point indicating that “*SEM's foundation lies in two familiar multivariate techniques: factor analysis and multiple regression analysis*”. SEM has three unique characteristics that distinguish it from other statistical techniques. These are its ability to:

1. Estimate multiple and inter-correlated relationships among several dependents variables.
2. Account for measurement errors in the estimation process.
3. Provide a comprehensive account for the entire set of relationships in the model.

The SEM model consists of measurement and structural models. Initially, any model has to be generated from some underlying theories. The measurement model consists of different indicators (measurement items) whose role is to capture the concepts under investigation and create different constructs (latent variables, factors, etc.) and those constructs will be the core of the structural model where the causality among those constructs are being tested. In other words, the structural model involves specific latent constructs which are measured by indicators (in measurement model) and those constructs are related to each other either by a dependence relationship or correlation relationship. The dependence relationship refers to a straight arrow from exogenous constructs toward endogenous constructs, and usually, this is what the researcher tend to test. The second relationship is a correlation relationship, which is referred to by a two-headed arrow connection, which can only be connecting exogenous constructs.

In order to use SEM to test hypotheses, some criteria must be met. Those criteria are classified from a local test to global test. Therefore, to be able to support a hypothesis, the local test (p-value test) as well as a global test (the R-square and model fit tests) have to be successfully tested. For instance, if the p-value for a given relationship is significant (local test), but the model fit is poor (fail in the global test) the hypothesis cannot be supported with great confidence. Likewise, the R-square test (variance explained test) has to be met. Otherwise, the hypothesis cannot be supported. For instance, if the local and global tests are met (a significant p-value and a good model fit), but the R-square is only 0.015, then the relationship (hypothesis) is not meaningful because it does not explain a sufficient variance in the dependent variable.

Global test or model fit test is evaluated through some statistical numbers such as The Tucker-Lewis Index ‘**TLI**’; the Comparative Fit Index ‘**CFI**’; the Goodness of Fit Index ‘**GFI**’; and the Adjusted Goodness of Fit Index ‘**AGFI**’. The ideal value for those indexes is close to 1. However, the ideal value for the Root Mean Square Error of Approximation ‘**RMSEA**’ is 0, and the same applies to the Standardised Root Mean Square Residual ‘**SRMS**’. While, the p-value of close fit ‘**P-CLOSE**’ has to be more than 0.05 (not significant) so the fit of the model is close. Finally, the Chi-square ‘**X²**’ has to be within the range of 0 to 3⁵².

SEM is generally referred to by different names such as covariance structure analysis, latent variable analysis, and even the names of the statistical software (AMOS and LISREL).

Due to the mathematical complexities of conducting the SEM, computer software programs are the only means to estimate and test the proposed assertions (SEM). There are several textbooks (e.g., Hoyle, 1995; Hair et al., 2010) and different statistical computers based programs available to use in structural equation modelling. AMOS was selected for two reasons: (1) its ease-of-use advantage; and (2) the licence availability by the University⁵³.

5. 5. 2. Structural Model Specification and Evaluation

The structural model represents the final model that includes all the hypothesised paths between the latent variables according to the theoretical and logical reasoning (Hair et al., 2010). The structural model specification is considered to be an essential step in the SEM analysis, where the theoretical relationships among the latent variables are determined and communicated into a

⁵² More details about each statistical number are found in the CFA section 5.6.4.

⁵³ National university of Ireland, Galway ‘NUIG’.

statistical program (AMOS). There are two types of latent variables (constructs) in the structural model: ‘exogenous’ latent variables and ‘endogenous’ latent variables. The exogenous latent variables predict the endogenous latent variables. Therefore the causal path (the hypothesised relationship) is drawn from the exogenous to endogenous latent variables.

In order to draw a conclusion about this causal path, certain criteria need to be met. Those criteria could be categorised as global and local tests (see figure 5.4). Ordinarily, if the p-value was significant (local test), the hypothesis is considered to be supported. However, ignoring the global test could lead to meaningless or incorrect results. For instance, if the local test was achieved (a significant p-value), but the global test was not (poor model fit) it cannot be concluded with sufficient confidence that the hypothesis is supported. Similarly, if the local and global tests were achieved (a significant p-value and a good model fit), but the R-square was very low, then the proposed relationship is meaningless because the explained variance (R-square) is not sufficient (Götz et al., 2010). R-square measures the amount of variances of an endogenous variable explained by the exogenous variable(s) and it ranges from 0 to 1 as it is a normalised term. There is no acceptable threshold for R-square, the larger the R-square, the more variance is explained by the exogenous latent variables on the endogenous latent variable which is a good indication (Hair et al., 2010).

The reported path coefficients hereafter are the standardised beta coefficients. Besides, AMOS used a standardised beta coefficient due to the estimation technique which is Maximum Likelihood Estimation ‘MLE’. This technique is considered to be an alternative technique to ordinary least squares, which iteratively improves parameter estimates to minimise a specified fit function (Hair et al., 2010). The bootstrapping technique is used to assess the significance of the path coefficient. If the path is insignificant and/or in the wrong direction, this will be considered as an indication that the hypothesis is not supported (Chin, 1998; Götz et al., 2010).

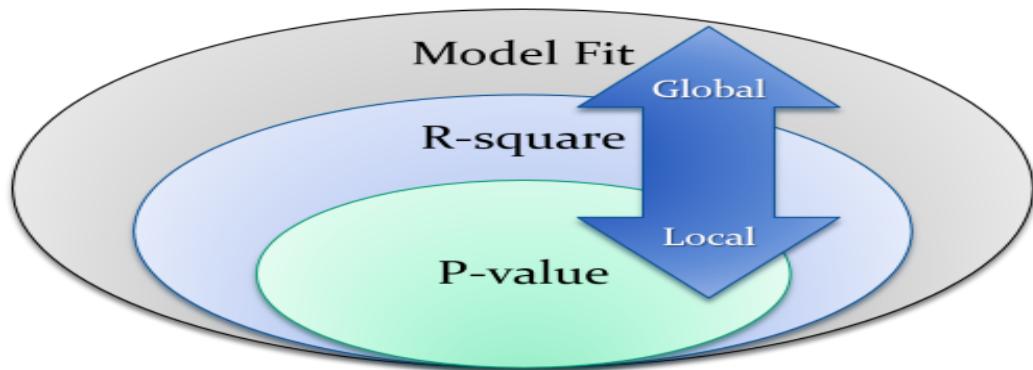


Figure 5.4: The Three Criteria of Accepting the SEM Results

Source: The StatWiki: Gaskin, J., (2016)

5. 5. 3. Advantages and Limitations of SEM

The growing SEM popularity stems from its advantages over other multivariate analytical tools.

The following are some SEM advantages which make it a very attractive technique:

- It offers a sophisticated tool to assess and modify the theoretical models.
- The ability to frame and answer increasingly complex research questions.
- It accounts for measurement errors in the estimation process.
- SEM offers more general measurement models than traditional factor analysis.
- It is considered to be more analytically powerful than multiple regression and factor analysis.

The most outstanding advantage that SEM has over other techniques is the feature of analysing a series of equations (relationships) with more than one dependent variable simultaneously, while the others share a common limitation of inability to examine more than one relationship at a time and with a single dependent variable.

Despite the clear advantages of the SEM over other techniques, the SEM could not escape some criticism:

- SEM is considered to be a very complex and difficult instrument to use.
- SEM tends to be a very demanding tool compared to others.
- It requires several assumptions to be met before using SEM.
- The most common criticism of SEM is its failure in testing the directionality of the causal relationships among variables (Hoyle, 1995).

5. 6. Pre-Analyses

Before commencing the path analysis, the data has to be prepared to be used in SEM. To prepare the data for further analysis, the following data preparation's stages were carried: (1) data and variable Screening; (2) Multivariate assumptions; (3) Exploratory Factor Analysis (EFA); and (4) Confirmatory Factor Analysis (CFA).

5. 6. 1. Data Screening

After the data collection description in section 5.4.4, the objective of this section is to prepare the data to be analysed. Data screening, also called ‘data screaming’, is the process of ensuring that the data is cleaned and prepared to be used for further statistical analyses. According to Schumacker and Lomax (2004) “*data screening is a very important step in structural equation modelling*”. Besides, SEM is a correlation research method, and any issue with the data such as outliers, missing data or a violation of multivariate assumptions will have a significant impact on the SEM analysis and eventually will make the results inadmissible (Hair et al., 2010). Therefore, the data must always be screened to ensure the adequacy, reliability and validity of the data to be tested and examined for the proposed theoretical causal relationships between independent variables and dependent variables. Data screening involves handling the missing data, address the outliers and influential, and meeting the multivariate statistical assumptions. The following sub-sections point out the steps that were followed to ensure the reliability and validity of the current data to be tested in the path analysis.

5. 6. 1. 1. Missing Data

AMOS as a statistics software tool requires the data to be free of missing observation otherwise this software would not work. Missing data at any dataset will cause several problems such as a failure of meeting the sufficient number of observations to run a meaningful statistical analysis; and in case of a complex model, a bigger dataset is essential. Moreover, a high percentage of missing data might imply that there is a bias issue. Therefore, the researcher has to ensure that the data is free of missing observations before running any further analyses (Osborne, 2012).

According to Hair et al. (2010), there are two ways to manage the missing data. The first method which is the more conservative method, where each case that has at least one missing observation at any of its variables will be deleted, given that the dataset is large enough.

On the contrary, the second method is to replace⁵⁴ the missing observations for each case by the mean (or median if it is on Likert-scale) of its variable (Hair et al., 2010). According to Malhotra (1988), the conservative method suffers from a bias toward a complete survey. If all cases that have at least 1 missing observation were excluded from the data analysis, the result would be biased toward the answer of just the participants who completed their survey without missing data. Also, this method could cause a significant drop in sample size which could lead to a loss of meaningful variances in the data. Hence, the second method appears to have received less criticism (Schumacker and Lomax, 2004) and it was selected to handle the missing data in this study. In the procedures that were implemented, all cases that contained more than 15% of missing observation in scenarios' items or general social norms (SNG) toward tax system at the end of the survey were excluded (Hair et al., 2010). For all the cases that have less or equal to 15% of missing observations, they were replaced by the median of each variable where the missing observation took place. However, all cases that contained at least one missing observation in dependent variables (intentions questions) were excluded from the dataset. The imputation of the median was just applied for the Likert-scale type of questions and not for the categorical questions (control variables and socio-demographic characteristics).

5. 6. 1. 2. Unengaged Data

Unengaged responses are outliers by nature. It usually happens when a respondent enters the same answer (value) for every single measurement item. This type of unengaged responses has a significant impact on the analyses and weakens the results. In order to detect and eliminate these types of outliers this study used two methods following the recommendation of Dillman (2011). The first method was to have multiple reversed scales among the other scales in a different part of the survey (full survey questions are presented in Appendix B). If the respondents entered the same value for the unreversed and reversed scale that would mean that respondents either did not pay attention or did not understand the question which will raise a red flag and it will lead to

⁵⁴ As long as the missing observations are equal or less than 15%.

excluding this case from the dataset. The second method that was used to identify the unengaged responses was measuring the standard deviation of the responses of every single respondent. If there was a low variance between the answers it will imply that this respondent was answering the same value for all questions and the case will be excluded from the data set⁵⁵.

5. 6. 2. Multivariate Assumptions

There are three assumptions that need to be verified before proceeding with the SEM analysis.

5. 6. 2. 1. Normality Assumption

Normality of the data distribution is a key assumption in multivariate analysis. Normality refers to the distribution of the data. In order to use and test the data in general linear models such as SEM, the data has to be drawn from a continuous and multivariate normal population (Hair et al., 2010). Normality assumption can be assessed in many different way including visual examination of the histogram for the shape of the data collected or statistical examination of the data's normality and measure of the skewness and the kurtosis of each variable and ensuring that the data is free of outliers (Hair et al., 2010). Since the majority of variables in this research is on Likert-scale, this data is unlikely to have any outliers, however, as it was explained earlier, this data suffered from some of unengaged responses (which is a type of outliers) that it was detected and excluded. The skewness refers to the responses that heavily shaped the distribution toward one end of the scale (Hair et al., 2010). In other words, it reflects the symmetry of a univariate distribution. Kurtosis refers to the peakedness or flatness of the data distribution. Data that has a very tight distribution shape around the mean has a kurtosis issue (Hair et al., 2010). Besides, the data that has a distant distribution shape also has a kurtosis issue. In order to assess for normality distribution in this study, the value of the kurtosis and skewness were checked. Any value of the kurtosis and skewness that is outside the interval of -3 to +3, is an indication that the data has a kurtosis or skewness issue, which means that it violates the normality distribution assumption (Raykov and Marcoulides, 2012). Skewness and kurtosis tests indicate that the research data set

⁵⁵ All data with the standard deviation “STD” that equalled to zero were excluded from the dataset and all those with standard deviation close to 0.5 were watch out.

is normally distributed⁵⁶ as the kurtosis and skewness values were all within the interval of -3 to +3. Hence, the dataset of this study follows a normal distribution assumption. Since the normality assumption was verified, the current study is justified to use the parametric techniques. Nonetheless, the non-parametric tests will be also conducted, but the results will not be presented unless they are different from the results of the parametric tests (Hair et al., 2010).

5. 6. 2. 2. Linearity Assumption

Linearity assumption refers to a consistent slope of the change that represents the relationship between the dependent and independent variables. This relationship has to be a straight line to pass the linearity assumption (Schumacker and Lomax, 2004). In order to test the relationships between the dependent variables and the independent variables in AMOS, those relationships have to meet the linearity assumptions, if not, AMOS will underestimate these relationships (Raykov and Marcoulides, 2012). A full test of linearity assumption was conducted between the tax compliance intentions “DVs” (ethical recognition “ER” and ethical evaluation “EE”) and the tax compliance’s factors and moral intensity’s dimensions. Most of the relationships were sufficiently linear to be tested in SEM, except for some relationships⁵⁷. More details on the linearity assumption are pointed out in Tables (D1, D2, and D3) in Appendix D.

5. 6. 2. 3. Multicollinearity Assumption

Multicollinearity refers to the incidence where the variance of the dependent variable can be explained by a single independent variable (Hair et al., 2010). In other words, the independent variables are overlapping with each other in explaining the variance in dependent variables. To detect if a multicollinearity issue existed between the observed variables, the variance inflation factors (VIF) were measured. A VIF value that exceeds 5 means that there is a certain probability that multicollinearity issue exists (O’brien, 2007) and if it exceeds 10 then a multicollinearity problem is very likely. As none of the VIFs exceeded or even reached the value of 5, multicollinearity was not considered as an issue in the study analysis⁵⁸.

⁵⁶ The kurtosis and skewness values were within the cut off -3 to +3 (for more details see Table C in Appendix C).

⁵⁷ These relationships are still included in the SEM analysis (AMOS) and will be mentioned as limitations.

⁵⁸ The full analysis of the multicollinearity test is presented in Table E at the appendix E.

5. 6. 3. Exploratory Factor Analysis

This section starts with a brief introduction of EFA and is followed by the description of (1) the EFA's procedures and (2) the validity and reliability of the factor structure. The results of EFA are presented in the last part of this section.

5. 6. 3. 1. Introduction of EFA

Measuring the tax compliance decision and the factors that have any impact on this decision process is very challenging due to the sensitivity of the matter and the difficulties of achieving a direct answer for each variable using a single measurement item. Hence, for each concept (factor) to be captured, multiple measurement items were used⁵⁹. For instance, the social consensus was measured by using different measurement items (indicators) for each single component of social consensus (2 indicators for the subjective norms, 2 indicators for the injunctive norms and so on). Therefore, each dimension or concept theoretically contains multiple measurement items that are highly correlated and belong to a distinct single concept. To empirically ensure and assess the dimensionality of a set of measurement items that were predicted to be a part of one concept (construct), exploratory factor analysis was performed. The dimensionality can be assessed with exploratory factor analysis or confirmatory factor analysis CFA or both. CFA seeks to statistically test the fitness of the dataset to the proposed model, while the EFA attempts to statistically reproduce the data by as less factors as possible (Field, 2009). Exploratory factor analysis is a statistical approach to determining the correlation among the items in a given dataset and grouping those items under a factor structure based merely on statistical logic. The advantage of EFA over CFA is that EFA does not require a prior theory about which items belong to which constructs. The EFA is used for this purpose and also to predict the correlation among the items and creates a cleaner pattern matrix. Besides, the EFA has the advantage of detecting any potential problematic within the construction of variables better than the CFA. Usually, EFA is used for the exploratory type of study where either the scale is new or the dataset is first-hand data (Hair, 2010). Despite the fact that most of the measurements items in this survey were adopted from previously designed measures which had

⁵⁹ Some variables were measured using a single measurement item and they are not included in EFA analysis.

already shown acceptable reliability and validity in the literature (Stalans et al., 1991; Hanno and Violette, 1996; Wenzel, 2004; Donna et al., 2011; Bobek et al., 2013) the research dataset is first hand data and new⁶⁰. Therefore, it is justifiable to conduct EFA to determine which sets of the observed share common variance-covariance characteristics that represent a distinct construct (latent variable).

5. 6. 3. 2. The EFA Procedures

The EFA procedures are as following:

- 1 – Select the extraction method
- 2 – Select the number of factors to retain for rotation
- 3 – Select the rotation method

The first decision a researcher has to take in conducting EFA is to select the extraction method. There are several extraction methods, however, Principal Axis factoring “PAF” was selected as the factoring method of the EFA over the principal components analysis “PCA” following the recommendations of Costello and Osborne (2005). According to Costello and Osborne (2005), PCA is not a true method of factor analysis, and it is heavily criticised in the literature on whether it is to be considered as a method of factor analysis. In fact, many authors in the literature consider PCA as only a data reduction method arguing that it is old fashion method that was used when the technology was not very sophisticated. On the contrary, factor analysis aims to reveal any latent variables that lead the manifest variables to covary.

Again, PAF was selected over the rest of factor extraction method (there are 6 methods) as a conservative⁶¹ measure. Fabrigar et al. (1999) recommend using PAF over Maximum likelihood ‘ML’ if the normality assumption of the data was not verified. Besides, Costello and Osborne (2005: p 2) stated that “*in general, ML or PAF will give you the best results, depending on whether your data are generally normally-distributed or significantly non-normal, respectively*”. It is worth to mention that the author used both methods PCA and PAF in EFA, but the results of PCA are not presented.

⁶⁰ The research data were first hand collected by designed survey for the purpose of this study so it is new data.

⁶¹ There were no concerns with normality of the final data. It was at the first stage of data collection when the assumption of normality was not verified (when the total dataset was 137) so PAF was continued to be used for the final dataset.

After selecting the extraction method (this study used PAF), the next decision is to select the number of factors to retain for rotation. There are two ways to decide the number of factors to retain, either based on statistical or theoretical justification (Anna and Osborne, 2005). Whereas, the default statistical method in most statistical software package retains all factors with eigenvalues greater than 1, the theoretical method (as it can tell by its name) uses the theory to decide how many factors to retain.

According to Osborne (2012: p 4), deciding the number of factors to retain based on merely eigenvalue is not accurate and pointed out that “*there is broad consensus in the literature that this is among the least accurate methods for selecting the number of factors to retain*”.

Therefore, this study used the theoretical method of selecting the number of factors⁶² to retain in EFA.

After the extraction method and the number of factors to retain, the rotation method is the next step that has to be decided in EFA. The method of the rotation would not improve the results of EFA. However, the aim of rotation is to simplify and clarify the data structure. Two types of rotation exist, namely ‘orthogonal’ and ‘oblique’. Whereas the orthogonal rotations (varimax, quartimax, and equamax are part of the orthogonal method) produce factors that are uncorrelated, the oblique method (direct oblimin, quartimin, and promax are part of the oblique method) allows the factors to correlate (Osborne, 2012). In the social sciences research, it is generally expected certain correlation among the factors, especially in behaviour decision research. As a matter of fact, Cialdini (1998) clearly emphasised that the components of social norms are highly correlated among each of other. Therefore, using the orthogonal rotation will cause a loss of important information if the factors are indeed correlated, and oblique rotation should theoretically yield a much more accurate solution. Besides, if the factors are uncorrelated, orthogonal and oblique rotations would yield nearly identical outcomes (Costello and Osborne, 2005). Hence, this study will use the promax oblique rotation.

After describing the procedures that were taken in conducting the EFA, the next step is to assess the adequacy, validity and reliability of the outcome of EFA (the factor pattern).

⁶² As with extraction method decision, the author used the alternative method (statistical method) as well and results are not reported.

5. 6. 3. 3. Adequacy, Validity and Reliability of the Factor Structure of the EFA

The obtained factor structure (pattern matrix) has to be checked for adequacy, reliability and validity before using it in further analysis such as CFA and path analysis. The measures and thresholds of these measures are described in the next section.

Adequacy

To assess the appropriateness of the data for the suggested pattern matrix by the EFA, three measures were calculated:

1. Kaiser Meyer Olkin “KMO” value
2. Total variance explained TVE
3. Communalities

According to Hair et al. (2010), the threshold for the KMO are marvellous (0.9); meritorious (0.8); middling (0.7); mediocre (0.6); miserable (0.5); and unacceptable (<0.5)

The total variance explained by the number of factors extracted from the EFA has to be at least 50%, which is the acceptable threshold. If the factors extracted from the EFA do not explain more than 50% of the variance, then the pattern matrix is not adequate to the data (Treiblmaier and Filzmoser, 2010; Reio and Shuck, 2014).

The communality of items refers to the variance accounted for by the factor solution for each item (Field, 2009). If the communalities are high than the items are correlated highly among each other which eventually means a good adequacy single (Treiblmaier and Filzmoser, 2010; Reio and Shuck, 2014).

The study KMO, total variance explained, communalities values are presented in the next section 5.6.3.4 (Tables 5.4, 5.5, 5.6, 5.7, and 5.8)

Validity of the Patterns Matrix

Validity refers to the extent of which a scale or set of measurement items accurately reflects the true aspect of the concept of interest. There are four most widely accepted types of validity: (1) Face Validity; (2) Discriminant Validity; (3) Convergent Validity; and (4) Cross-Validity.

Face Validity

It is also called content validity, which refers to whether the construct extracted make sense and could be easily labelled. Also, whether the items that are loading together are from similar nature and they are expected to be loaded on a single distinct construct according to theory. In the case they load unexpectedly in different constructs, could they still be explained? If the answer is yes, it means there is no face validity issue (Hair et al., 2010).

Discriminant Validity

Discriminant validity refers to whether the factors extracted are distinct and not highly correlated among themselves. Besides, the items that are part of one factor should highly correlate among themselves within their factor and less with the other items of other factors.

In order to check that the factor structure is discriminately valid, two aspects are considered: (1) the items should highly load in just one factor, and in case that there is a cross loading, this cross loading should differ by more than 0.2 (Hair et al., 2010); and (2) if the correlation between any 2 factors exceeds 0.7, this will raise a red flag which implies that there is sufficient evidence of discriminant validity issue.

Convergent Validity

Convergent validity refers to the size of loading of the items within a factor. The loading should be sufficiently high. The level and the magnitude of loading depend on the sample size of the dataset.

Therefore, to summarise, the convergent validity ensures that the measurement items are correlated with other measurement items that are part of the same concept (factor). Discriminant validity confirms that the measurement items of a single concept are sufficiently different from other measurements items from different concepts. Finally, face validity determines whether the measurements items manifest the relationships conferring to the existent theory or prior research.

Cross-validity

Using a split sample (split data) in EFA and CFA is an approach that researchers can use to cross validate the results of EFA in the next step ‘CFA’. Usually, it is used when there is a lack of theory prior to the study (Worthington and Whittaker, 2006). This approach is also called a ‘hybrid approach’. Matsunaga (2010: p 98) defined the hybrid approach as “*an approach where researchers initially run an exploratory factor analysis and follow-up on its results using a confirmatory factor analysis with separate data*”.

The main rationale for this approach is to cross validate the results of EFA in different dataset when performing the CFA analysis.

However, it is not very common in the literature as Worthington and Whittaker (2006: p 816) pointed out:

“In the studies we reviewed for the content analysis, some form of purposeful sampling from a specific target population was the most common approach, followed by a combination of convenience and purposeful sampling. Only about 25% of the studies used convenience sampling, most often with undergraduate student participants. Three of the studies we reviewed used split samples (i.e., a large sample split into two groups for separate analyses).”

It was not considered necessary to adopt a hybrid approach in this study since data is collected using well-developed instrument containing almost all measurement items which were previously tested for validity and reliability concerns (Bobek et al., 2013), and further the model of this study is based on well-known models in the literature (issue-contingent and ethical decision-making models).

However, this study did check for cross-validity by dividing the dataset into three datasets (each country) and comparing the results of the EFA from each dataset with the CFA in the three datasets and the whole dataset (the three countries together).

Reliability Test

Reliability refers to the degree to which the study’s measurement items would deliver the same results each time they are used under the same conditions with the same subjects. There are two types of reliability: individual indicator reliability and internal consistency reliability.

The individual indicator reliability refers to the consistency of loading of the items within a single factor. It is assessed through the size of factor loading in which high loading indicates a better reliability. It is very similar to the convergent validity.

On the contrary, the internal consistency reliability refers to the joint reliability of all the indicators that are part of one construct, and the consistency of those measures on reflecting their factor jointly; as opposed to separately. In order to test the internal reliability of the items within a single factor, a standard Cronbach's alpha was computed. According to Hair et al. (2010), Cronbach's alpha is a widely used as a measure of internal consistency of the measurement items. It is the average of all possible split-half coefficients resulting from different ways of splitting the scale items (Hair et al., 2010). The cut-off point differs between disciplines, Hair et al. (2010: p 123) pointed out that "*the generally agreed upon lower limit for Cronbach's alpha is 0.70, although it may decrease to 0.60 in exploratory research*". For the purpose of this study, any reliability below 0.6 would indicate poor reliability.

5. 6. 3. 4. Results of Exploratory Factor Analysis

The exploratory factor analysis "EFA" was performed on all the datasets: Irish dataset, Canadian dataset, Scottish dataset, and all countries dataset. For each of those four datasets, there are three different scenarios.

A total number of five different EFAs were conducted on each dataset and each scenario as follows: the first EFA was conducted on the 4 specific social consensus components related to the specific scenario (SC) and was followed by EFA on social norms related to the tax system in general (SNG). Another EFA was performed again on SC and SNG together. The purpose of last EFA was to reveal the pattern of correlations among all the items that are supposed to measure the social norms.

The fourth EFA was performed on SC, SNG and moral intensity's dimensions MI. the Final EFA was performed on all the measurement items expected to be part of a distinct variable.

The Figure 5.5 below presents the 5 different EFAs that were performed in each country and each scenario.

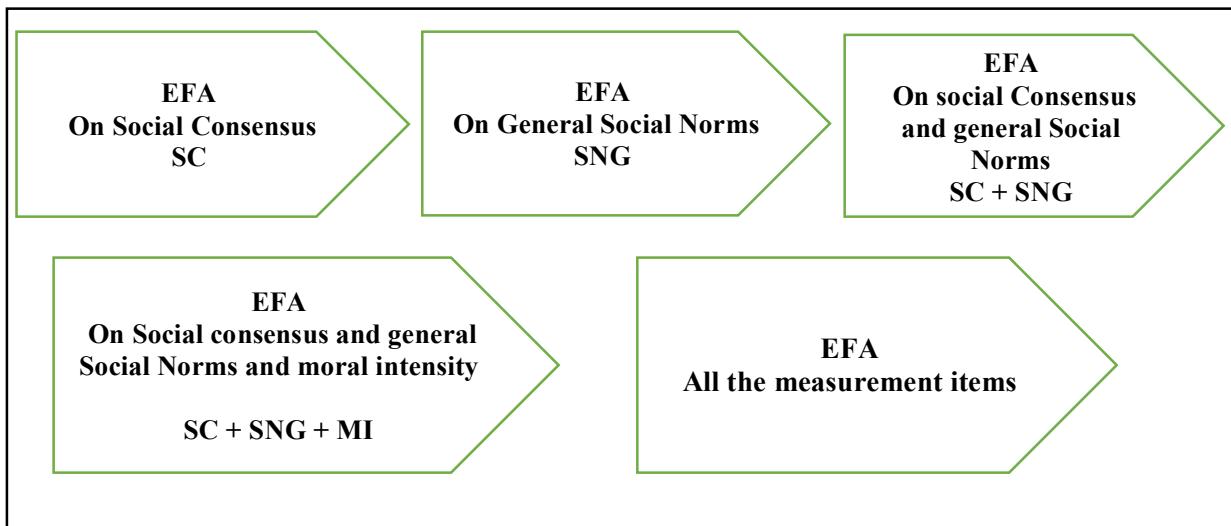


Figure 5.5: The Different Stages of the Performed EFA

Scenario I⁶³

The result of EFA on SC revealed 3 distinct latent variables (factors): personal norms ‘PN’, subjective norms ‘SUN’, and injunctive norms ‘IUN’. The descriptive norms ‘DN’ was excluded from the pattern matrix, which was expected as only one single measurement item was devoted to measuring this type of norm. The adequacy of the data was measured by KMO, TVE, and communalities. All those measures indicate that the data is appropriate to the obtained patterns factors matrix (KMO = 0.817, TVE = 64.273%, and communalities were all above 0.500).

The factors structure successfully passed the 3 validity tests (face validity; discriminant validity; and convergent validity), the loading was high for each item within the factor (convergent validity), no cross loading (discriminant validity), the items were loaded on the specific factor as was predicted by the theory and the factors were easily labelled (face validity), and there was no abnormal correlation among the extracted factors (discriminant validity). The standard Cronbach’s alpha showed an admissible internal reliability (all the values were above 0.7).

⁶³ For a presentation sake, the results of EFA is presented just for scenario 1, while the results for scenario 2 and 3 can be found in the appendix F and G.

In summary, the EFA revealed 3 distinct factors: personal norms PN, subjective norms SUN, and injunctive norms IUN. Those factors passed successfully the reliability and validity tests as well as adequacy. The Table 5.4 below summarises the pattern matrix, the standard Cronbach's alpha, the adequacy test (KMO, Communalities, and TVE), convergent validity, discriminant validity, and face validity using PAF and constrain the number of factors extracted using the theory (prior studies).

Table 5.4: The Results of EFA on SC Measurement Items

N = 638 Scale items	Principal Axis Factoring		
	PN	SUN	IUN
Personal norms a	0.961		
Personal norms b	0.761		
Personal norms c	0.729		
Subjective norms g		0.846	
Subjective norms f		0.744	
Injunctive norms h			0.770
Injunctive norms i			0.690
Cronbach's Alpha STD	0.864	0.782	0.708
Adequacy			
KMO	0.817		
Communalities	0.827 0.608 0.632	0.720 0.578	0.514 0.620
Total Variance Explained	64.273%	Non-redundant Residuals 0%	
Convergent Validity			
Loading > 0.3	✓	✓	✓
Discriminant Validity			
No cross loading	✓	✓	✓
Factor correlation matrix	✓	✓	✓

The result of the second EFA on SNG revealed four distinct factors. The measurement items loaded unexpectedly onto different factors. The theory predicted the following 4 factors:

Personal norms which should contain the following measurement items according to the prior research:

- I think I should honestly report cash earnings on my tax return.
- I think it is acceptable to overstate tax deductions on my tax return (reversed).
- I think working for cash-in-hand payments without paying taxes is a trivial offence

Subjective norms which should contain the following measurement items according to prior research:

- The people closest to me (e.g., family and/or friends, etc.) think they should honestly report cash earnings on their tax return.
- The people closest to me (e.g., family and/or friends, etc.) think that it is acceptable to overstate tax deduction on their tax return
- The people closest to me (e.g., family and/or friends, etc.) think that working for cash payments without paying tax is a trivial offence

Injunctive norms which should contain the following measurement items according to prior research:

- Most people in Ireland/Scotland/Canada think they should honestly report cash earnings on their tax returns.
- Most people in Ireland/Scotland/Canada think it is acceptable to overstate tax deductions on their tax returns.
- Most people in Ireland/Scotland/Canada think working for cash payments without paying tax is a trivial offence.

Descriptive norms which should contain the following measurement items according to the prior research

- In your opinion, what percentage of Irish taxpayers do you think deliberately pay less taxes than they legally owe?
- In your opinion, what percentage of Irish taxpayers unknowingly through lack of care pay less taxes than they legally owe?

However, the results of EFA on those measurement items demonstrated 4 factors as follows:

The first factor contains the following items:

- I think I should honestly report cash earnings on my tax returns.
- The people closest to me (e.g., family and/or friend, etc.) think they should honestly report cash earnings on their tax returns.
- Most people in Ireland/Scotland/Canada think they should honestly report cash earnings on their tax returns.

The second factor contains the following items:

- I think it is acceptable to overstate tax deductions on my tax returns.
- The people closest to me (e.g., family and/or friends, etc.) think that it is acceptable to overstate tax deductions on their tax returns.
- Most people in Ireland/Scotland/Canada think it is acceptable to overstate tax deductions on their tax returns.

The third factor contains the following items:

- I think working for cash-in-hand payments without paying taxes is a trivial offence
- The people closest to me (e.g., family and/or friends, etc.) think that working for cash payments without paying taxes is a trivial offence
- Most people in Ireland/Scotland/Canada think working for cash payments without paying tax is a trivial offence.

The fourth factor contains the following items:

- In your opinion, what percentage of Irish taxpayers do you think deliberately pay less taxes than legally owe?
- In your opinion, what percentage of Irish taxpayers unknowingly through lack of care pay less taxes than they legally owe?

The outcome of this EFA pattern matrix exhibits an unexpected set of factors. However, those extracted 4 factors can be still labelled by the type of the measurement items loaded on each factor. The first factor contained all the measurement items that were related to reporting honestly cash earnings. Hence, this factor could be labelled as the social norms toward reporting honestly all cash earnings on the tax returns ‘RT’. Similar to the first factor, the second factors contained all measurement items related to the overstated tax deductions. Therefore, this factor will be labelled as the social norms towards overstating tax deductions ‘OE’. The third factor grouped all the measurement items that are related to the social norms towards working for cash-in-hand payments without paying taxes. Therefore, this factor will be labelled as social norms toward working for cash-in-hand ‘CH’.

The fourth factor turned out to be aligned with prior theory (descriptive norm). Thus, this factor is labelled as social norms (descriptive norms) toward paying taxes ‘DNG’.

Importantly, the injunctive norms for both RT and OE failed to make it to the final pattern matrix due the low communalities and size of loading (‘most people in Ireland think they should honestly report cash earnings on their tax returns’ and ‘Most people in Ireland think it is acceptable to overstate tax deductions on their tax returns’)

The personal, subjective and injunctive norms toward the specific behaviour described in the scenario were distinguished into different factors (as social norms theory predicted), whereas the personal, subjective and injunctive norms toward working for cash-in-hand, honestly reporting taxes, and accepting overestimate tax expenses were close enough to be part of a single factor each. This result suggests that individual personal, subjective, injunctive norms are generally aligned when it comes to a general matter and could be all grouped under one umbrella ‘social norms’ (Cialdini, 1998). However, those norms manifested different factors when it comes to a specific matter ‘social consensus’ (Jones, 1991).

The difficulty in measuring and defining the social norms in tax compliance was acknowledged in prior literature. For example, Torgler (2002: p 663) pointed out “*When working with social norms, we have the difficulty of specifying their exact meaning*”. Logically, when a person is asked about his/her view regarding a general matter or issue, he/she is usually inclined to align his/her view with society (personal, subjective, injunctive and descriptive norms correlated very closely). However, when it comes to a specific matter or issue, his/her view might differ from the society view or norm.

It is worth mentioning that the EFA was freely performed without constraints on the number of factors. Leaving the SPSS to extract the number of factors based on the eigenvalue would deliver a more statistically accurate pattern matrix. Actually, the theory⁶⁴ predicted the 4 factors that they were obtained from constraining the number of factors based on the eigenvalue.

Table 5.5 summarised the EFA on SNG using PAF and free estimate the number of factors based on Eigenvalue:

⁶⁴ The previous studies that the current study based its survey on.

Table 5.5: The Results of EFA on SNG Measurement Items

N = 638 Measurement items	Principal Axis Factoring			
	CH	RT	OE	DNG
Cash in Hand c	0.763			
Cash in Hand f	0.758			
Cash in Hand i	0.510			
Reporting all Taxes a		0.788		
Reporting all Taxes d		0.719		
Overestimate expense e			0.762	
Overestimate expense b			0.673	
Descriptive Norms Gen 2				0.725
Descriptive Norms Gen 1				0.653
Cronbach's Alpha STD	0.713	0.723	0.680	0.644
Adequacy				
KMO	0.640			
Communalities	0.568 0.570 0.297	0.594 0.548	0.530 0.524	0.494 0.482
Total Variance Explained	51.201%		Non-redundant Residuals 0%	
Convergent Validity				
Loading > 0.3	✓	✓	✓	✓
Discriminant Validity				
No cross loading	✓	✓	✓	✓
Factor correlation matrix	✓	✓	✓	✓

Due to the unexpected results on the second EFA on SNG which yielded different factors than what was anticipated by theory, a third EFA that was conducted on the both SC and SNG aimed to group all the measurement items that are related to the social norms together and investigate further the type of items that manifest together to create a distinct concept (factor). For this type of exploratory analysis, two types of restraints on the number of factors were performed: the statistical method (eigenvalue) vs. the theoretical method (based on the number of extracted factors in the first and second EFA).

For the theoretical method, the number of factors was constrained to 7 different factors as where found on the results of early EFA on SC and SNG separately (3 factors from first EFA + 4 factors from the second EFA). Those factors are: PN; CH; OE; IUN; SUN; DNG; RT.

On the contrary, the statistical method allows the number of factors to be constrained by the eigenvalue of each factor. The results showed the following 5 factors: PN; ‘SUN+IUN’, CH; OE;

DNG. Following the recommendations in the literature, this study will use the theoretical method and keep the 7 factors for the further analysis (Costello and Osborne, 2005; Osborne, 2012). This decision was reached based on the literature and according to the difference in total variance explained TVE percentage between the two methods, which was 56.5% for the 7 factors versus 51% for the 5 factors.

Table 5.6: The Results of EFA on SC and SNG Measurement Items

N = 638 Measurement items	Principal Axis Factoring						
	PN	CH	OE	SUN	IUN	RT	DNG
Personal norms a	0.974						
Personal norms b	0.773						
Personal norms c	0.720						
Cash in Hand f		0.777					
Cash in Hand c		0.741					
Cash in Hand i		0.528					
Overestimate expense e			0.779				
Overestimate expense b			0.647				
Overestimate expense h			0.463				
Subjective norms f				0.827			
Subjective norms g				0.781			
Injunctive norms h					0.899		
Injunctive norms i					0.516		
Reporting all taxes d						0.866	
Reporting all taxes a						0.575	
Descriptive norms G2							0.735
Descriptive norms G1							0.650
Cronbach's Alpha STD	0.864	0.713	0.668	0.782	0.708	0.723	0.644
Adequacy							
KMO	0.814						
Communalities	0.824	0.593	0.552	0.641	0.704	0.680	0.494
	0.621	0.557	0.520	0.671	0.519	0.496	0.505
	0.634	0.328	0.293				
Total Variance Explained	56.671%			Non-redundant Residuals			0%
Convergent Validity							
Loading > 0.3	✓	✓	✓	✓	✓	✓	✓
Discriminant Validity							
No cross loading	✓	✓	✓	✓	✓	✓	✓
Factor correlation matrix	✓	✓	✓	✓	✓	✓	✓

The fourth EFA was performed on all items related to SC, SNG, and Moral intensity's dimensions MI. The outcome of the pattern matrix showed 9 factors as following: PN; POE, MC; CH; IUN; OE; DNG; SUN; RT. The result of the reliability and validity tests showed no concerns as demonstrated in Table 5.7.

Table 5.7: The Results of EFA on SC, SNG, and MI Measurement Items.

N = 638 Measurement items	Principal Axis Factoring								
	PN	CH	POE	OE	IUN	SUN	RT	DNG	MC
Personal norms a	.960								
Personal norms b	.772								
Personal norms c	.704								
Cash in hand c		.778							
Cash in Hand f		.744							
Cash in Hand f		.528							
Probability of effect d			.778						
Probability of effect e				.771					
Overestimate expense e					.789				
Overestimate expense b						.661			
Overestimate expense h						.450			
Injunctive norms h							.919		
Injunctive norms i							.516		
Subjective norms g								.976	
Subjective norms f								.547	
Reporting all Taxes d								.785	
Reporting all Taxes a								.735	
Descriptive norms G2									.781
Descriptive norms G1									.616
Magnitude of Consequences									.549
Cronbach's Alpha STD	.864	.713	.749	.668	.708	.782	.723	.644	✓
Adequacy									
KMO	.824								
Communalities	.823	.601	.595	.579	.716	.834	.615	.535	.408
	.624	.571	.617	.525	.513	.584	.611	.493	
	.646	.340		.287					
Total Variance Explained	57.597%				Non-redundant Residuals				1%
Convergent Validity									
Loading > 0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓
Discriminant Validity									
No cross loading	✓	✓	✓	✓	✓	✓	✓	✓	✓
Factor correlation matrix	✓	✓	✓	✓	✓	✓	✓	✓	✓

The last EFA on all countries dataset Scenario 1 was conducted on all items that are expected to be part of the distinct factor. The results were: PN; POE; CH; OE; INT; IUN; SUN; RT; DNG. Every single factor showed a good level of internal reliability and had no validity concerns. Table 5.8 represents the EFA conducted on all items using PAF and fixed number of factors.

Table 5.8: The Results of EFA on all Variables Measurement Items

N = 638 Measurement items	Principal Axis Factoring								
	PN	CH	INT	OE	POE	SUN	RT	IUN	DNG
Personal norms a	0.949								
Personal norms b	0.725								
Personal norms c	0.714								
Cash in hand f		0.778							
Cash in Hand c		0.735							
Cash in Hand i		0.536							
Intentions 'Quantitative.'			0.834						
Intentions 'Qualitative.'			0.760						
Overestimate expense e				0.769					
Overestimate expense b				0.702					
Overestimate expense h				0.446					
Probability of effect e					0.814				
Probability of effect d					0.732				
Subjective norms g						0.860			
Subjective norms f						0.746			
Reporting all Taxes d							0.874		
Reporting all Taxes a							0.594		
Injunctive norms h								0.873	
Injunctive norms i								0.581	
Descriptive norms G2									0.741
Descriptive norms G1									0.644
Cronbach's Alpha STD	0.864	0.713	0.812	0.668	0.749	0.782	0.723	0.708	0.644
Adequacy									
KMO	0.827								
Communalities	0.813	0.597	0.722	0.548	0.648	0.722	0.700	0.660	0.507
	0.642	0.552	0.684	0.552	0.559	0.634	0.504	0.574	0.500
	0.644	0.340		0.290					
Total Variance Explained	59.022%					Non-redundant Residuals			0%
Convergent Validity	✓	✓	✓	✓	✓	✓	✓	✓	✓
Discriminant Validity									
No cross loading	✓	✓	✓	✓	✓	✓	✓	✓	✓
Factor correlation matrix	✓	✓	✓	✓	✓	✓	✓	✓	✓

The full results of EFA for second and third scenarios can be found in the appendices E and F.

The Results of EFA for Irish, Canadian, and Scottish Datasets

The purpose of the exploratory factor analysis is to reduce and reproduce the data as less factors as possible. Besides, it offers the initial information about the factors (variables) that a given dataset holds. The reason why the EFA was performed on all countries dataset and each country dataset separately was to verify that each data yielded similar types and characteristics of the factors (variables) in their pattern matrix.

Most EFA on the different datasets demonstrated in general a similar pattern matrix as all the individual countries datasets following the same procedures that were used in the all countries dataset (the 5 different EFA on SC, SNG, ‘SC + SNG’, ‘SC + SNG + MI’, and all measurement items). Since the results were identical to those shown in the previous section, there is no need to break it down for more details. The following section continues the assessment of the extracted factors and the alignment of the measurement model to the proposed research model. Testing the reliability and validity of the latent variables in the model is one of the main advantages of the CFA along with the invariant test and common method bias test.

5. 6. 4. Confirmatory Factor Analysis

There are some similarities between CFA and EFA in some aspects, but philosophically they are quite different. The main fundamental difference between the CFA and EFA is the fact that the number of factors has to be determined by a pre-test in CFA and the measurement items have to be assigned to each of those factors as well before the results can be computed (Brown, 2015). Also, CFA requires some prior specifications and restrictions on the measurement model. EFA, on the contrary, is a pure data-driven approach in the sense that it requires no specifications nor restrictions pre-tests and it offers merely statistical results.

Accordingly, EFA is usually performed at the first stage of scale development and latent variables validation, whereas CFA is applied in the next stage to test the extent to which the obtained pattern of factors (from EFA) represents and fits the data.

Confirmatory factor analysis ‘CFA’ is a branch of the structural equation modelling SEM that specifically deals with the measurements model and the relationships between the measurement items and the latent variables [construct variables] (Brown, 2015).

CFA can be used for several purposes such as the detection of common method bias, evaluation of measurement invariance, and establishing validity. In the context of this study, CFA will be used to assess the fitness of the measurement model to the proposed model; check the reliability and validity of the latent variables; evaluate the measurement invariance among distinct groups⁶⁵; and finally, to detect any potential common method bias that the data may suffer from.

⁶⁵ High vs. low religious groups.

5. 6. 4. 1. Model Fit

One of the aims of CFA is to detect any potential issues related to the measurement model. When achieving a poor model fit at the SEM analysis, it is usually due to the misspecification in the measurement model at the CFA level rather than the structural model at the SEM level. Hence, obtaining an acceptable measurement model at CFA analysis is necessary before estimating and interpreting the results from the structural model at the SEM analysis.

The first step in CFA analysis is the model fit. Model fit refers to the degree to which the proposed model (measurement model) accounts for all the relationship between the factors and indicators in the dataset. If the measurement model accounts for the majority of the correlation inherent in the dataset, the model fit will exhibit a good fit. Whereas, in the case when there is a significant discrepancy between the correlations proposed, and the actual correlation observed, the structure factor model (measurement model) will demonstrate a poor fit (Hair et al., 2010).

In order to assess the model fit for a given measurement model, some thresholds from the literature were adopted. The thresholds used in this study used are adopted from the Hair et al. (2010: p 584) and Hu and Bentler (1999)

Table 5.9: The Thresholds of some Critical Measures

Measure	Threshold (N > 250 and m* ≥ 30)
Chi-square/DF (cmin/df)	Less than 3 good; less than 5 sometimes permissible
P value for the model	> 0.05 (significant)
CFI or TLI	Above 0.90
GFI	Above 0.90
AGFI	Above 0.80
SRMR	Less than 0.09
RMSEA	Less than 0.05 is good; between 0.05 – 0.10 moderate, > 0.1 bad
PCLOSE	Less than 0.05

* m = number of observed variables

Source: (Hu and Bentler, 1999; Hair et al., 2010)

5. 6. 4. 2. Reliability and Validity Test

The next step in the CFA analysis is to establish the validity and reliability for the latent variables. Achieving an acceptable level of reliability and validity is indispensable. The results of the CFA reliability and validity tests can offer a compelling proof of validity and reliability of factors in the measurement model.

The validity achieved in the EFA was more related to the indicators validity, whereas the validity test in the CFA was related to the constructs (latent variables). Two types of validity will be established here: the ‘convergent’ and ‘discriminant’ validity.

In some sense, discriminant measures are internally convergent (Dillon and Goldstein, 1984) since both are dealing with the same matter but from different perspectives. The discriminant validity verifies if the indicators of a theoretically distinct construct are not highly correlated with other indicators of different constructs, whereas the convergent validity verifies if the indicators of a theoretically distinct construct are strongly inter-correlated among themselves (Hair et al., 2010).

In order to establish a convergent validity for a latent variable, the average variance extracted ‘AVE’ is measured. The AVE refers to the variance of the indicators captured by their own latent variable relative to the total variance which contains measurement error (Brown, 2015). In other words, AVE is a measure of the error-free variance of a set of indicators (Dillon and Goldstein, 1984).

The widely used threshold for the AVE is 50% (Hair et al., 2010). According to Malhotra (2011: p 23), AVE is a strict measure of convergent validity, and he pointed out that “*AVE is a more conservative measure than CR. On the basis of CR alone, the researcher may conclude that the convergent validity of the construct is adequate, even though more than 50% of the variance is due to an error.*”

Maximal reliability ‘H’ is considered to be a more powerful and robust measure of convergent validity.

On the contrary, discriminant validity refers to how well the indicators of the same construct are explaining only a unique concept in the model. In other words, discriminant validity verifies and assesses if the set of indicators that they show to be part of one construct are effectively defining a unique concept (construct) and there is no high correlation among this construct’s indicators and other indicators from other constructs. To establish a discriminant validity for a latent variable, the average variance extracted AVE has to be larger than the maximum shared variance MSV with others latent variables in the measurement model (Hair et al., 2010). MSV equals to the square of the highest correlation of the latent variable with other latent variables. The rational explanation of this criteria is that the latent variable should explain more of the variance by its own indicators than by indicators of the other latent variables.

Discriminant validity is also tested through using the Fornell and Larcker (1981) criterion. In order to pass the discriminant validity for a latent variable, the correlations of this latent variable with other latent variables in the model have to be less than the square root of the AVE. All those measures are presented in figure 5.6 to be presented in the section 5.6.4.5.

5. 6. 4. 3. Invariance Test

Before moving forward into the common bias method and creating the composite variables afterwards, the invariance test needs to be performed and achieved if the study intends to employ the same factor structure across distinct groups. The CFA is considered to be a strong analytic tool to investigate whether the proposed model measures the same underlying latent variables among the distinct groups and the loadings are sufficiently equivalent across the groups. Otherwise, if the invariance test was not performed, there is no guarantee that the underlying latent variables are capturing the same concept across the groups. Also, failing in the invariance test implies that the finding of a difference between group cannot be unambiguously interpreted (Cheung and Rensvold, 2002). Hence, invariance test is critically important when comparing groups. When those groups are culturally different, and the language capacity are different across those group, invariance test becomes even more of necessity (Cheung and Rensvold, 2002).

There are two types of invariance tests: ‘Configural’ and ‘Metric’ invariance tests. The combination of the Configural and Metric invariance is called the ‘scalar invariance’ or ‘strong factorial invariance’ (Hoyle, 2012)

Configural Invariance Test

The Configural test examines whether the proposed model achieves adequate fit across groups. It ensures that the participants conceptualise the constructs in the same manner across different groups. Overall, Configural invariance test assesses whether the factors are associated with the same indicators across groups (Gregorich, 2006). Configural invariance is achieved if the basic factor structure is invariant across groups. Therefore, in order to test the configural invariance, the new model fit obtained from including the groups of interest in the measurement model will

be evaluated and if it shows an acceptable model fit, then the model is Configural invariant among the groups.

If the result shows that the proposed model is Configural invariant, this means that the data is reproduced into the same number of latent variables, with the same indicators associated with each latent variable across the groups (Cheung and Rensvold, 2002). Otherwise, if the result shows that the model is not configurally invariant, that could be interpreted by either that “*the concepts are so abstract such that participants’ perceptions of the constructs depend on their cultural context, or when participants from different groups use different conceptual frames of reference and attach different meanings to constructs*” as Cheung and Rensvold (2002: p 237) pointed out.

Metric Invariance Test

To confirm that the perception of the participants about the underlying latent variables is the same and to compare the potential difference in the path analysis across the groups, the assumption of Metric invariance must be met (Hong et al., 2003). Metric invariance is related to whether the meaning of the factors is the same across groups. Unlike the Configural invariance test which is considered to be a basic invariance test, Metric invariance offers a stronger test of invariance by introducing the concept of equal metrics or scale intervals across groups (Steenkamp et al., 1998). To assess the metric invariance, a chi-square different test on the groups of interest will be performed. If the p-value of this test is significant, then there is a substantial evidence of differences between groups so the proposed model is not adequate and comparative among those groups. Otherwise, the groups are invariant and can be tested and compared in the SEM path analysis.

5. 6. 4. 4. Common Method Bias

Many researchers that use the same source of data face issues related to the common method bias (Richardson et al., 2009). There is a consensus among the behavioural research literature that the data has to be checked for common method bias before proceeding to the SEM analysis (Podsakoff et al., 2003). Common method bias refers to the concerns related to the dataset that

are external to the measurement instrument. In simpler terms, if the research is interested in examining the relationship between two variables and those two variables are measured using the same instrument (survey in case of this study), there is a potential possibility that those two variables are sharing a systematic effect that could be called a common method bias. This common method bias can have serious impacts on the research findings if it was ignored or unassessed in the analysis. Also, it is important to understand the source of the issue and detect it in early stages so actions could take place to mitigate this issue.

In order to assess the model for a common method bias, this research adopted the common latent factor CLF approach. This approach uses a common latent factor to capture the common variance among the observed indicators in the model. As a start, the CLF will be connected to all observed items and calculated the regression with and without constraining the paths. Afterwards, a Chi-square will be used, and p-value will be produced. If the p-value is significant, that means there is evidence of a significant share variance among the observed items, which means that the data could suffer from a common method bias. If the p-value is not significant, that means there is no evidence of common method bias (Richardson et al., 2009).

In case that the CLF shows a potential common method bias, the CLF will be retained when computing the latent variables composites for the final part of the analysis. By retaining the CLF, the researcher is accounting for the common method bias (Richardson et al., 2009).

5. 6. 4. 5. Results of the Confirmatory Factor Analysis

In this section, the results of the CFAs that were conducted on the three scenarios of all countries dataset will be presented. For each scenario⁶⁶, a summary figure will be presented that exhibits all the steps of the CFA such as: model fit, reliability and validity checks, invariance test (Configural and Metric test), and the common method bias test. Also, the figure demonstrates the measurement model along with all indicators and the latent variables and the regression loadings (see figure 5.6).

⁶⁶ The summary figures of Scenario 2 and 3 can be found in the appendix H and I.

Scenario I⁶⁷

According to figure 5.6, the measurement model achieved an excellent model fit. Specifically, the absolute measures such as χ^2 , GFI, AGFI and SRMS exhibited very acceptable values (2.375, 0.949, 0.919, and 0.0359 respectfully) all above the thresholds. The relative and parsimonious measures are high above the thresholds that were demonstrated in Table 5.9 which confirms the good fit of the proposed model to the dataset.

There are no concerns regarding the validity and reliability of the proposed model and constructs. The composites reliability CR of all the constructs in the model are above the threshold of 0.7 as well as the average variance extracted AVE which exhibits excellent values above 0.5.

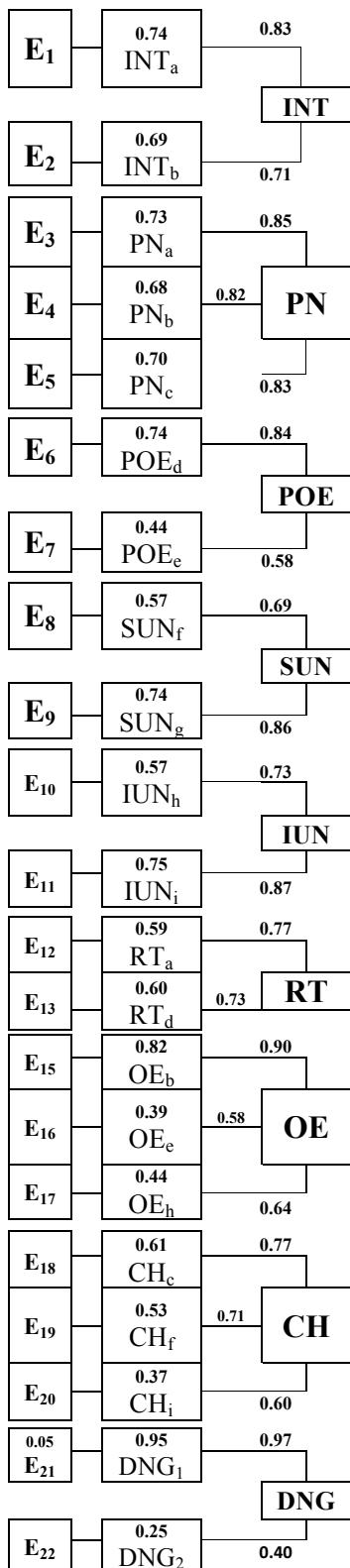
A more robust measure of reliability was computing as well, which is the Maximal reliability “H”. The results support the same conclusion of no reliability concerns.

Both tests of invariance (Configural and Metric) confirmed that the groups (High and Low religious groups) are Configural and Metric invariant, which implies that the constructs in the model are measuring the same concept across the groups and can be tested for differences in relationships in the next stage of the analysis (path analysis).

Finally, there was evidence of a common method bias in measuring the indicators and variables in the study so the common latent factor will be retained in computing the composites in order to account for the common method bias.

Overall, the measurement model showed an excellent model fit and no validity nor reliability concerns, and the groups are invariant in the model. The only concern was the common method bias that was addressed by retaining the common latent factor CLF in creating the constructs composites.

⁶⁷ The full results of CFA for Scenario 2 and 3 can be found in the appendix H and I.



(1) Model fit														
Absolute				Relative				Parsimonious						
Test	Value	Test	Value	Test	Value	Test	Value	Test	Value	Test	Value			
X ²	2.375	NFI	0.928	PNFI	0.645									
RMR	0.112	RFI	0.897	PCFI	0.665									
GFI	0.949	IFI	0.957	CMIN	346.730									
AGFI	0.919	TLI	0.938	DF	146									
PGFI	0.600	CFI	0.957	RMSEA	0.046									
SRMR	0.0359			PCLOSE	0.817									
(2) Validity & Reliability														
	CR	AVE	MSV	H	IUN	PN	INT	POE	CH	RT	SUN	OE	DNG	
IUN	.782	.643	.352	.801	.802									
PN	.877	.704	.421	.918	.593	.839								
INT	.818	.694	.355	.944	.400	.596	.833							
POE	.721	.570	.210	.953	.431	.445	.293	.755						
CH	.759	.516	.034	.961	.039	.181	.156	.017	.719					
RT	.723	.567	.421	.965	.544	.649	.420	.362	.060	.753				
SUN	.743	.593	.303	.968	.525	.550	.284	.458	-.001	.445	.770			
OE	.745	.501	.184	.972	.262	.384	.311	.210	.185	.429	.162	.708		
DNG	.723	.591	.088	.981	.209	.296	.203	.215	.162	.267	.155	.271	.769	
(3) Invariance test														
<i>(A) Configural Invariance test</i>														
Test	Value	Test	Value	Test	Value	Test	Value	Test	Value	Test	Value			
X ²	1.828	SRMR	0.0520	RMSEA	0.036									
GFI	0.891	CFI	0.924	PCLOSE	1.000									
<i>(B) Metric Invariance test</i>														
No Constrained						Fully Constrained								
Chi-square	824.257			Chi-square	851.769									
DF	476			DF	476									
P-Value	0.331			The groups are <i>NOT</i> different at the model level										
(4) Common Method Bias														
No Constrained						Fully Constrained								
Chi-square	208.867			Chi-square	346.730									
DF	125			DF	146									
Chi-square difference	137.863			DF difference	21									
P-Value	0.000			The groups are different at the model level										

Figure 5.6: The Results of CFA on Scenario 1

5. 6. 4. 6. Construct Composites

After passing all the CFA steps successfully, a final step before moving to the SEM analysis and path analysis was computing the latent variables composites. Since there were common method bias concerns for all the scenarios; the CLFs were retained in computing the composites to account for the common method bias and the commonly shared problematics.

5. 6. 5. Summary of the Pre-Analysis

The section 5.6.3 and 5.6.4 have provided the results of the exploratory factor analysis and confirmatory factor analysis respectively. The EFA was conducted in all countries dataset using the principal axis factoring PAF to assess the factorial dimensionality of the dataset and to reproduce the data in as less factors as possible. This analysis resulted in regrouping the indicators into nine latent variables which could follows: personal norms **PN**; subjective norms **SUN**; injunctive norms **IUN**; probability of the effect **POE**; ethical intentions **INT**; social norms toward reporting honestly all taxes **RT**; social norms toward accepting overestimated expenses **OE**; social norms toward working for cash-in-hand **CH**; and finally, social norms toward paying taxes **DNG**. The reliability and validity test at this stage showed no concerns.

To confirm the factor pattern obtained from the EFA, CFA was carried out to assess: the fitness of the data to the measurement model, to check the reliability and validity assumptions of the model and latent variables, to test for the invariance of the groups in measuring the model, and finally to detect if the dataset is suffering from common method bias. The results of the CFA confirm the fitness of the data to the measurement model and show no concerns regarding the validity and reliability of the model and its constructs. The invariance test confirms that the model is invariant among the groups⁶⁸ which allow conducting multi-group analysis in the next chapter. The only concerns were at the common method bias level where evidence showed that there was a high common shared variance. This issue was addressed by retaining the CLF for the last step of the CFA which is computing the constructs composites. By retaining the CLF, the model will account for the common shared variance, and the issue of common method bias is mitigated.

⁶⁸ High and Low religious groups.

To demonstrate and summarise the steps used in the methodology, table 5.10 illustrates the steps used in each part of the methodology starting with structure and content of the survey and finishing with the actual data analysis. The second section of the table also displays in more details the steps used in the pre-data analysis such as EFA and CFA.

Table 5.10: The Steps Used in The Methodology

Methodology phase	The steps	The sources
Structure and Content of the survey	<i>Step 1:</i> Development of initial draft <i>Step 2:</i> Pretesting of the survey <i>Step 3:</i> Pilot testing of the survey	Dillman (2011)
Statistical approach	<i>Step 1:</i> Sampling method <i>Step 2:</i> Sample size <i>Step 3:</i> Data collection <i>Step 4:</i> Response rate (non-response bias)	Oppenheim (2000)
Pre-data analysis	<i>Step 1:</i> Data screening <i>Step 2:</i> Multivariate assumptions <i>Step 3:</i> Exploratory factor analysis <i>Step 4:</i> Confirmatory factor analysis	Hair et al (2010)
Actual data analysis	<i>Step 1:</i> Descriptive statistics <i>Step 2:</i> Univariate analysis of variance <i>Step 3:</i> Preliminary tests of hypotheses <i>Step 4:</i> Formal tests of hypotheses 'SEM'	Hair et al (2010)
Pre-data analysis	<i>Step 1:</i> Data screening Phase 1: Data and variables screening Phase 2: Missing data Phase 3: Unengaged data	Hair et al (2010)
	<i>Step 2:</i> Multivariate assumptions Phase 1: Normality assumption Phase 2: Linearity assumption Phase 3: Multicollinearity assumption	
	<i>Step 3:</i> Exploratory factor analysis Phase 1: Selection of extraction method, number of factors to retain for rotation, rotation method. Phase 2: Adequacy, Validity, and Reliability of the factor structure of the EFA	
	<i>Step 4:</i> Confirmatory factor analysis Phase 1: Model fit Phase 2: Reliability and validity test Phase 3: Invariance test Phase 4: Common method bias Phase 5: Construct Composites	

5. 7. Chapter Summary

This chapter presented the research methodology approach and the method used to gather evidence about the research concerns and introduced the statistical tool selected to analyse the data.

This chapter (section 2) started by briefly describing the philosophical approach of the research. The research's paradigm was introduced and selected following the philosophical assumptions of the research. It then went on to outline the research approach adopted which stems from a positivist research paradigm (functionalist) whereby the reality can be objectively measured and the researcher is independent from what is being researched. The last part of this section discussed some issues related to the research methodology and the deductive research approach adopted by this study. The overall description of the philosophical approach of this study is the use of *a priori* theories/models to generate hypotheses based on theories and testing them through empirical data.

Section 3 of this chapter provided the details of the research instrument applied in this study. It began with the purpose of the survey and was followed by a discussion of the structure and content of the survey. In developing the research instrument (survey), three steps were followed. The first step was to develop the initial draft of the survey, which consisted of five sections: (1) three research scenarios; (2) socio-demographic measures; (3) Islamic taxation measures; (4) religiosity scale measures; and (5) general social norms measures. This initial draft was pretested as the second procedure after developing the survey. Finally, a pilot testing took place to ensure that the survey was, in fact, measuring the intended concepts. The last part of this section described the method adopted in administrating the survey.

The statistical approach used in this study was then discussed (section 4). First, the research population of this study (Irish/Scottish/Canadian taxpayers and students) was described. Secondly, the sampling method used to gather the required data was explained. The non-probability sampling method was the approach used in the current study for data collection. The minimum sample size was calculated using the G*power program based on 172 completed questionnaires. The data collection was comprehensively described for the three countries (Ireland, Canada, and Scotland). Finally, the response rate of this study was discussed as well as the non-response issue. Out of 2102 distributed questionnaires, 679 questionnaires were

completed and received back to be analysed, which made the response rate of this study to be equal to 32.3%.

The data analysis sections (section 5 and 6) described with the intended empirical analysis that this study has performed based on two phases: the ‘pre-data’ analysis and the ‘actual data’ analysis. The pre-data analysis consisted of different stages: (1) data screening, (2) multivariate assumptions, (3) EFA, and (4) CFA.

The actual data analysis (next Chapter) is where the hypotheses are tested and confirmed (next Chapter). It starts with descriptive statistics, the mean scores and univariate analysis of variance (ANOVA). This will be followed by the preliminary test of hypotheses (correlation analysis), where the developed research hypotheses are initially tested. Finally, a structural equation modelling “SEM” will be conducted to formally test the generated hypotheses from Chapter 4.

Chapter 6: Findings

6. 1. Introduction

This chapter presents the statistical analysis of the results in three main parts. The first part (Section 6.2) includes basic descriptive statistics on the socio-demographic backgrounds of the respondents as well as on each of the constructs (latent variables) included in this study. It also includes a univariate analysis of variance (one-way ANOVA test) which offers a comparative analysis of the dependent variables across the control variables. The second part (Section 6.3) presents bivariate correlation analysis to assess the appropriateness of the proposed hypotheses and research model as suggested by Hair (2010).

The third part (Section 6.4) presents the SEM analysis conducted using the maximum likelihood method of parameter estimation in AMOS 22. SEM is a modelling technique that simultaneously estimates multiple regression equations. It is an extension of multivariate regression that allows for the simultaneous testing of any number of independent variables (Hair et al., 2010). In this section, mediation test will be performed using the bootstrapping technique on the three stages of Rest and Barnett (1986), as well as a multi-group comparisons test which is applied to the religiosity groups (section 6.4.1.4).

The last part of this chapter (Section 6.5) provides a summary of the findings and concludes the chapter.

6. 2. Descriptive Statistics

This section consists of two parts. The first part presents the descriptive statistics on the demographics backgrounds of the respondents in each country including age, gender, marital status, nationality, country of birth, educational levels and field, experience, job status and religion affiliation (see Table 6.1). The second part presents the outcomes of the univariate analysis of variance ‘ANOVA’ (see Table 6.4).

6. 2. 1. Demographics of Data

A comprehensive analysis of the participants background can be found in the following Table:

Table 6.1: The Background Information for all the Participants

Characteristics		Ireland (N = 388)	Canada (N = 216)	Scotland (N = 75)	All countries (N = 679)
Age	Young (less than 20 years)	25 (6%)	26 (12%)	22 (29%)	73 (11%)
	Adult (21 – 34 years)	250 (64%)	138 (64%)	33 (44%)	421 (62%)
	Middle age (35 – 54 years)	97 (25%)	46 (21%)	18 (24%)	161 (24%)
	Senior (over 55 years)	10 (3%)	6 (3%)	2 (3%)	18 (3%)
	Missing	6 (2%)	0 (0%)	0 (0%)	6 (1%)
Residence in the country	New arrivals (less than 1 year)	49 (13%)	20 (9%)	20 (27%)	89 (13%)
	Short residence (1-3 years)	94 (24%)	50 (23%)	9 (12%)	153 (22.5%)
	Medium residence (4-10 years)	83 (21%)	62 (29%)	9 (12%)	154 (22.5%)
	Long residence (over 10 years)	158 (41%)	84 (39%)	37 (49%)	279 (41%)
	Missing	4 (1%)	0 (0%)	0 (0%)	4 (1%)
Gender	Male	237 (61%)	192 (89%)	57 (76%)	486 (71.5%)
	Female	148 (38%)	24 (11%)	18 (24%)	190 (28%)
	Missing	3 (1%)	0 (0%)	0 (0%)	3 (0.5%)
Marital status	Married	122 (31%)	54 (25%)	25 (33%)	201 (29.5%)
	Single	247 (63%)	157 (73%)	49 (65%)	453 (67%)
	Other	16 (4%)	5 (2%)	1 (1%)	22 (3%)
	Missing	3 (1%)	0 (0%)	0 (0%)	3 (0.5%)
Education level	No formal qualification	11 (3%)	1 (0.4%)	1 (1%)	13 (1.9%)
	High school study	92 (24%)	51 (24%)	16 (21%)	159 (23%)
	University study	158 (41%)	105 (49%)	40 (53%)	303 (45%)
	Post graduate study	122 (31%)	56 (26%)	18 (24%)	196 (29%)
	Other	2 (0.5%)	3 (1%)	0 (0%)	5 (1%)
	Missing	3 (0.7%)	0 (0%)	0 (0%)	3 (0.5%)
Education field	Business	78 (20%)	42 (19%)	15 (20%)	135 (20%)
	Law	21 (5 %)	9 (4%)	8 (11%)	38 (6%)
	Sciences & engineering	69 (18%)	103 (48%)	25 (33%)	197 (29%)
	Humanities	33 (8.5%)	21 (10%)	6 (8%)	60 (9%)
	Medicine	153 (39 %)	14 (6.5%)	13 (17%)	180 (26.5%)
	Not applicable	0 (0%)	17 (8%)	6 (8%)	23 (3.5%)
	Other	26 (7%)	10 (5%)	2 (3%)	38 (6%)
	Missing	8 (2%)	0 (0%)	0 (0%)	8 (1%)
Job statue	Part-time employed	23 (6%)	26 (12%)	1 (1%)	50 (7%)
	Self-employed	10 (3%)	9 (4%)	2 (3%)	21 (3%)
	Unemployed	19 (5%)	13 (6%)	1 (1%)	33 (5%)
	Full-time employed	50 (13%)	68 (31.5%)	17 (23%)	135 (20%)
	At home	18 (5%)	4 (2%)	2 (3%)	24 (3.5%)
	Student	263 (68%)	94 (43.5%)	51 (68%)	408 (60%)
	Retired	1 (0.25%)	2 (1%)	1 (1%)	4 (1%)
	Other	4 (1%)	0 (0%)	0 (0%)	4 (1%)
How many years have you filed tax return?	Never	228 (59%)	55 (25.5%)	53 (71%)	336 (50%)
	1 – 4 years	84 (22%)	93 (43%)	8 (11%)	185 (27%)
	over 5 years	69 (18%)	68 (31.5%)	11 (15%)	148 (22%)
	Missing	7 (2%)	0 (0%)	3 (4%)	10 (1.5%)
Who prepares your tax returns?	Myself/Ourselves	77 (20%)	60 (28%)	7 (9%)	144 (21%)
	Tax preparer	69 (18%)	105 (49%)	10 (13%)	184 (27%)
	Not applicable	234 (60%)	51 (24%)	55 (73%)	340 (50%)
	Missing	8 (2%)	0 (0%)	3 (4%)	11 (2%)
Religion affiliation	Christian	78 (20%)	6 (3%)	1 (1%)	85 (12.5%)
	Muslim	264 (68%)	209 (96.8%)	73 (97%)	546 (80%)
	Atheist/Agnostic	38 (10%)	1 (0.4%)	0 (0%)	39 (6%)
	Other	11 (2%)	0 (0%)	0 (0%)	11 (0.5%)
	Missing	0 (0%)	0 (0%)	0 (0%)	0 (0%)

As it is shown in the table 6.1, the majority of respondents were male 71.5% compared to 28% female. The reason for the preponderance of male respondents is the difficulties of approaching the Muslim female in Muslim community comparing to non-Muslim participants⁶⁹. The survey was distributed mainly in mosques during Fridays prayers, where the Muslim female are not required to attend the prayer, whereas, the male Muslim are obligated to attend this particular prayer weekly.

Regarding the age, marital status, and religion affiliation; 62% of the participants were between 21 to 34 years, 67% were single, and 80% were Muslims. The predominant religion in the non-Muslim respondents was Christianity by 63%.

On the education side, most of the respondents had academic qualifications as 303 (45%) of respondents had a university degree, 196 (29%) had a post-graduate degree, and 159 (23%) had a high school level of study, whereas 13 (1.9%) said they had no formal qualifications. This result was expected as the survey was mostly distributed to university students.

The field of education was predominated by sciences and engineering 197 (29%) followed by medicine 180 (26.5%) and business 135 (20%).

It is worth mentioning that the Canadian data is mainly Muslim participants 96.8% (209) due to some challenges faced by the author in obtaining access to non-Muslim respondents⁷⁰. The same applies to for the Scottish data; only the Muslim community was surveyed due to access constraints.

6. 2. 2. Variable Descriptive

Following the description of the demographics, this section deals with the description of each variable of interest and the way they were captured and operationalised in the survey (e.g., how many indicators, the type of scale, and all the statistical description of those indicators). Those variables were grouped into 4 themes.

The first group contains the three stages of ethical decision making ‘EDM’, which are: ethical recognition ‘ER’, evaluation ‘EE’, and intentions ‘INT’.

⁶⁹ The percentage of male and female was fairly evenly for Non-Muslim Irish respondents (49.2% and 48.4% respectively)

⁷⁰ The access was obtained but due the time constraint and financial shortage, the distribution to non-Muslim respondents did not take a place

The second group consists of the three moral intensity ‘**MI**’ dimensions: perceived social consensus ‘**SC**’, perceived probability of effects ‘**POE**’, and perceived magnitude of consequences ‘**MC**’ (Jones, 1991). The social consensus ‘**SC**’ was unpacked into three different types: Subjective norms ‘**SUN**’, injunctive norms ‘**IUN**’, and descriptive norms ‘**DN**’ following the social norms theory (Cialdini, 1998).

The third group contains the moral agent characteristic which is the personal norms ‘**PN**’, and the last group contains the general social norms ‘**SNG**’ toward tax systems. Similar to social consensus ‘**SC**’, those general social norms were thought to be categorised into the three types of norms (SUN, IUN, DN), however, the results of the EFA showed different factors: social norms toward reporting taxable income ‘**RT**’, social norms toward overstating tax deductions ‘**OE**’, and general descriptive norms ‘**DNG**’ (see Section 5.6.3.4).

The results and values are presented in two separate Tables (Tables 6.2 and 6.3) for the whole data collected (in Ireland, Canada, and Scotland).

The majority of the indicators were operationalised on a 7 point Likert-scale, anchored on an ordinal scale from 1 (strongly disagree) to 7 (strongly agree). Some of those indicators were reversed to detect any unengaged response. However, in coding the data, all the items were coded with higher values indicating more favourable compliance behaviour including the reversed indicators. The following Table 6.2 includes the mean scores of all indicators⁷¹ that followed each scenario and the results of the t-test (different than the mid-point ‘4’).

⁷¹ Indicators that measured all of ER, EE, INT, PN, SUN, IUN, DN, POE, and MC.

Table 6.2: The Mean Scores and the Results of t-test for EDM, MI, and PN.

Variables	Indicator	Scenario1 (N=638)		Scenario2 (N=635)		Scenario3 (N=636)	
		Mean	P	Mean	P	Mean	P
Ethical recognition 'ER.'	"To what extent do you agree that there is a moral (ethical) issue involved in Jack's behaviour ^{A,,} "	4.54***	0.000	3.84*	0.05	4.85***	0.00
Ethical evaluation 'EE'	"Overall, how would you rate Jack's decision ^{A,,} (R)	4.55***	0.000	3.81***	0.01	5.08***	0.00
Ethical intention 'INT.'	"How likely would you be to make the same decision as Jack and underreport the cash ^{B,,} (R)	4.20**	0.019	3.50***	0.00	5.15***	0.00
	"Which of the following amounts of the \$6,000 cash ^C do you think is close the amount you would underreport ^{B,,} (R)	3.83	/	3.21	/	4.33	/
Personal norms 'PN.'	"You would definitely feel guilty if you did underreport ^B the \$6,000 cash ^{C,,}	4.51***	0.000	3.45***	0.00	5.17***	0.00
	"You would definitely feel justified if you did underreport ^B the \$6,000 cash ^{C,,} (R)	4.45***	0.000	3.65***	0.00	5.13***	0.00
	"You would definitely feel ashamed if you did underreport ^B the \$6,000 cash ^{C,,}	4.10	0.262	3.35***	0.00	4.81***	0.00
Subjective norms 'SUN'	"Your family would definitely NOT think it is okay to underreport ^B the \$6,000 cash ^{C,,}	4.27***	0.001	3.56***	0.00	4.73***	0.00
	"Your friends would definitely NOT think it is okay to underreport ^B the \$6,000 cash ^{C,,}	3.99	0.855	3.17***	0.00	4.39***	0.00
Injunctive norms 'IUN.'	"Most people would definitely feel guilty if they did underreport the \$6,000 cash ^{B,,}	4.02	0.811	3.13***	0.00	4.16**	0.01
	"Most people would definitely NOT feel ashamed if they did underreport the \$6,000 cash ^{B,,} (R)	3.85**	0.043	3.09***	0.00	4.25***	0.00
Descriptive norms 'DN.'	"What percentage of the \$6,000 cash ^C do you think is the closest to the amount that the average Irish ^{B,,} taxpayer would report ^{B,,,*}	3.37	/	2.94	/	3.54	/
Probability of effects 'POE.'	"If you decided to underreport ^B the \$6,000 cash ^{C,,} you would definitely be audited by the tax authorities."	3.89	0.124	3.29***	0.00	4.21***	0.00
	"If you were audited by the tax authorities, they would definitely discover that you had engaged in underreport behaviour ^{B,,}	4.18**	0.015	3.53***	0.00	4.44***	0.00
Magnitude of consequences 'MC.'	"if you were audited by the tax authorities, how would you rate the seriousness of the consequences."	4.78***	0.000	3.71***	0.00	4.93***	0.00

All of **ER**, **EE**, **INT_a**, **PN**, **SUN**, **IUN**, and **POE** were measured on a 7-point Likert-type scale with higher values in favour of more compliance behaviour. The magnitude of consequence "**MC**" indicator was also measured on a 7-point Likert-type scale with the higher value indicating severe consequences in case of underreporting income /overstating tax expenses. While, **DN** and **INT_b** (which of the following amounts, do you think close to the amount you would underreport/overestimate) were measured on a 6-point Likert-type scale with higher values in favour of a more compliant behaviour.

(R): The scale was reversed so the higher values in four of more compliance behaviour.

A: Julie's behaviour in Scenario 2, & James' behaviour in scenario 3.

B: "Julie and underreport the tips" in scenario 2, & "James and take the additional \$1,400 deductions" in scenario 3.

C: \$500 tips in scenario 2 & \$1,400 additional expenses in scenario 3.

P: It is p-value of the t-test.

/: It is not applicable in this indicator.

T-test analysis

*: significant at 90% level of confidence; **: Significant at 95% level of confidence; ***: significant at 99% level of confidence.

6. 2. 2. 1. Statistical Description of the Three Stages of Ethical Decision-Making

The ethical decision-making process consists of four stages: (1) ethical recognition ‘ER’; (2) ethical evaluation ‘EE’; (3) ethical intention ‘INT’; and (4) ethical behaviour ‘EB’ (Rest and Barnett, 1986). This study is concerned only with the first three stages (ER, EE, and INT).

Regarding ethical recognition ‘ER’, the mean scores of the one-item measure for scenarios 1 and 3 were significantly⁷² higher than the midpoint (4.54 and 4.85 respectively). This implies that the respondents, on average, recognised that the behaviours described in those two scenarios⁷³ had an ethical problem. On the other hand, the mean score for scenario 2 was 3.84 (STD = 2.028) which is slightly lower than the midpoint of 4. A one sample T-test showed that this was significant⁷⁴ only at the confidence level of 90%. To be more conservative, this result is interpreted as the respondents are not quite certain whether this type of behaviour⁷⁵ involves an ethical issue.

To sum it up, the participants recognised that the behaviour involved in scenario 3 (falsely overestimating tax deductions by \$1,400) is more appealing⁷⁶ (p-value 0.000) and contains an ethical issue than the behaviour described in scenario 1 (underestimate the \$6,000 taxable income). In contrast, for scenario 2 (underreport the \$500 taxable tips), the participants were uncertain whether this type of behaviour has any potential ethical issue.

The second stage of EDM is ethical evaluation ‘EE’. The mean scores for scenario 1 and 3, were 4.55 and 5.08 which were significantly⁷⁷ higher than the midpoint, hence, it indicates that the respondents judged both behaviours to be unethical with a stronger⁷⁸ judgment (p-value 0.000) for the falsely overestimate tax deductions behaviour compared to underreport the \$6,000 taxable income. Surprisingly, the mean score for scenario 2 was 3.81 which is significantly⁷⁹ lower than the midpoint 4; this means that the respondents, on average, were more inclined to judge the

⁷² The results of t-test for scenario 1 and 3 were ‘p-value = 0.000 and t-statistic= 6.9’ and ‘p-value = 0.000 and t-statistic= 10.698’ respectively.

⁷³ Scenario 1 the behaviour was underreport the \$6,000 cash income. While, for scenario 3 the behaviour was falsely overestimate tax deduction by \$1,400.

⁷⁴ The results of t-test for scenario 2 was p-value = 0.053 and t-statistic = -1.937.

⁷⁵ The behaviour described in scenario 2 was underreport the taxable \$500 tips by a university’s student.

⁷⁶ The mean score (4.85) for scenario 3 were significantly higher than the mean score (4.54) of scenario 1 (p-value = 0.000 and t-statistic = 3.869)

⁷⁷ The results of t-test for scenario 1 and 3 were ‘p-value = 0.000 and t-statistic= 8.004’ and ‘p-value = 0.000 and t-statistic= 15.508’ respectively.

⁷⁸ The mean score (5.08) for scenario 3 were significantly higher than the mean score (4.55) of scenario 1 (p-value = 0.000 and t-statistic = 7.799)

⁷⁹ The result of t-test for scenario 2 was p-value = 0.01 and t-statistic = -2.600.

behaviour as ethical than unethical behaviour. This outcome could be linked back to the result of the first stage of EDM that participants did not think that underreporting the \$500 taxable tips involved an ethical issue.

The third stage of EDM is ethical intentions ‘INT’. This latent variable was initially operationalised by two indicators (qualitative ‘INT_a’ and quantitative predictions ‘INT_b’), following the work of Henderson and Kaplan (2005). The first indicator predicts the probability of the participants acting in a similar way to that described in each scenario (qualitative prediction).

The mean scores of this indicator were 4.20, 3.50, and 5.15 for scenario 1, 2, and 3 respectively. This suggests that the participants were more likely to not overstate tax deduction by \$1,400, and to report the \$6,000 taxable cash (both means was significantly⁸⁰ higher than midpoint) however, they were more likely to underreport the \$500 taxable tips.

For the quantitative prediction ‘INT_b’ (second indicator), the participants predicted the amount by which they would underreport (overstate) the taxable income (tax deductions) under the same circumstance of the described scenarios. The response included six 20% increments, ranging from 0% (\$0) to the full amount 100% (\$6,000/500/1,400).

The average percentage that participants would evade is between 40% to 60% of the \$6,000 and \$500 taxable income and overstate between 20% to 40% of the amount of \$1,400 tax deductions. Hence, on average, the participants showed non-compliance intentions in all scenarios. To avoid any issue that may arise from combining the two indicators as one latent variable (ethical intentions), just the qualitative prediction (the probability of behaving similarly to the behaviour described in the scenarios) will be the representative of this variable.

To sum up, two important outcomes could be concluded from this analysis:

- (1) Respondents tended to hold a more favourable intention to compliance if they had recognised that the described behaviour involved an ethical issue, as well as if they had judged the behaviour to be unethical.
- (2) intentions to comply were highest for overstating tax deductions (scenario 3) and lowest for reporting taxable tips (scenario 2)

⁸⁰ The results of t-test for scenario 1 and 3 were ‘p-value = 0.019 and t-statistic= 2.358’ and ‘p-value = 0.000 and t-statistic= 15.303’ respectively, while for scenario 2 the p-value was 0.000 and t-statistic was -5.551.

6. 2. 2. Statistical Description of the Personal Norms

The concept of personal norms was operationalised through three indicators.

In scenario 1, the mean scores of the first two indicators were significantly⁸¹ higher than the midpoint (4.51 and 4.45), while the mean score of the third indicator was not significantly different from the midpoint (4.10). Those results suggest that the respondents, on average, would feel guilty and unjustified if they did underreport the \$6,000 cash income, however, they were undecided if they would feel ashamed.

In scenario 3, the mean scores of the all three indicators were significantly⁸² higher than the midpoint of the scales (5.17, 5.13, and 4.81), which suggests that the respondents hold high personal norms against falsely overstating tax deductions by \$1,400 (they would definitely feel guilty, unjustified, and ashamed if they did overstate tax deductions by \$1,400).

In contrast, in scenario 2, underreporting of \$500 taxable tips would make the respondents feel justified and would make them feel neither guilty nor ashamed. The mean scores were significantly⁸³ less than the midpoint (3.45, 3.65, and 3.35).

Linking back to the previous results, the low personal norms against underreporting the \$500 tips could be one of the reasons why the respondents had less intentions to report the \$500 taxable tips and did not recognise that this type of behaviour contained an ethical issue and judged it as ethical behaviour. The correlations among the three indicators were significant⁸⁴ in the three scenarios, and the Cronbach alpha was above the threshold of 0.6 in all scenarios (0.864, 0.907, and 0.867 respectively) which indicate no internal consistency reliability concerns. The composite reliability index “CR” of the PN variable were 0.876, 0.907, and 0.881 for the three scenarios, which are all above the threshold of 0.7, indicating that there is no constructs reliability concern (Hair et al., 2010). The average extracted variances ‘AVE’ were above the threshold of 0.5 (0.702, 0.766, and 0.713 respectively) also suggesting no constructs validity concerns.

⁸¹ The results of t-test for indicators 1 and 2 were ‘p-value = 0.000 and t-statistic= 5.831’ and ‘p-value = 0.000 and t-statistic= 5.607’ respectively, while for indicator 3 the p-value was 0.262 and t-statistic was 1.122.

⁸² The results of t-test for indicators 1, 2 and 3 were ‘p-value = 0.000 and t-statistic= 15.165’ and ‘p-value = 0.000 and t-statistic= 15.637’, and ‘p-value was 0.000 and t-statistic was 9.675’ respectively.

⁸³ The results of t-test for indicators 1, 2 and 3 were ‘p-value = 0.000 and t-statistic= -6.171’ and ‘p-value = 0.000 and t-statistic= -3.957’, and ‘p-value was 0.000 and t-statistic was -7.476’ respectively.

⁸⁴ For scenario 1 the correlation between: [PN_a and PN_b] was 0.708***; [PN_a and PN_c] was 0.709***; and [PN_b and PN_c] was 0.622***. In second scenario correlations were: [PN_a and PN_b] was 0.746***; [PN_a and PN_c] was 0.727***; and [PN_b and PN_c] was 0.596***. In the third scenario correlations were: [PN_a and PN_b] was 0.766***; [PN_a and PN_c] was 0.797***; and [PN_b and PN_c] was 0.731***

6. 2. 2. 3. Statistical Description of the Moral Intensity Dimensions.

This study is concerned with three out of six moral intensity's dimensions, which are: social consensus 'SC'; the probability of effects 'POE'; and magnitude of consequences 'MC'.

Social consensus

Social consensus is one of the key dimensions of moral intensity, and it was defined by Jones (1991: p 375) as "*the degree of social agreement that a proposed act is evil (or good)*". It consists of three types of norms: subjective, injunctive, and descriptive norms according to Cialdini (1998). Multiple indicators were adopted from the literature to measure those three types of norms (Bobek et al., 2013).

As set out in Table 6.2, the subjective norms 'SUN' were captured by two indicators. Both indicators were measured on a 7 point Likert scale, with higher values indicating a higher perception that the significant others (friends, family.etc.) think that the described behaviour is morally wrong (i.e., is in favour of tax compliance).

In scenario 1, the mean score of the first indicator (family) was significantly⁸⁵ higher than the midpoint (mean score = 4.27), whereas, the mean score of the second indicator was very close to the midpoint (mean score = 3.99). These results could be interpreted as the respondents, on average, think that their family would disapprove the underreporting of the \$6,000 taxable income, whereas, they were uncertain whether their friends would approve such behaviour. The Pearson correlation test shows a significant correlation between those two indicators (0.636***), and the Cronbach's alpha was 0.862 which indicates acceptable reliability. The CR and AVE were 0.742 and 0.592 which are good signs of no reliability and validity concerns for this latent variable.

In scenario 2, the mean scores of the two indicators were significantly⁸⁶ lower than the midpoint (mean scores were 3.56 and 3.17 respectively). This result suggests that the respondents think that the significant others (family and friends) would somehow approve the underreporting of \$500 taxable tips. The Pearson correlation test showed a correlation of 0.798***, and the

⁸⁵ The results of t-test for the first indicator was 'p-value = 0.001 and t-statistic= 3.456', while for the second indicator the 'p-value was 0.855 and T-statistic was -0.183'.

⁸⁶ The results of t-test for the two indicators were 'p-value = 0.000 and t-statistic= -5.170', and 'p-value = 0.000 and t-statistic = -10.325' respectively.

Cronbach's alpha showed the value of 0.887, which suggests that there is no internal consistency reliability issue among those two indicators. The CR of the factor "SUN" showed a value of 0.888 which is above the threshold, the same as the AVE (0.798) which implies that there are no reliability nor validity concerns for the SUN construct.

In scenario 3, the mean scores of the two indicators were significantly⁸⁷ higher than the midpoint (4.73 and 4.39 respectively). The result indicates that the respondents think that both their family and friends (significant others) would definitely disapprove overestimating the tax deduction by \$1,400. The Pearson correlation test and the Cronbach's alpha test showed high internal reliability between the two indicators (0.759*** and 0.862 respectively). Concerning the reliability and validity of the factor, the CR and AVE value showed no issues (0.863 and 0.759 respectively).

To sum up the results of this type of social consensus, the respondents' perception of the significant others (family and friends) that they would strongly disapprove the overstating of tax deduction by \$1,400, and less strongly⁸⁸ disapprove the underreporting of \$6,000 taxable income surprisingly, the significant others (family and friends) would approve underreporting the \$500 taxable tips.

Those results could link back to the previous outcomes of ER, EE, INT, and PN in sense that the behaviour that was not recognised as ethical issue, would be more likely to be judged as ethical behaviour, and the intention would be inclined to behave similarly due to high personal and subjective norms in favour of such behaviour.

The second type of social consensus dimension is injunctive norms; these norms were operationalised through 2 indicators as well.

In scenario 1, the mean score of the first indicator was 4.02 which is very close to the midpoint, whereas, the mean score of the second indicator was found to be significantly⁸⁹ lower than the midpoint. This implies that the respondents were undecided whether most people would feel guilty if they did underreport the \$6,000 taxable income, but they were certain that most people would not feel ashamed if they did underreport the \$6,000 taxable income. The correlation between those two indicators was significantly high 0.637*** and the Cronbach's alpha value

⁸⁷ The results of t-test for the two indicators were 'p-value = 0.000 and t-statistic= 8.977', and 'p-value = 0.000 and t-statistic = 4.993' respectively.

⁸⁸ The second indicator was around the midpoint which suggests that friends may not disapprove such behaviour.

⁸⁹ The results of t-test for the first indicator was 'p-value = 0.811 and t-statistic= 0.239', while for the second indicator the 'p-value was 0.043 and t-statistic was -2.032'.

was 0.777 which indicates a good level of internal reliability. Regarding the reliability and validity of the IUN construct, the CR and AVE were above the threshold (0.784 and 0.647 respectively).

In scenario 2, the mean scores of both indicators were significantly⁹⁰ lower than the midpoint (3.13 and 3.09 respectively). This implies that the respondents believed that most people would definitely not feel guilty nor ashamed if they did underreport the \$500 taxable tips. The internal reliability test of the two indicators revealed no concerns (Pearson correlation value was 0.611*** and the Cronbach's alpha value 0.758). The reliability and validity tests of the injunctive norms factor showed no concerns (CR and AVE were 0.767 and 0.624).

In scenario 3, both mean scores of the two indicators were significantly⁹¹ higher than the midpoint (4.16 and 4.25 respectively). So, the respondents believed that most people would feel guilty and ashamed if they did overstate tax deduction by \$1,400. There are no internal reliability concerns among the two indicators (the Pearson correlation value was 0.617***, and the Cronbach's alpha value was 0.763). The CR and AVE values showed no reliability and validity concerns for the injunctive norms as a factor (0.796 and 0.670 respectively).

To sum it up, the respondents, on average, thought that most people would definitely feel guilty and ashamed when the issue is overstating tax deduction by \$1,400, and less ashamed and guilty when the issue is underreporting the \$6,000 taxable income. In contrast, when the issue is underreporting the \$500 taxable tips, the respondents thought that most people would not feel guilty nor ashamed in behaving similarly.

The last component of social consensus is the descriptive norms; this variable was operationalised through a single indicator. The mean scores of this indicator for the three different scenarios were 3.37, 2.94, and 3.54 respectively which are less than value 6 which indicates that the average Irish/Canadian/Scottish taxpayer would not fully report (overstate) the taxable income (tax deductions). The results of the mean scores suggest that the respondents think that the average Irish/Canadian/Scottish taxpayer would underreport 52.6% of the \$6,000 taxable income, and 60.6% of \$500 taxable tips and they would overstate 49.2% of \$1,400 tax deductions.

⁹⁰ The results of t-test for the two indicators were ‘p-value = 0.000 and t-statistic= -11.582”, and ‘p-value = 0.000 and t-statistic = -12.903” respectively.

⁹¹ The results of t-test for the two indicators were ‘p-value = 0.015 and t-statistic= 2.427”, and ‘p-value = 0.000 and t-statistic = 3.702” respectively.

Probability of Effects and Magnitude of the Consequences

The two other dimensions of moral intensity are the magnitude of consequences ‘MC’ and the probability of effect ‘POE’. As set out in Table 6.2, those two dimensions were operationalised through 2 indicators for POE and a single indicator for MC.

In scenario 1, the mean scores of the first indicator of the probability of effect were close to the midpoint (3.89)⁹², which suggests that the respondents were uncertain whether they would be audited as a consequence of their tax evasion behaviour⁹³. The mean score of the second indicator of the probability of effect was significantly⁹⁴ higher than the midpoint (4.18) which reflected a view that if they had been audited, tax authorities would have discovered the tax evasion behaviour. The correlation between those two indicators was significant⁹⁵, and the Cronbach alpha was 0.709, which could be taken as a good indicator of internal consistency reliability, while, the CR and AVE were 0.723 and 0.574 indicated no reliability and validity concerns for the POE factor. The mean score of MC indicator in scenario 1 was 4.78 which is significantly⁹⁶ higher than the midpoint. This indicates that the respondents, on average, believed that the consequences of underreporting the \$6,000 would be severe.

In scenario 2, the mean scores of the two indicators of POE and the one indicator of MC were significantly⁹⁷ lower than the midpoint 3.29, 3.53, and 3.71 respectively. This could be interpreted as the respondents, on average, believed that they would not be audited by tax authorities if they did underreport the \$500 taxable tips, and if they were audited, the tax authorities would not discover the tax evasion behaviour, and even if they did, the consequences would be minor. The Pearson correlation of the three indicators⁹⁸ was moderately high⁹⁹, and the Cronbach alpha was 0.775, indicating that there is no internal reliability issue among the

⁹² The results of t-test were p-value of 0.124 and t-statistic of 0.239.

⁹³ Underreport the \$6,000 taxable income.

⁹⁴ The results of t-test were p-value of 0.015 and t-statistic of 2.444.

⁹⁵ The Pearson correlation test revealed 0.549 correlation and p-value less than 0.000.

⁹⁶ The results of t-test were p-value of 0.000 and t-statistic of 10.954.

⁹⁷ The results of t-test were p-value of 0.000 and t-statistic of -9.250 for the first indicator of POE; and p-value of 0.000 and t-statistic of -6.195 for the second indicator of POE; while, p-value of 0.000 and t-statistic of -3.552 for MC indicator.

⁹⁸ For scenario 2 and 3, the two indicators of POE and the single indicator of MC jointly formed a distinct factor referred to as ‘PM’ (more details can be found in section 5.6.3.4). According to Harrington (1997), some of moral intensity are highly correlated and could form a joint factor such as magnitude of consequences and probability of effects.

⁹⁹ The correlation between: POE₁ and POE₂ was 0.672 ***; POE₁ and MC was 0.444 ***; and POE₂ and MC was 0.498 ***.

indicators. The CR and AVE of PM were 0.802 and 0.582, hence, there are no validity neither reliability concerns for this factor.

In scenario 3, the mean scores of all three indicators were significantly¹⁰⁰ higher than the midpoint (4.21, 4.44, and 4.93 respectively). This implies that respondents, on average, believed that if they overstated the tax deduction by \$1,400, they would definitely be audited, and the tax authorities would discover that they had engaged in tax evasion behaviour and the consequences would be very severe. Again, the Pearson correlations were moderately¹⁰¹ high, and the Cronbach alpha was 0.759 which could be considered as an excellent internal consistency reliability level. For the reliability and validity tests of PM, the CR and AVE indicate no concerns (0.813 and 0.594).

To sum it up and link back to the previous outcomes, the results showed that for scenario 3 the respondents indicate high levels of PM¹⁰² and SC which could explain the high level of ethical recognition, evaluation and intention to behave according to the tax rules. The same conclusion is found in scenario 1, whereas, in scenario 2, the low level of PM and SC could explain the reason why the respondents demonstrated a low level of recognition, evaluation and intentions to comply with tax rule.

6. 2. 2. 4. Statistical Description of the General Social Norms

The last part of the survey measured the four different aspects of social norms toward tax system: social norms toward reporting all taxes ‘**RT**’; social norms toward overstating tax deductions ‘**OE**’; social norms toward working for cash in hand¹⁰³ ‘**CH**’; and lastly, the general social norms toward paying taxes ‘**DNG**’. Those construct variables were measured using indicators adopted from the work of Wenzel (2004) ‘an analysis of norms processes of tax compliance’. To be consistent with the rest of the indicators in the survey, a 7 point Likert-scale¹⁰⁴ was utilised with higher values indicating a higher level of social norms against the tax evasion. Some of those indicators were reversed in the survey and reversed back in the analysis to match the rest of indicators.

¹⁰⁰ The results of t-test were p-value of 0.003 and t-statistic of 2.982 for the first indicator of POE; and p-value of 0.000 and t-statistic of 6.146 for the second indicator of POE; while, p-value of 0.000 and t-statistic of 13.606 for MC indicator.

¹⁰¹ The correlation between: POE_1 and POE_2 was 0.580 ***; POE_1 and MC was 0.440 ***; and POE_2 and MC was 0.515 ***.

¹⁰² PM referred to the joint factor of magnitude of consequences and probability of effects.

¹⁰³ This variable will not be used in the current study.

¹⁰⁴ Except the DNG indicators, 5 point Likert scale was used to capture this concept.

Social Norms toward Reporting Honestly Cash Earnings ‘RT.’

For the first aspect of social norms ‘RT’ three indicators were adopted to capture this concept. However, one indicator was excluded from the analysis as a result of EFA (section 5.6.3.4).

As shown in Table 6.3, the first indicator’s mean score was significantly¹⁰⁵ higher than the midpoint 5.57 which implies that respondents think that they should honestly report cash earnings on their own tax returns. For the second indicator, the mean score was also significantly¹⁰⁰ higher than the midpoint (4.85) which suggests that the social norms are in favour of reporting cash earnings. The Pearson correlation of those two indicators was moderately high (0.566***) and the Cronbach alpha was 0.719 which indicates no internal consistency reliability issues. The CR and AVE were 0.722 and 0.566 which are good signs of reliability and validity.

Social Norms toward Overstating Tax Deductions ‘OE.’

The second aspect of the social norms was OE, and it was operationalised through three indicators adopted from the literature. The mean scores of all three indicators were 5.13, 4.83, and 4.18 which are significantly¹⁰⁶ higher than the midpoint, suggesting the respondents, on average, believed that they should not overstate tax deductions, and they perceived that the significant others (people close to them) and most people in their country think similarly to them. The correlations among those indicators were moderately¹⁰⁷ high (the correlation of injunctive norms’ indicator with the others were somehow low) and the Cronbach alpha was 0.670 which relatively close to 0.7 and above 0.6 which is the threshold used for this study (Nunnally et al., 1967). The CR and AVE were 0.754 and 0.516 which is considered to be a good level of reliability and validity for the OE factor.

¹⁰⁵ The results of t-test were p-value of 0.000 and t-statistic of -9.250 for the first indicator of RT; and p-value of 0.000 and t-statistic of -6.195 for the second indicator of RT.

¹⁰⁶ The results of t-test were p-value of 0.000 and t-statistic of 15.861 for the first indicator; and p-value of 0.000 and t-statistic of 12.317 for the second indicator; and p-value of 0.003 and t-statistic of 2.973 for third indicator.

¹⁰⁷ The correlation between: OE₁ and OE₂ was 0.516***; OE₁ and OE₃ was 0.332***; and OE₂ and OE₃ was 0.358***.

Descriptive Norms toward Paying Taxes ‘DNG.’

The last aspect of social norms was operationalised through two indicators. The mean scores of both indicators were significantly¹⁰⁸ high 3.38 and 3.58 which implies that the respondents’ think that more than 60% of average taxpayers in their country pay less taxes than they legally owe unknowingly or deliberately. The correlation was fairly high 0.475***, and the Cronbach alpha was 0.643 which are indications of a good internal reliability. The CR and AVE were 0.723 and 0.591 which established a good level of reliability and validity.

Table 6.3: The Mean Scores and the Results t-test Analysis for SNG

Variables	Indicator	Mean	P value
Social norms toward reporting honestly cash earnings ‘RT.’	I think I should honestly report cash earnings on my tax return	5.57 ***	0.000
	The people closest to me (e.g., family and/or friends, etc.) think they should honestly report cash earnings on their tax return	4.85 ***	0.000
	Factor score	4.21 ***	0.001
Social norms toward overstating tax deductions on the return ‘OE.’	I think it is acceptable to overstate tax deductions on my tax return	5.13 ***	0.000
	The people closest to me (e.g., family and/or friends, etc.) think that it is acceptable to overstate tax deductions on their tax return (R)	4.83 ***	0.000
	Most people in Canada think it is acceptable to overstate tax deductions on their tax returns (R)	4.18 ***	0.003
	Factor score	5.51 ***	0.000
General descriptive norms ‘DNG.’	In your opinion, what percentage of Canadian taxpayers do you think deliberately pay less taxes than they legally owe? (R)	3.38 ***	/
	In your opinion, what percentage of Canadian taxpayers unknowingly through lack of care pay less taxes than they legally owe? (R)	3.58 ***	/
	Factor score	3.322	/

The social norms toward: reporting honestly all cash earnings ‘RT’; and overstate tax deductions ‘OE’; and working for cash in hand ‘CH’ indicators were measured on a 7-point Likert-type scale with higher values in favour of more compliance behaviour. While the general descriptive norms ‘DNG’ indicators were measured on a 5-point Likert-type scale with higher values in favour of more compliance behaviour.

(R) = The scale was reversed so the higher values in favour of more compliance behaviour.

/: It is not applicable in this indicator

T-test analysis

*: Significant at 90% level of confidence; **: Significant at 95% level of confidence; ***: Significant at 99% level of confidence.

¹⁰⁸ The results of t-test were p-value of 0.000 for the both indicators and t-statistic of 10.105 and 14.385 respectively.

6. 2. 3. Univariate Analysis of Variance

After participants' backgrounds description and the mean scores analysis in the previous sections, results of one-way analysis of variance (ANOVA¹⁰⁹) and post hoc tests (Scheffe¹¹⁰) are reported in this section¹¹¹. This analysis is used to investigate and detect any mean differences in the dependent variables (ethical recognition, evaluation, and intentions) across different groups such as: age, residency, gender, marital status, education field and level, job status, member of the communities (Muslim vs. non-Muslim), country, and experience. The results of the one-way ANOVA (Welch test) are summarised in the following table.

Table 6.4: The Results of Univariate Analysis of Variance

Variables		Scenario 1		Scenario 2		Scenario 3	
		Type of test	P-Value	Type of test	P-Value	Type of test	P-Value
ER	Age	Welch test	0.432	ANOVA	0.020**	ANOVA	0.607
	Gender	ANOVA	0.598	Welch test	0.057*	Welch test	0.296
	Marital status	ANOVA	0.326	Welch test	0.000***	Welch test	0.426
	Education field	ANOVA	0.097*	ANOVA	0.165	ANOVA	0.728
	Job status	ANOVA	0.277	Welch test	0.027**	Welch test	0.204
	Group ***	Welch test	0.137	ANOVA	0.067*	Welch test	0.011**
	Experience	Welch test	0.060*	Welch test	0.334	ANOVA	0.861
EE	Age	Welch test	0.005***	Welch test	0.371	Welch test	0.950
	Duration in country	ANOVA	0.971	ANOVA	0.000***	ANOVA	0.005***
	Marital status	Welch test	0.017**	Welch test	0.003***	ANOVA	0.814
	Education field	Welch test	0.023**	Welch test	0.322	ANOVA	0.072*
	Education level	ANOVA	0.006***	ANOVA	0.276	ANOVA	0.042**
	Job status	Welch test	0.049**	Welch test	0.223	ANOVA	0.171
	Group	Welch test	0.857	Welch test	0.582	ANOVA	0.008***
	Tax jurisdictions	ANOVA	0.039**	ANOVA	0.117	ANOVA	0.024**
INT	Experience	ANOVA	0.037**	Welch test	0.028**	ANOVA	0.914
	Age	Welch test	0.003***	Welch test	0.009***	Welch test	0.867
	Duration in country	ANOVA	0.007***	ANOVA	0.016**	Welch test	0.000***
	Marital status	ANOVA	0.111	Welch test	0.000***	ANOVA	0.469
	Education level	ANOVA	0.028**	ANOVA	0.859	ANOVA	0.192
	Job status	Welch test	0.876	Welch test	0.000***	Welch test	0.258
	Group	ANOVA	0.001***	Welch test	0.000***	Welch test	0.008***
	Tax jurisdictions	Welch test	0.073*	ANOVA	0.137	ANOVA	0.231

*: significant at 90% level of confidence; **: significant at 95% level of confidence; ***: significant at 99% level of confidence.

¹⁰⁹ ANOVA test will be the main technique to investigate the equality of means as long as the homogeneity assumption is unviolated, otherwise, the Welch technique will be used.

¹¹⁰ Scheffe is a post hoc technique that this study used to make pairwise comparisons between means when the groups have different sample size (Maxwell and Delaney, 2004).

¹¹¹ The non-parametric method (Mann–Whitney U test) was used to measure the mean differences as alternative method. The results of Mann–Whitney U test were mostly the same as the parametric methods (one-way ANOVA and Welch test) and are not reported here.

6. 2. 3. 1. Age

From Table 6.4, age was found to cause a mean difference in ethical recognition (scenario 2), ethical evaluation (scenario 1), and ethical intentions (scenario 1 and 2). The results of univariate analysis of variance will be presented for each stage of EDM separately as follows:

For the first stage of EDM, one-way ANOVA test revealed that age had a positive effect¹¹² on ethical recognition of the described behaviour (underreport the \$500 taxable tips). The post hoc test showed that senior participants scored significantly¹¹³ higher than young, adult, and middle age participants in recognising the ethicality component of the behaviour, which means that, they were more likely to recognise that underreporting the \$500 taxable tips involves an ethical issue than the rest of age's groups.

For the second stage of EDM, the Welch test revealed that age had a positive effect¹¹⁴ on ethical evaluation of the described behaviour (underreport the \$6,000 taxable income). The post hoc test showed that senior participants scored significantly¹¹⁵ higher than young and adult participants in evaluating the behaviour, which implies that, senior participants were more likely to judge the underreporting of the \$6,000 taxable income as unethical behaviour compared to young and adult participants.

For the third stage of EDM, the Welch test revealed that age had a positive effect¹¹⁶ on behavioural intention toward the described behaviour (underreport the \$6,000 taxable income and \$500 taxable tips). The post hoc test showed that senior participants scored significantly¹¹⁷ higher than adult and middle age participants in forming the intention to behave similarly, which means that, they were less likely to form a behavioural intention to underreport the \$6,000 taxable income compared to adult and middle age participants. The same result of post hoc in scenario 1 was found in scenario 2.

¹¹² The result of one-way ANOVA showed a significant p-value of 0.020 and f-value of 3.304.

¹¹³ The result of post hoc indicated that senior groups scored significantly higher (5.35) than young (3.83); adult (3.78); middle age (3.85) with p-value of 0.051, 0.020, 0.038 respectively.

¹¹⁴ The result of Welch tests showed p-value of 0.003 and F-value of 4.654.

¹¹⁵ The post hoc tests showed that senior mean is 5.76 which significantly higher than adult mean 4.46 (p=0.025) and young mean 4.36 (p= 0.028).

¹¹⁶ The result of Welch tests showed p-value of 0.003 and F-value of 4.654 for scenario 1 and p-value of 0.020 and f-value of 3.304 in scenario 2.

¹¹⁷ The post hoc test showed that senior had mean score of 5.71 which is a significantly higher than adults (mean = 4.08 & p-value = 0.02) and middle age (mean = 4.21 & P-value =0.049) for scenario 1. While, for scenario 2, the post hoc showed a significant mean difference between the senior and adult groups with p-value of 0.056.

6. 2. 3. 2. Residency Period

The duration of living in the country (residency) was found to effect two stages of EDM: ethical evaluation (scenario 2 and 3) and ethical intention (in all scenarios).

The one-way ANOVA test revealed that residency period had a negative effect¹¹⁸ on ethical evaluation of the described behaviours (underreporting the \$500 taxable tips and overstating tax deductions by \$1,400). The post hoc test showed that the participants who had less than one year living in the country scored significantly¹¹⁹ higher than the rest of the groups (short, medium, and long-term residency) in evaluating the behaviour, which means that they were more likely to judge the underreporting of the \$500 taxable tips as unethical than the rest of the residency groups. While, in scenario 3, the long-term resident participants scored significantly lower¹²⁰ than the short and medium resident participants in evaluating the behaviour, which means that they were less likely to judge the overstating tax deductions by \$1,400 as unethical behaviour compared to short and medium resident participants.

For the third stage of EDM, Welch test revealed that residency period had a negative effect¹²¹ on ethical intention toward the described behaviour in all scenarios. The post hoc test showed that the long-term resident participants scored significantly¹²² lower than short and medium resident participants in forming intention comply and not to underreport the \$6,000 taxable income, which implies that, they were more likely to form the intention to underreport the \$6,000 taxable income compared to short and medium resident participants. While, in scenario 2, the post hoc test showed that long-term resident participants scored significantly¹²³ lower than new resident participants in forming intention comply and not to underreport the \$500 taxable tips, which means that, they were more likely to underreport the \$500 taxable tips compared to new resident participants. Finally, in scenario 3, the post hoc test showed a consistent result as long term

¹¹⁸ The one-way ANOVA result showed a significant mean difference with p-value of 0.0001 in scenario 2 and 0.005 in scenario 3.

¹¹⁹ The post hoc test showed that participants with less than 1 year in the country scored the highest mean (4.54) which was significantly higher than short term (3.79 & p = 0.035); medium term (3.86 & p = 0.069); and long term (3.56 & p = 0.000) participants.

¹²⁰ The post hoc tests showed that long term residence participants scored the lowest mean (4.78) comparing to short term (5.28, p-value = 0.05) and medium term (5.30, p-value = 0.037).

¹²¹ The one-way ANOVA result showed a significant mean difference with p-value of 0.007,

¹²² The post hoc test showed that long term residence had a significant lower means (3.86) than short term and medium term with p-value of 0.089 and 0.030 respectively.

¹²³ The post hoc results showed a significant lower mean for long term residency comparing to new residency (p = 0.074).

resident participants again scored the lowest¹²⁴ in forming intention comply and not to overstate tax deductions by \$1,400 compared to the rest of the groups, which means that they were more likely to form intention to overstate tax deductions by \$1,400 compared to: new, short, and medium resident participants.

6. 2. 3. 3. Gender

Gender was found to have effect only on ethical recognition in scenario 2 (although this effect was only significant at a confidence level of 90%). The one-way ANOVA showed that women participants scored significantly higher¹²⁵ than men participants in recognising the ethicality of the described behaviour, which means that, they were more likely to recognise that underreporting the \$500 taxable tips involves an ethical issue than men participants.

6. 2. 3. 4. Marital Status

Marital status was found to have an effect on all stages of EDM: ethical recognition (scenario 2), ethical evaluation (scenario 1 and 2), and ethical intention (scenario 2), as were shown in Table 6.4. However, the post hoc tests¹²⁶ provided no evidence of such effect of marital status on the EDM stages; except the effect of marital status on ethical evaluation in scenario 1. In more details, the Welch test revealed that Marital status had a significant¹²⁷ effect on the ethical evaluation of underreporting the \$6,000 taxable tips. The post hoc test showed that married participants scored significantly¹²⁸ higher than single participants in evaluating the underreporting the \$6,000 taxable income, which means that married participants were more likely to judge the underreporting of the \$6,000 taxable income as unethical compared to single participants.

¹²⁴ The result of post hoc tests showed a significant mean difference between long term residency and new, short, and medium term residency with p-value of 0.035; 0.001; and 0.012 respectively.

¹²⁵ The result of Welch test showed a significant p-value of 0.057.

¹²⁶ Post hoc test was carried out because this variable has 3 groups: single, married, and other.

¹²⁷ The result of Welch test showed a significant p-value = 0.017 & f-value = 4.714.

¹²⁸ The result post hoc test demonstrated that married participants have significant higher mean (4.83) than single participants (4.43) with p-value = 0.069.

6. 2. 3. 5. Education Field

Education field was found to have an effect on ethical recognition (scenario 1) and ethical evaluation (scenario 1 and 3) as it is demonstrated in Table 6.4. However, the post hoc test showed no supported of such effect.

6. 2. 3. 6. Education Level

Education level was found to have an effect on ethical evaluation (scenario 1 and 3) and ethical intention (scenario 1) as demonstrated in Table 6.4.

In more details, one-way ANOVA test revealed that education level had a positive¹²⁹ effect on the ethical evaluation of the described behaviour (underreport the \$6,000 taxable income). The post hoc test showed that post-graduate participants scored significantly¹³⁰ higher than high school group in evaluating the underreporting of the \$6,000 taxable income, which means that post-graduate participants were more likely to judge the described behaviour as unethical compared to a high school group. For scenario 3, the post hoc test showed no significant effect. Post hoc test showed that education levels had little impact on ethical intentions. Hence, the only proved effect of education level was on ethical evaluation in scenario 1.

6. 2. 3. 7. Job Status

From Table 6.4, job status was found to have an effect on ethical evaluation¹³¹ (scenario 1) and ethical intentions¹³² (scenario 2). In more details, Welch test revealed that job status had a significant effect on the ethical evaluation of the behaviour described (underreporting the \$6,000 taxable income). The post hoc test showed that the participants who categorised themselves to be ‘at home’ have a significantly¹³³ lower mean score than the full time employed participants, which means that, they were less likely to judge underreporting of the \$6,000 taxable income as unethical compared the full time employed participants.

¹²⁹ The result of ANOVA showed a significant mean difference with p-value = 0.006 & f-value = 3.602.

¹³⁰ The post hoc indicated that the post-graduated participants scored, on average, 4.86, while the high school group scored significantly lower 4.31 (p-value = 0.069).

¹³¹ The result of Welch test showed a significant p-value of 0.005.

¹³² The effect of job status on ethical intentions was no supported by post hoc test.

¹³³ The post hoc test showed a significant difference between the ‘at home’ group (mean = 3.38) and ‘full-time employed’ group (mean = 4.84) with p-value of 0.039.

6. 2. 3. 8. Membership of Muslim Community

A mean difference test was performed on the following groups: Muslim students, Muslim non-students, and Non-Muslim students, in order to detect any difference in ethical recognition, evaluation, and intentions toward the described behaviours. From Table 6.4, there were a mean difference across the groups in ethical recognition (scenario 2 and 3), ethical evaluation (scenario 3) and ethical intentions for all scenarios.

One-way ANOVA revealed that there was a significant¹³⁴ mean difference in recognising the ethicality of the described behaviour across the groups. The post hoc test showed that Muslim non-students scored significantly¹³⁵ higher than non-Muslim students in recognising the ethicality of underreporting the \$500 taxable tips. From the mean scores of the two groups, it can be seen that while the Muslim non-students were uncertain whether the described behaviour involved an ethical issue, the non-Muslim students, on average, did not think that underreport the \$500 taxable tips involved an ethical issue. For scenario 3, the post hoc tests showed that Muslim non-students scored significantly¹³⁶ lower than non-Muslim students which implies that non-Muslim students recognised better the ethicality of the behaviour than the Muslim non-students (which is the opposite of the finding in scenario 2).

For the second stage of EDM, the one-way ANOVA test revealed that there was a significant¹³⁷ mean difference in evaluating the described behaviour across the groups. The post hoc test showed that non-Muslim students scored significantly¹³⁸ lower than Muslim students, which implies that Muslim students were more likely to judge overstating tax deductions by \$1,400 as unethical compared to non-Muslim students.

For the third stage of EDM, the one-way ANOVA test (Welch tests) revealed that there was a significant¹³⁹ mean difference in forming a behavioural intention toward the described behaviour across the groups for all scenarios. The post hoc test showed that Muslim student scored

¹³⁴ The result of ANOVA showed a significant p-value of 0.067 in scenario 2; while, in scenario 3, the Welch test showed a significant p-value of 0.011.

¹³⁵ The post hoc showed that the Muslim non-students' participants significantly scored higher (4.04) than the non-Muslim students participants (3.44) with p-value = 0.068.

¹³⁶ The post hoc showed that the non-Muslim students' participants significantly scored higher (5.33) than the non-Muslim non-students participants (4.49) with p-value = 0.011.

¹³⁷ The result of ANOVA showed a significant p-value of 0.008.

¹³⁸ The post hoc test showed a mean difference between non-Muslim students (4.62) and Muslim students (5.27) with significant p-value of 0.009.

¹³⁹ The result of ANOVA showed a significant p-value of 0.008 in scenario 1, while Welch test in scenario 2 and 3 showed a significant p-value of 0.0001 and 0.008 respectively.

significantly¹⁴⁰ higher than the non-Muslim students, which means that, Muslim student were less likely to underreport the \$6,000 taxable income compared to non-Muslim students.

While, in scenario 2, post hoc test showed that non-Muslim students scored significantly¹⁴¹ the lowest mean scores than the rest of groups, which means that non-Muslim students were more likely to underreport the \$500 taxable tips compared to Muslim students and non-students. However, the three groups showed significant low mean scores (compared to the midpoint of 4), which indicates that the three groups were more likely to underreport the \$500 taxable tips.

Finally, in scenario 3, the post hoc test showed Muslim students scored significantly¹⁴² the highest mean scores than the rest of groups, suggesting that Muslim students were less likely to overstate tax deductions by \$1,400 compared to Muslim non-students and non-Muslim students. To sum it up, the mean difference tests showed that there are noticeable differences in ethical recognition, evaluation, and intentions across the groups. It can be concluded that tax compliance behaviour is different for Muslim and non-Muslim participants with more compliant behaviour for Muslim participants.

6. 2. 3. 9. Tax Jurisdictions

Tax jurisdictions where the participants are currently living in were found to have a significant effect on ethical evaluation (scenario 1 and 3) and ethical intentions (scenario 3) as it is demonstrated in Table 6.4.

In more details, the one-way ANOVA test revealed that ethical evaluation was significantly¹⁴³ different regarding the underreporting the \$6,000 taxable income and the overstating tax deduction by \$1,400. The post hoc test showed that the participants living in Canada scored significantly¹⁴⁴ higher than participants living in Ireland, which means that, they were more likely

¹⁴⁰ The post hoc test showed that mean scored by Muslim students (4.40) was significantly higher than Non-Muslim students (3.55) with p-value of 0.004.

¹⁴¹ The post hoc test showed that non-Muslim students had a significantly lowest mean (2.4) compared to the Muslim students (3.68) and Muslim non-students (3.83) with both p-value less than 0.000.

¹⁴² The post hoc test showed that Muslim students had a significantly highest mean (5.5) compared to the Muslim non-students (4.97) and non-Muslim students (4.78) with both p-value less than 0.02 and 0.009 respectively.

¹⁴³ The result of ANOVA showed significant P-values of 0.039 and 0.024 for scenario 1 and 3 respectively.

¹⁴⁴ The post hoc test showed the participants living in Canada scored (4.77) significantly higher than participants living in Ireland (4.40) with p-value of 0.053, while in scenario 3, the participants living in Canada scored (5.35) significantly¹⁴⁴ higher than participants living in Ireland (4.95) with p-value of 0.032.

to judge underreporting the \$6,000 taxable income (overstating tax deductions by \$1,400 in scenario 3) as unethical compared to the participants living in Ireland.

For the third stage of EDM, the Welch test revealed that ethical intention was significantly¹⁴⁵ different toward underreporting the \$6,000 taxable income. The post hoc test showed that the participants living in Canada scored significantly¹⁴⁶ higher than participants living in Ireland, which means that, they were less likely to form the intention to underreport the \$6,000 taxable income compared to the participants living in Ireland.

To sum it up, the mean difference tests showed that there are noticeable differences in ethical evaluation and intentions depending on the tax jurisdictions within which participants are currently living in, which suggests that, tax jurisdictions have an impact on the tax compliance behaviour of an individual.

6. 2. 3. 10. Experience level

From Table 6.4, experience level exhibited significant¹⁴⁷ effects on ethical recognition (scenario 1) and evaluation (scenario 1 and 2). However, the post hoc test showed no evidence of this effect on ethical recognition and evaluation for the first scenario and a significant effect on ethical evaluation for the second scenario. Furthermore, the post hoc test showed that non-experience participants scored significantly¹⁴⁸ higher than the participants with a level of experience, which means that, the participants without experience level were more likely to judge underreporting the \$500 taxable tips as unethical compared to participants with a reasonable level of experience.

¹⁴⁵ The result of Welch test showed significant p-values of 0.073.

¹⁴⁶ The post hoc test showed the participants living in Canada scored (4.46) significantly higher than participants living in Ireland (4.03) with p-value of 0.073.

¹⁴⁷ The results of ANOVA showed a significant p-value of 0.037 for the effect of experience level on EE in scenario 1, while the Welch test showed a significant p-values of 0.073 for the effect of experience level on INT in the same scenario. For scenario 3, the Welch test showed a significant P-values of 0.028 for the effect of experience level on EE.

¹⁴⁸ The post hoc test showed a significant higher mean score for the non-experience participants (3.95) compared to decent level of experience participants (3.37) with p-value of 0.025.

6.3. Preliminary Test of Hypotheses

As a preliminary analysis and to support the research hypotheses, bivariate correlations between the latent variables were performed using the factorial scores of their respective validated measurement items (see Chapter 5). According to Hair et al. (2010), bivariate correlation analysis helps to establish the appropriateness of the causal model, before formally testing hypotheses in the SEM analysis. The following table was produced to present the results of Pearson correlation analyses for the three scenarios.

Table 6.5: The Summary of Preliminary Hypotheses Testing for all Scenarios

Hypotheses	Associations	Scenario 1 ^A	Scenario 2 ^A	Scenario 3 ^A
H ₁ +	ER → EE	0.149***	0.226***	0.099***
H ₂ +	EE → INT	0.455***	0.444***	0.501***
H ₃ +	ER → INT	0.113***	0.245***	0.288***
H ₄ +	PN → ER	0.220***	0.380***	0.375***
	SUN → ER	0.111***	0.310***	0.290***
	IUN → ER	0.189***	0.309***	0.098***
	DN → ER	0.069**	0.102***	-0.011
	POE ^B → ER	0.147***	/	/
	MC ^B → ER	0.161***	/	/
	PM ^B → ER	/	0.321***	0.184***
	RT → ER	0.291***	0.241***	/
	OE → ER	/	/	0.056*
	DNG → ER	0.064*	0.073**	0.214***
H ₅ +	PN → EE	0.560***	0.585***	0.437***
	SUN → EE	0.272***	0.479***	0.292***
	IUN → EE	0.392***	0.426***	0.214***
	DN → EE	0.077**	0.089**	0.145***
	POE ^B → EE	0.271***	/	/
	MC ^B → EE	0.201***	/	/
	PM ^B → EE	/	0.423***	0.196***
	RT → EE	0.477***	0.418***	/
	OE → EE	/	/	0.277***
H ₆ +	DNG → EE	0.189***	0.146***	0.215***
	PN → INT	0.517***	0.513***	0.653***
	SUN → INT	0.292***	0.457***	0.456***
	IUN → INT	0.370***	0.436***	0.291***
	DN → INT	0.146***	0.175***	0.136***
	POE ^B → INT	0.269***	/	/
	MC ^B → INT	0.232***	/	/
	PM ^B → INT	/	0.465***	0.322***
	RT → INT	0.420***	0.286***	/
	OE → INT	/	/	0.393***
	DNG → INT	0.172***	0.212***	0.214***

***. Correlation is significant at the 0.01 level (1-tailed).

**. Correlation is significant at the 0.05 level (1-tailed).

*. Correlation is significant at the 0.10 level (1-tailed).

/: It is not applicable for this scenario.

^A: Person coefficients.

^B: POE and MC were joined in scenario 2 & 3 as PM

For scenario 1, the results of the Pearson correlations test exhibited 71 significant and positive correlations out of 78, which provide preliminarily support for the appropriateness of the research framework, and offers preliminary validation for the majority of the hypothesised relationships.

For scenario 2, as they are shown in Table 6.5, all the correlations were found to be significant and positive which support the research framework in general and the proposed hypotheses in particular.

For scenario 3, the Pearson correlation analyses revealed almost same the results in scenario 3 as the two previous scenarios. Out of 24 correlation relationships, 23 were positive and significant which permits to conclude that the research framework in general and the developed hypotheses in particular, were preliminary supported.

The research model adopted in this thesis assumes positive associations between issue contingent characteristics and the EDM stages; the moral agent characteristics and the EDM stages and the environment and social characteristics and the EDM stages were supported. The bivariate correlations test of the three scenarios shows that the majority of the correlations are positive and strongly significant. As such, these results provide preliminary support for the research framework and the developed hypotheses.

6. 4. Formal Testing of Proposed Hypotheses

This study follows the Hair et al. (2010) steps in conducting the SEM analysis which include the measurement and structural models specifications. For presentation purposes, the two models are discussed separately. The measurement model was specified and reported in the Pre-Data Analysis Chapter (CFA section in chapter 5), while the structural model will be specified and tested in this chapter. This section will start by specifying the structural model and presenting the model fit and the R-squared of the dependent variables “global test”, before presenting the results of the SEM “local test”.

6. 4. 1. First Objective: *To examine the process by which taxpayers make an ethical decision and engage in tax compliance behaviour.*

The aim of this objective is to test the EDM's model of Rest in tax compliance area. Rest and Barnett (1986) model 'ethical decision making' was adopted to examine the chain of reasoning that taxpayers use when they face a tax compliance situation. The theoretical premise of this model is that an increase in perceptions that a situation involves an ethical issue will increase the probability of judging this particular situation as unethical behaviour (H_1) and will have direct (indirect) effect (H_3/H_{3a}) on the way taxpayers establish their intention to behave in this situation. Evaluating the situation as an unethical behaviour will have an impact on the intention of the taxpayers to behave ethically (H_2).

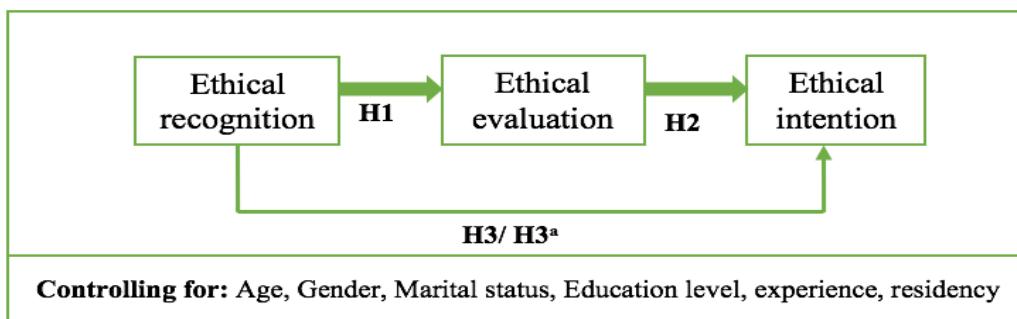


Figure 6.1: The Empirical Schema of the 1st Objective

In order to test this model, structural equation modelling was used, and some of the socio-demographics' characteristics¹⁴⁹ will be controlled for. The SEM was performed across three difference compliance scenarios to endorse the reliability and validity of the results. Again, before individually testing each hypothesis 'local testing', a global test is needed to ensure the validity of the anticipated results (model fit and R-squared).

The model shows a good fit across the three scenarios¹⁵⁰, while, the R-squared values were acceptable for the ethical intentions and very low for the ethical evaluation across the three scenarios¹⁵¹. The small R-squared for the ethical evaluation might be explained by the need of

¹⁴⁹ The control variables are: age, residency period, gender, marital status, education level, and experience. Some of those variables were found to have impact on the EDM stages (see Table J in appendix J for more details).

¹⁵⁰ Model fit indices for three scenarios were all within the acceptable thresholds: (CMIN/DF = 2.767, 2.033, and 3.234); (CFI = 0.983, 0.991, and 0.984); (SRMS = 0.026, 0.024, and 0.026); (RMSEA = 0.053, 0.04, and 0.059); (PCLOSE = 0.392, 0.62, and 0.283) for scenario 1, 2 and 3 respectively.

¹⁵¹ The R-squared values of the dependent variables (EE and INT) were (4.6% and 22.9%); (7.2% and 23.1%); and (2.3% and 29.6%) across the three scenarios respectively. According to the literature (Falk & Miller, 1992; King, 1986), low R-squared is expected in social science and especially when the sample size is considerably large.

more independent variables (e.g., moral intensity, moral agent's characteristics, and environment's characteristics) to be included to explain better the variance in this variable.

On establishing a good model fit, a local testing of the proposed hypotheses will be performed. The results of SEM are described as follows:

- Hypothesis 1 states that ethical recognition is positively related to ethical evaluation. The SEM revealed a consistent result across the three scenarios that recognising the ethicality of the described behaviour is significantly¹⁵² associated with judging it as unethical. So, when participants recognised that the described behaviour involves an ethical issue, they were more likely to judge it as unethical. Thus, hypothesis 1 was supported across the three scenarios.
- Hypothesis 2 states that ethical evaluation is positively related to ethical intention. The SEM revealed a consistent result across the three scenarios that ethical evaluation is a significant¹⁵³ predictor of the ethical intentions. So, when participants judged the described behaviour as unethical, they were more likely to avoid behaving in a similar manner. Thus, hypothesis 2 was supported across the three scenarios.
- Hypothesis 3 states that ethical recognition is positively related to ethical intention. The SEM revealed that ethical recognition is a significant¹⁵⁴ predictor of the ethical intentions in scenarios 2 and 3, while in scenario 1, the effect of the ethical recognition on the ethical intention was fully mediated¹⁵⁵ by ethical evaluation. So, when participants recognised that the described behaviour involves an ethical issue, they were more likely to avoid behaving in a similar manner in scenarios 2 and 3. Whereas, in scenario 1, when participants recognised that the described behaviour involves an ethical issue, they were more likely to judge it as unethical, which consequently, led them to form behavioural intentions to avoid behaving in a similar manner. Thus, Hypothesis 3 was supported in scenarios 2 and 3, while the alternative hypothesis 3 (mediation) was supported in scenario 1.

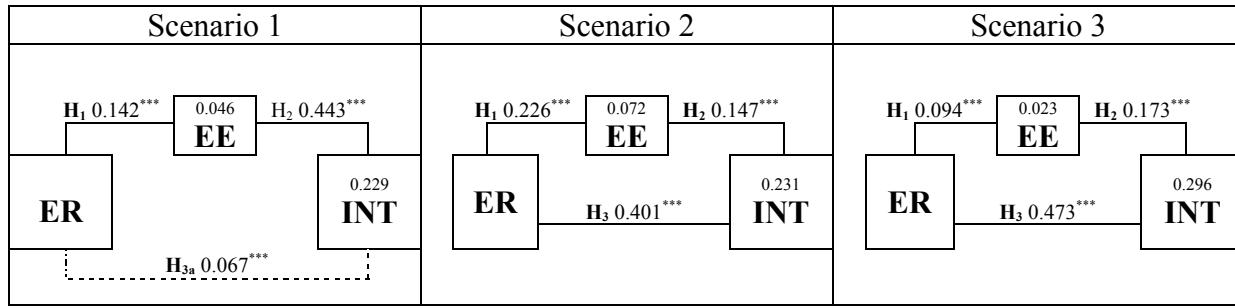
¹⁵² The standard estimates values were 0.142, 0.226, and 0.094; and P-value were lower than 0.01 across the three scenarios respectively.

¹⁵³ The standard estimates values were 0.443, 0.401, and 0.473; and p-value were lower than 0.01 across the three scenarios respectively.

¹⁵⁴ The standard estimates values were 0.147 and 0.173; and p-value were lower than 0.01 for scenario 2 and 3 respectively.

¹⁵⁵ The estimate value was 0.034 and P-value was 0.079 using bootstrapping method.

In summary, the results of the SEM lend support to the Rest's model 'ethical decision making' across all the three scenarios. So, when taxpayers face a tax compliance situation, they will first recognise that the situation involves an ethical issue, and they will then evaluate the situation as either an ethical or unethical situation, and will subsequently form a behavioural intention toward the situation.



While controlling for age, residency period, gender, marital status, education level, experience

Figure 6.2: The Results of SEM on the EDM model

Summary of the results of hypothesis testing for H₁, H₂, and H₃ can be found in the table 6.6 below.

Hypothesis	Outcome		
	Scenario 1	Scenario 2	Scenario 3
H₁: Ethical recognition is positively related to ethical evaluation.	Supported (0.142***)	Supported (0.226***)	Supported (0.094***)
H₂: Ethical evaluation is positively related to ethical intention.	Supported (0.443***)	Supported (0.226***)	Supported (0.173***)
H₃: Ethical recognition is positively related to ethical intention.	Not supported	Supported (0.40***)	Supported (0.142***)
H_{3a}: Ethical recognition is indirectly related to ethical intentions through ethical evaluation.	Supported (0.142***)	/	/

/: It is not applicable in this scenario.

Table 6.6: The Results of Hypotheses Testing (H₁, H₂, and H₃)

6. 4. 2. Second Objective: *To examine the effect of issue characteristics on ethical decision-making in relation to tax compliance.*

After determining the chain of reasoning that taxpayers use when they face a tax compliance situation, the factors which are theoretically assumed to have an impact on this chain of reasoning will be examined next. First, in this section, Jones's model will be tested to assert the role of moral intensity's dimensions in the tax compliance behaviour of taxpayers (2nd objective). In the next section, the research synthesis model which includes a further two of characteristics (moral agent and environmental characteristics) will be examined (3rd objective).

Moral contingent model of Jones (1991) claimed that the issue's characteristics have the potential to impact the decision making of the moral agent in a given situation.

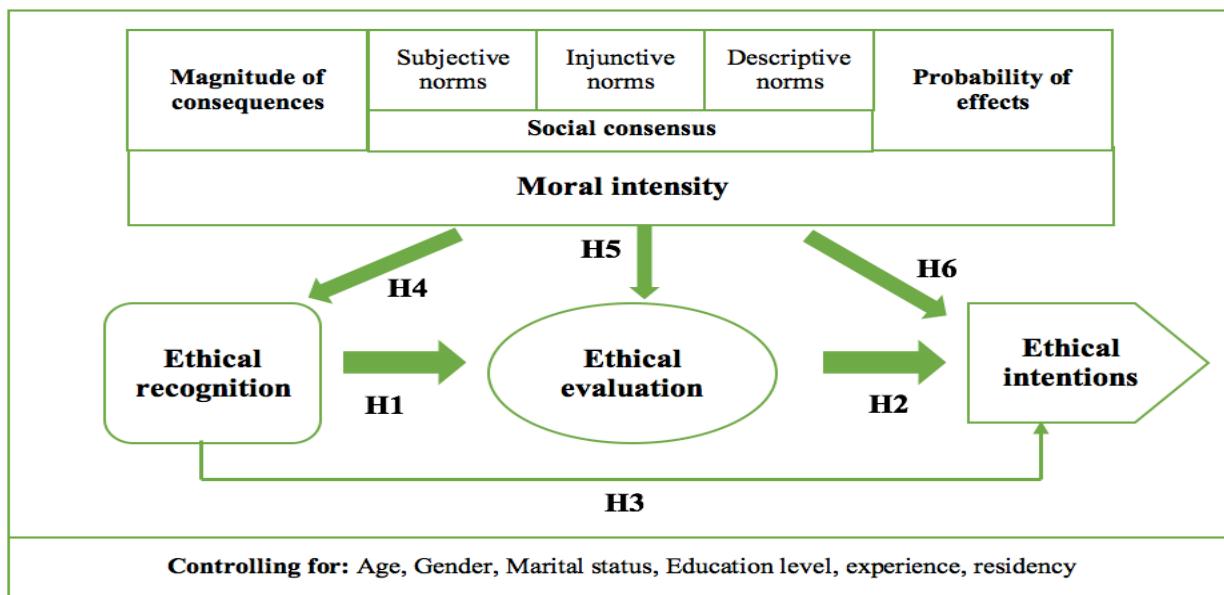


Figure 6.3: The Empirical Schema of 2nd Objective

In order to test this model, structural equation modelling was performed¹⁵⁶. But, before presenting the results of testing each relationship (hypothesis) individually “local test”, a global test (model fit and R-squared) need to be established (see section 4.4). The overall model fits across the

¹⁵⁶ The control variables are: age, residency period, gender, marital status, education level, and experience. Some of those variables were found to have impact on the EDM stages (see Table J in appendix J for more details).

three scenarios showed an acceptable model fit¹⁵⁷ and the R-squared¹⁵⁸ values were sufficiently acceptable. Hence, the global test was achieved, and the local test (p-value and the direction sign) will be examined next.

Hypothesis 4 states that there is a positive relationship between moral intensity and ethical recognition. High levels of perceived magnitude of consequences, the probability of effects, and social consensus that an issue is not morally acceptable, were expected to make it more likely that participants would recognise the behaviour as an ethical issue.

The results of path analysis are presented as follows:

- For scenario 1, the path analysis revealed that the magnitude of consequences and social consensus (injunctive norms) were excellent¹⁵⁹ predictors of the participants' recognising the described behaviour as an ethical issue. So, when participants felt that society (most people in the country) condemned the underreporting of the \$6,000 taxable income, they were more likely to believe that it represented an ethical issue. Similarly, when participants felt that the possible consequences of the underreporting of the \$6,000 taxable income were serious, they were more likely to believe that it represented an ethical issue. Thus, hypothesis 4 was supported for the dimensions of social consensus and magnitude of consequences in scenario 1.
- For scenario 2, the path analysis revealed that the joint variable “PM”¹⁶⁰ and social consensus (subjective and injunctive norms) were significant¹⁶¹ predictors of participants' recognising the described behaviour as an ethical issue. So, when participants felt that people close to them and most people condemned the underreporting of the \$500 taxable tips, they were more likely to believe that it represented an ethical issue. Also, when

¹⁵⁷ Model fit indices for three scenarios were all within the acceptable thresholds: (CMIN/DF = 2.775, 2.02, and 3.185); (CFI = 0.994, 0.997, and 0.993); (SRMS = 0.017, 0.017, and 0.017); (RMSEA = 0.053, 0.04, and 0.059); (PCLOSE = 0.39, 0.624, and 0.293)

¹⁵⁸ In more details, the three moral intensity's dimensions explained only 5.6%, 13.7%, and 9.4% of the variance in the ethical recognition across the three scenarios respectively. According to the literature (Falk & Miller, 1992; King, 1986), low R-squared is expected in social science and especially when the sample size is considerably large. For the second dependent variable, the amount of variance that moral intensity's dimensions and ethical recognition explained out of ethical evaluation were 19.2%, 26.2%, and 11.6% in the three scenarios respectively. Those amounts of variance are considered to be sufficient to conclude that the results are meaningful (Falk & Miller, 1992). The last dependent variable, the total explained variance of ethical intentions by the moral intensity's dimensions and the two stages of EDM (ethical recognition and evaluation) were 27.9%, 32%, and 38.3% for the three scenarios respectively. Those R-squared are considered to be relatively high which indicated again that the results are meaningful.

¹⁵⁹ The standard estimate values were 0.151 and 0.092; p-values were 0.004 and 0.035 for IUN and MC respectively.

¹⁶⁰ PM represents the joint variable of magnitude of consequences and probability of effects.

¹⁶¹ The standard estimate values were 0.149, 0.126 and 0.111; p-values were 0.011, 0.024 and 0.059 for PM, SUN and IUN respectively.

participants felt that the probability and the magnitude of consequences jointly were high, they were more likely to believe that it represented an ethical issue. Thus, hypothesis 4 was entirely supported for all the dimensions of moral intensity in scenario 2.

- For scenario 3, the path analysis revealed that only social consensus (subjective norms) was a significant¹⁶² predictor of participants' recognising the described behaviour as an ethical issue. When participants felt that people close to them (friends and family) condemned the falsely overstating tax deductions by \$1,400, they were more likely to believe that it represented an ethical issue. Thus, hypothesis 4 was supported, but only for the dimension of social consensus (subjective norms) in scenario 3.

The path analysis results across the three scenarios provide sufficient evidence to support the fourth hypothesis of relationships between moral intensity's dimensions and ethical recognition. Different dimensions affect ethical recognition in different scenarios, however, the effect of social consensus on the ethical recognition was consistent across the three scenarios which suggest the important role of social norms in recognising the ethicality of a given situation.

Hypothesis 5 states that there is a positive relationship between moral intensity and ethical evaluation. High levels of perceived magnitude of consequences, the probability of effects, and social consensus that an issue is not morally acceptable, were expected to make it more likely that participants would judge the behaviour as an unethical.

The results of path analysis are presented as follows:

- For scenario 1, path analysis revealed that probability of effects and social consensus (injunctive norms) were significant¹⁶³ predictors of ethical judgment. As hypothesised, when participants felt that the probability of effect of underreporting the \$6,000 taxable income was high, they were more likely to judge it as unethical. Also, when participants believed that society (most people) condemned the underreporting the \$6,000 taxable income, they were more likely to judge it as unethical. However, the magnitude of consequences was not related to ethical judgments. Thus, hypothesis 5 was supported for the dimensions of the probability of effects and social consensus in scenario 1.

¹⁶² The standard estimate value was 0.301; p-values was less than 0.001 for SUN.

¹⁶³ The standard estimate values were 0.095 and 0.305; p-values were 0.035 and 0.001 for POE and IUN respectively.

- For scenario 2, path analysis revealed that the joint variable “PM”¹⁶⁴ and social consensus (subjective and injunctive norms) were significant¹⁶⁵ predictors of ethical judgments. So, when participants felt that the probability of effects and magnitude of consequences jointly were high, they were more likely to judge the underreporting of \$500 taxable tips as unethical. Also, when participants believed that people close to them (friends and family) and most people condemned the underreporting of \$500 taxable tips, they were more likely to judge it as unethical. Thus, hypothesis 5 was entirely supported for all the dimensions of moral intensity in scenario 2.
- For scenario 3, path analysis revealed that only social consensus (subjective and descriptive norms) was a significant¹⁶⁶ predictor of ethical judgments. When participants believed that people close to them (friends and family) condemned the falsely overstating tax deductions and most people do not engage in falsely overstating tax deductions, they were more likely to judge it as unethical. Thus, hypothesis 5 was supported, but only for the dimension of social consensus in scenario 3.

The path analysis results across the three scenarios provide sufficient evidence to support the fifth hypothesis of relationships between moral intensity’s dimensions and ethical evaluation. Again, the social consensus was the predominated dimension of moral intensity across the three scenarios.

Hypothesis 6 states that there is a positive relationship between moral intensity and ethical intention. High levels of perceived magnitude of consequences, the probability of effects, and social consensus that an issue is not morally acceptable were expected to make it more likely that participants would avoid behaving in a similar manner.

The results of path analysis are presented as follows:

- For scenario 1, path analysis revealed that social consensus (injunctive and descriptive norms) was a significant¹⁶⁷ predictor of the behavioural intentions and the effect of probability of an effect on ethical behaviour was fully mediated¹⁶⁸ through ethical

¹⁶⁴ PM represents the joint variable of magnitude of consequences and probability of effects.

¹⁶⁵ The standard estimate values were 0.121, 0.229 and 0.104; p-values were 0.025, 0.0001 and 0.055 for PM, SUN and IUN respectively.

¹⁶⁶ The standard estimate values were 0.218 and 0.127; p-values were less than 0.001 for SUN and DN respectively.

¹⁶⁷ The standard estimate values were 0.141 and 0.074; p-values were 0.003 and 0.035 for IUN and DN respectively.

¹⁶⁸ The estimate value was 0.049 and P-values was 0.054.

evaluation. A belief that society (most people) condemned the underreporting of \$6,000 taxable income and the perception that most people don't engage in such behaviour have made it less likely that participants would indicate a willingness to engage in such behaviour. In addition, when participants felt that the likelihood of the effects of underreporting of \$6,000 taxable income was high, they were more likely to judge it as unethical. Consequently, it led them to indicate a more willingness to avoid engaging in such behaviour (mediation). Thus, hypothesis 6 was supported only for social consensus, while, the alternative hypothesis 6 (mediation) was supported for the probability of effects.

- For scenarios 2 and 3, path analysis revealed almost the same results. It revealed that the joint variable “PM”¹⁶⁹ and social consensus (subjective and descriptive norms) were significant¹⁷⁰ predictors of the behavioural intentions. When participants felt that the probability and magnitude of consequences jointly were high, they were more likely to indicate a willingness to avoid behaving in a similar manner. Also, a belief that the people close to them (friends and family) condemned the underreporting of the \$500 taxable tips (overstating tax dedications) and the perception that most people don't engage in such behaviour have made it more likely that participants would indicate a willingness to avoid behaving in similar manners. In addition, the effect of injunctive norms on the behavioural intentions was fully mediated¹⁷¹ through ethical recognition and evaluation in scenario 2. Thus, hypothesis 6 was entirely supported for the three moral intensity's dimensions in both scenarios 2 and 3. In addition, alternative hypothesis 6 (mediation) was supported for the social consensus (injunctive norms) in scenario 2.

The path analysis results across the three scenarios provide sufficient evidence to support the sixth hypothesis of relationships between moral intensity's dimensions and ethical intention. Most of the moral intensity were found to impact the ethical intentions across all three scenarios. So, the role of moral intensity's dimensions is manifested better at this stage of EDM.

¹⁶⁹ PM represents the joint variable of magnitude of consequences and probability of effects.

¹⁷⁰ The standard estimate values were (0.172, 0.13 and 0.063) and (0.079, 0.251, and 0.06); p-values were (0.0001, 0.011 and 0.06) and (0.033, 0.0001, and 0.057) for PM, SUN, and DN in scenario 2 and 3 respectively.

¹⁷¹ The estimate value 0.05 and p-value 0.078 (through EE); estimate value 0.012 and p-value 0.083 (through ER).

Regarding the EDM hypotheses, ethical recognition was significantly¹⁷² associated with ethical evaluation in just the second scenario (underreporting \$500 taxable tips). The disappearance¹⁷³ of the influence of ethical recognition in the ethical evaluation was observed in more intense¹⁷⁴ situations (scenario 1 and 3). This could be explained by arguing that the more intense the issue became, the clearer the course of ethical behaviour would be, so the ethical recognition would lose its effect on ethical evaluation. The ethical evaluation was an excellent¹⁷⁵ predictor of the behavioural intentions across the three scenarios. Also, ethical recognition directly¹⁷⁶ predicted ethical intentions in scenarios 2 and 3.

To sum up, the results of the current study lend support to Jones (1991) assertion that moral intensity has an important role in the way taxpayers shapes their tax compliance decisions (see Figure 6.4 and table 6.7 for more details¹⁷⁷). Next, the research synthesis model that includes all factors will be tested.

Hypothesis	Outcome		
	Scenario 1	Scenario 2	Scenario 3
H₄: There is a positive relationship between moral intensity and ethical recognition. POE → ER MC → ER SC → ER: SUN → ER IUN → ER DN → ER	Supported (0.151***) Not Supported Not Supported Supported (0.092**) Not Supported	Supported (0.149**) / Supported (0.126**) / Supported (0.111*) / Not Supported	Not Supported / Supported (0.301***) Not Supported / Not Supported
H₅: There is a positive relationship between moral intensity and ethical evaluation. POE → EE MC → EE SC → EE: SUN → EE IUN → EE DN → EE	Supported (0.095**) / Not Supported Not Supported Supported (0.305***) Not Supported	Supported (0.121**) / Supported (0.229***) Supported (0.104*) / Not Supported	Not Supported / Supported (0.218***) Not Supported / Supported (0.127***)
H₆: There is a positive relationship between moral intensity and ethical intention. POE → INT MC → INT SC → INT: SUN → INT IUN → INT DN → INT	Not Supported Not Supported Not Supported Supported (0.141***) Supported (0.074**)	Supported (0.172***) / / Supported (0.130**) / Not Supported Supported (0.063*)	Supported (0.079**) / Supported (0.251***) Not Supported / Supported (0.06*)

/: It is not applicable in this scenario.

Table 6.7: The Results of Hypotheses Testing (H₄, H₅, and H₆)

¹⁷² The estimate value 0.067 and p-value 0.069.

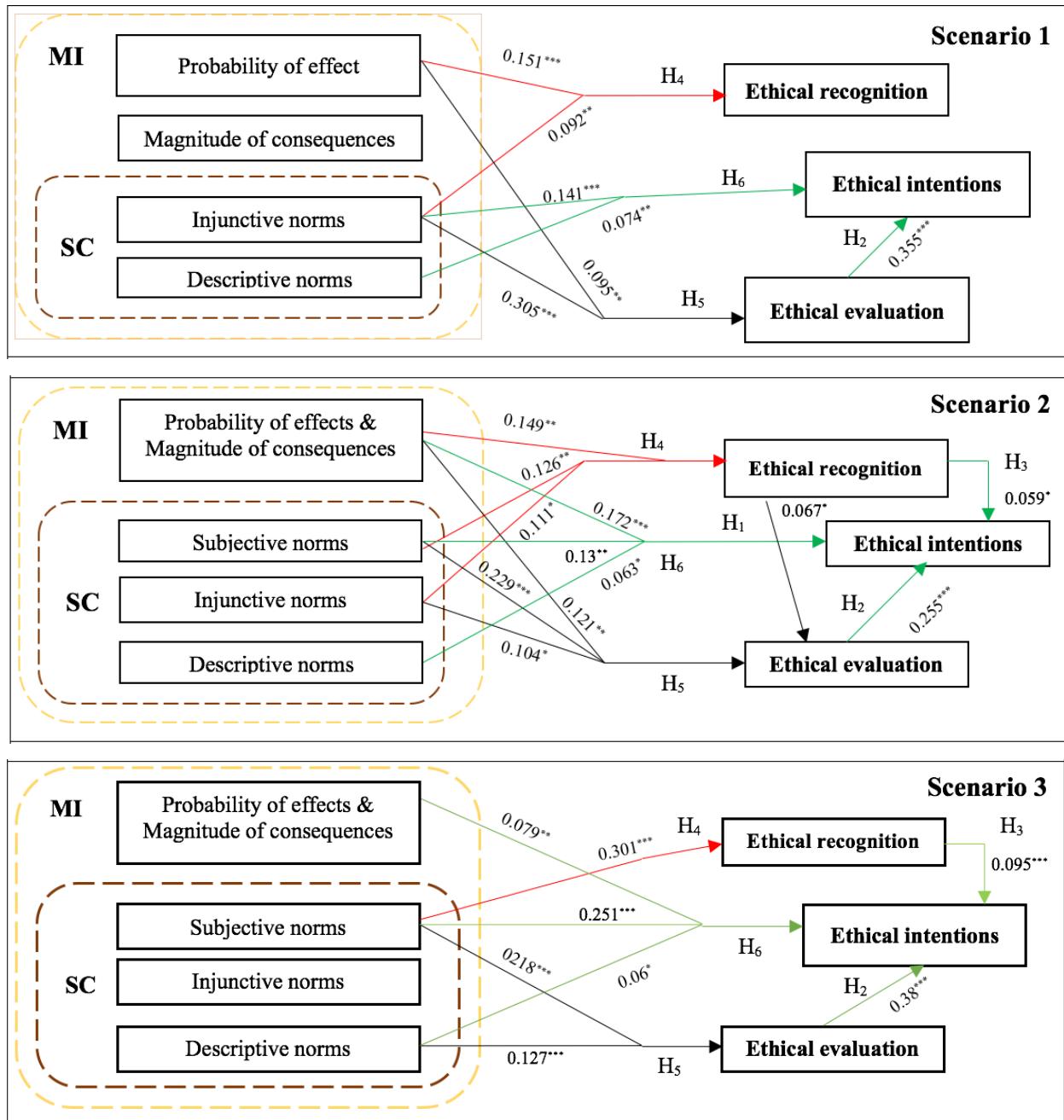
¹⁷³ The ethical recognition was found to be significantly associated with ethical evaluation across all scenarios in the previous path analysis testing ‘the ethical decision-making process’ (1st objective).

¹⁷⁴ The mean difference analysis of all indicators of moral intensity’s dimensions showed that scenario 3 had the highest perception level of social consensus, probability of effect, and magnitude of consequences which make the perception of the situation as very high intense situation, before scenario 1 and 2 respectively (scenario 2 showed the less intense situation).

¹⁷⁵ The estimate values were 0.355, 0.255, and 0.38; p-values were less than 0.001 in the three scenarios respectively.

¹⁷⁶ The estimate values 0.059 and 0.095; p-values were 0.095 and 0.004 in scenario 2 and 3 respectively.

¹⁷⁷ Some of Control variables were found to have impact on the EDM stages (see table J in appendix J for more details).



*: significant at 90% level of confidence; **: Significant at 95% level of confidence; ***: significant at 99% level of confidence.

—→ The arrow towards ethical recognition

—→ The arrow towards ethical evaluation

—→ The arrow towards ethical intention

Figure 6.4: The Results of SEM on the Issue-Contingent Model

6. 4. 3. Third Objective: *To examine the effect of the issue, moral agent, and environment characteristics on ethical decision-making in relation to tax compliance.*

The ultimate objective of the current study is to empirically test the theoretical role of the issue, moral agent, and environmental characteristics in ethical decision-making process. In order to test these characteristics, a research synthesis model has been developed as it is illustrated below.

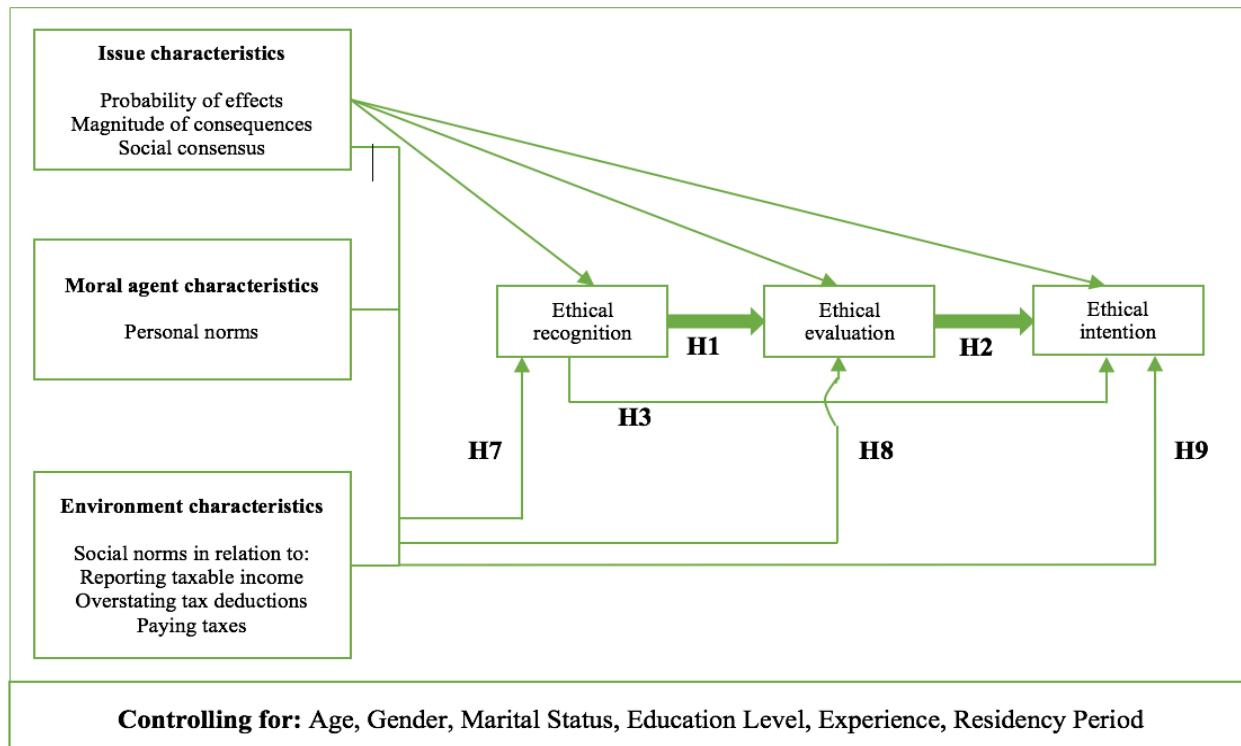


Figure 6.5: The Empirical Schema of 3rd Objective.

Again, structural equation modelling was used to test the proposed hypotheses¹⁷⁸. The model fit of the research synthesis model across the three scenarios displayed an excellent model fit¹⁷⁹ and the R-squared of the dependent variables were sufficiently acceptable¹⁸⁰. Thus, the global test of the model was achieved. The local tests of the proposed hypotheses are presented below:

¹⁷⁸ The control variables are: age, residency period, gender, marital status, education level, and experience. Some of those variables were found to have impact on the EDM stages (see Table J in the appendix J for more details).

¹⁷⁹ Model fit indices for three scenarios were all within the acceptable thresholds: (CMIN/DF = 2.573, 1.859, and 2.409); (CFI = 0.997, 0.999, and 0.997); (SRMS = 0.013, 0.013, and 0.013); (RMSEA = 0.050, 0.037, and 0.047); (PCLOSE = 0.448, 0.674, and 0.485) for scenario 1, 2 and 3 respectively.

¹⁸⁰ The R-squared values of the dependent variables ER, EE and INT were (7.6%, 35.3% and 32.7%); (16.7%, 35.7% and 34.1%); and (16.6%, 22.5% and 49.9%) across the three scenarios respectively. Those amounts of variance are considered to be sufficient to conclude that the results are meaningful (Falk & Miller, 1992).

Hypothesis 7 states that there is a positive relationship between issue, moral agents, and environmental characteristics and ethical recognition. High level of moral intensity's dimensions (POE, MC, and SC); personal norms (PN); and general social norms towards tax systems (RT, OE, DNG), were expected to make it more likely that participants would recognise the described behaviour as an ethical issue.

The results of SEM are presented as follows:

- For scenario 1, SEM revealed that personal norms ‘PN’; the magnitude of consequences ‘MC’; and social norms toward reporting cash earnings ‘RT’ were significant¹⁸¹ predictors of the participants recognising the underreporting of \$6,000 taxable income as an ethical issue. So, when participants hold high personal norms against underreporting of the \$6,000 taxable income, they were more likely to believe that it represented an ethical issue. Also, when participants felt that the possible consequences of the underreporting of the \$6,000 taxable income were serious, they were more likely to believe that it represented an ethical issue. Same, when participants believed that society was in favour of reporting cash earnings, they were more likely to believe that underreporting the \$6,000 taxable income represented an ethical issue. Thus, hypothesis 7 was supported for issue’s characteristics (MC), moral agents’ characteristics (PN), and environment’s characteristics (RT).
- For scenario 2, SEM revealed that personal norms ‘PN’ and the joint variable ‘PM’ were significant¹⁸² predictors of the participants recognising the described behaviour as an ethical issue. So, when participants hold high personal norms against underreporting the \$500 taxable tips, they were more likely to believe that it represented an ethical issue. Also, when participants felt that the probability and magnitude of consequences of underreporting the \$500 taxable tips were high, they were more likely to believe that it represented an ethical issue. Thus, hypothesis 7 was supported for issue characteristics (PM) and moral agents’ characteristics (PN) only, while no evidence for the effect of environment’s characteristics was seen in this scenario.
- For scenario 3, SEM revealed that personal norms ‘PN’; social consensus ‘SC’ (subjective norms ‘SUN’); and social norms toward overstating tax deductions ‘OE’ were

¹⁸¹ The standard estimate values were 0.124, 0.082, and 0.109; p-values were 0.062, 0.058, and 0.075 for PN, MC, and RT respectively.

¹⁸² The standard estimate values were 0.273, and 0.102; p-values were 0.0001 and 0.09 for PN and PM respectively.

significant¹⁸³ predictors of the participant's recognition of the described behaviour as an ethical issue. So, when participants hold high personal norms against overstating tax deductions by \$1,400, they were more likely to believe that it represented an ethical issue. Also, when participants felt people close to them (family and friends) condemned overstating tax deductions by \$1,400, they were more likely to believe that it represented an ethical issue. Similarly, when participants felt that society was against overstating tax deductions by any amount, they were more likely to believe that overstating tax deductions by \$1,400 represented an ethical issue. Thus, hypothesis 7 was supported for issue's characteristics (SC), moral agents' characteristics (PN), and environment's characteristics (OE).

The SEM results across the three scenarios provide sufficient evidence to support the seventh hypothesis and assert the role of the three¹⁸⁴ characteristics in shaping the ethical recognition. It is worth mentioning that marital status was found to have an effect¹⁸⁵ on ethical recognition in scenario 2.

Hypothesis 8 states that there is a positive relationship between 'issue, moral agents, and environmental characteristics' and ethical evaluation. High level of moral intensity's dimensions (POE, MC, and SC); personal norms (PN); and general social norms towards tax systems (RT, OE, DNG), were expected to make it more likely that participants would judge the behaviour (tax evasion) as an unethical.

The results of SEM are presented as follows:

- For scenarios 1 and 2, SEM revealed the same results. It revealed that personal norms 'PN' and social norms towards reporting cash earnings 'RT' were significant¹⁸⁶ predictors of ethical judgment. So, when participants hold high personal norms against the underreporting of \$6,000 taxable income (\$500 taxable tips in scenario 2), they were more likely to judge it as unethical. Also, when participants believed that society was in favour of reporting cash earnings, they were more likely to judge the underreporting of

¹⁸³ The standard estimate values were 0.334, 0.101 and 0.072; p-values were 0.0001, 0.061 and 0.086 for PN, SUN, and OE respectively.

¹⁸⁴ The issue, moral agents, and environment's characteristics.

¹⁸⁵ Married participants recognised better the ethicality of the described behaviour compared to single participants (standard estimate was -0.08 and p-value of 0.045).

¹⁸⁶ The standard estimate values were (0.529, and 0.135) and (0.469 and 0.106); p-values were (0.0001 and 0.009) and (0.0001 and 0.013) for PN and RT in scenario 1 and 2 respectively.

\$6,000 taxable income (\$500 taxable tips in scenario 2) as unethical behaviour. Thus, hypothesis 8 was supported for moral agents' characteristics (PN), and environment's characteristics (RT). There was no evidence of the role of moral intensity' dimensions in either scenario.

- For scenario 3, SEM revealed that personal norms 'PN'; social consensus 'SC' (descriptive norms 'DN'); social norms toward overstating tax deductions 'OE', and toward paying taxes 'DNG', were significant¹⁸⁷ predictors of ethical judgment. When participants held high personal norms against overstating tax deductions by \$1,400, they were more likely to judge it as unethical. Also, when participants felt that most people don't engage in such behaviour, they were more likely to judge it as unethical behaviour. Similarly, when participants felt that society in general against overstating tax deductions, they were more likely to judge the overstating tax deductions by \$1,400 as unethical behaviour. And, when participants felt that society complies in general with tax systems, they were more likely to judge the described behaviour as unethical. Thus, hypothesis 8 was supported for issue's characteristics (SC), moral agents' characteristics (PN), and environment's characteristics (OE and DNG).

The SEM results across the three scenarios provide sufficient evidence to support the eighth hypothesis and assert the role of the three characteristics in shaping the ethical evaluation, although issue characteristics were only found to have an impact on ethical evaluation in scenario 3.

It is worth mentioning that the period of residency in the country was found to have an impact¹⁸⁸ on the way participants evaluated the described behaviour in scenario 1.

Hypothesis 9 states that there is a positive relationship between 'issue, moral agents, and environmental characteristics' and ethical intention. High level of moral intensity's dimensions (POE, MC, and SC); personal norms (PN); and general social norms toward tax system (RT, OE, DNG), were expected to make it more likely that participants would form intention to avoid behaving in a similar manner to that described behaviour in the scenarios.

¹⁸⁷ The standard estimate values were 0.432, 0.081, 0.09 and 0.064; p-values were 0.0001, 0.026, 0.03 and 0.095 for PN, DN, OE and DNG respectively.

¹⁸⁸ The more time participants spent in the country, the stronger they judged the described behaviour as unethical with standard estimate of 0.062 and p-value of 0.068.

The results of SEM are presented as follows:

- For scenario 1, SEM revealed that personal norms ‘PN’ and social consensus ‘SC’ (descriptive norms ‘DN’) were significant¹⁸⁹ predictors of the behavioural intentions. So, when participants held high personal norms against underreporting the \$6,000 taxable income, they were more likely to form intentions to avoid behaving in a similar manner. Also, when participants believed that most people don’t engage in such behaviour, they were more likely to form behavioural intention to avoid underreporting the \$6,000 taxable income. Thus, hypothesis 9 was supported for the issue’s characteristics (DN), and moral agents’ characteristics (PN). Hypothesis H_{9a} (alternative) states that the issue; moral agents; and environment’s characteristics would influence behavioural intentions through ethical evaluation (mediation). The bootstrapping test of mediation revealed that the effect of social norms toward reporting cash earnings ‘RT’ on the ethical intentions was fully mediated¹⁹⁰ through ethical evaluation. So, when participants believed that society was in favour of reporting cash earnings, they were more likely to judge it as unethical behaviour, which consequently, led them to form behavioural intentions to avoid underreporting the \$6,000 taxable income. Thus, alternative hypothesis 9 was supported for the environment’s characteristics (RT).
- For scenario 2, SEM revealed that personal norms ‘PN’; probability and magnitude of consequences ‘PM’; social consensus ‘SC’ (subjective norms ‘SUN’); and social norms toward paying taxes ‘DNG’ were significant¹⁹¹ predictors of the behavioural intentions. So, when participants held high personal norms against underreporting the \$500 taxable tips, they were more likely to form intentions to avoid behaving in a similar manner. Also, when participants believed that people close to them (family and friends) condemned underreporting the \$500 taxable tips, they were more likely to form the intention to avoid behaving in a similar manner. Similarly, when participants felt that the likelihood and magnitude of the consequences of underreporting the \$500 taxable tips were high, they were more likely to form the intention to avoid behaving in a similar manner. Finally, when participants felt that society was compliant with taxes system, they

¹⁸⁹ The standard estimate values were 0.350, and 0.086; p-values were 0.0001 and 0.011 for PN and DN respectively.

¹⁹⁰ The estimate value was 0.061 and p-value was 0.02 for RT in INT through EE.

¹⁹¹ The standard estimate values were 0.203, 0.122, 0.091 and 0.103; p-values were 0.002, 0.022, 0.099 and 0.003 for PN, PM, SUN and DNG respectively.

were more likely to form behavioural intentions to avoid underreporting the \$500 taxable tips. Thus, hypothesis 9 was supported for issue's characteristics (PM and SC), moral agents' characteristics (PN), and environment's characteristics (DNG). The bootstrapping test of mediation again revealed that the effect of social norms toward reporting cash earnings "RT" on the ethical intentions was fully mediated¹⁹² through ethical evaluation. So, when participants felt that society was in favour of reporting cash earnings, they were more likely to judge the underreporting of \$500 taxable tips as unethical behaviour, which consequently, led them to form behavioural intentions to report the \$500 taxable tips. Thus, the alternative hypothesis 9 (mediation) was also supported for environment's characteristics (RT).

- For scenario 3, SEM revealed that personal norms "PN"; and social norms toward overstating tax deductions "OE" were significant¹⁹³ predictors of the behavioural intentions. So, when participants held high personal norms against overstating tax deductions by \$1,400, they were more likely to form intentions to avoid behaving in a similar manner. Also, when participants believed that society against overstating tax deductions, they were more likely to intend to avoid overstating tax deductions by \$1,400. Thus, hypothesis 9 was supported for moral agents' characteristics (PN), and environment's characteristics (OE). Bootstrapping test of mediation revealed that the effect of social norms toward paying taxes "DNG" and social consensus "SC" (descriptive norms "DN") on the ethical intentions were fully mediated¹⁹⁴ through ethical evaluation. Thus, the alternative hypothesis 9 (mediation) was supported for the issue characteristics (SC) and environment's characteristics (DNG).

The SEM results across the three scenarios provide sufficient evidence to support the ninth hypothesis and assert the role of the three characteristics in shaping the ethical intention (directly/indirectly). Although the effect of some factors (environment characteristics in scenario 1, and issue characteristics in scenario 3) was found to be fully mediated by ethical evaluation, they still had a level of impact on the last stage of EDM: ethical intention.

¹⁹² The estimate value was 0.05 and p-value was 0.007 for RT (through EE).

¹⁹³ The standard estimate values were 0.503, and 0.104; p-values were 0.0001 and 0.002 for PN and OE respectively.

¹⁹⁴ The estimate values were 0.034 and 0.025; p-values were 0.079 and 0.04 for DNG and DN (through EE).

Regarding hypotheses 1, 2, and 3, the SEM revealed that only hypothesis 2 was supported¹⁹⁵ across the three scenarios, whereas there was no evidence to support¹⁹⁶ hypotheses 1 and 3.

Including the issue, moral agents, and environment's characteristics in the model seem to crowd out the effect of ethical recognition on the other two stages of EDM. A possible explanation could be that including more factors to explain EE and INT in the model have made the course of action clearer to the individuals, which caused the ER to lose its effects on EE and INT.

It is noteworthy that the period of residency in the country was found to have an impact¹⁹⁷ on the behavioural intentions of the participants in scenario 1 and 3. Also, the marital status had an impact¹⁹⁸ on the ethical intentions in scenario 3. Figure 6.6 and table 6.8 presents the results¹⁹⁹ of SEM analysis of the research synthesis model for the three scenarios.

Hypothesis	Outcome		
	Scenario 1	Scenario 2	Scenario 3
H₇: There is a positive relationship between “issue, moral agents, and environment’s characteristics” and ethical recognition. POE → ER MC → ER SC → ER: SUN → ER IUN → ER DN → ER PN → ER SNG → ER: RT (OE) → ER DNG → ER	Not Supported Supported (0.082*) Not Supported Not Supported Not Supported Supported (0.124*) Supported (0.109*) Not Supported	Supported (0.102*) / Not Supported Not Supported Not Supported Supported (0.273***) Not Supported Not Supported	Not Supported / Supported (0.101*) Not Supported Not Supported Supported (0.334***) Supported (0.072*) Not Supported
H₈: There is a positive relationship between “issue, moral agents, and environment’s characteristics” and ethical evaluation. POE → EE MC → EE SC → EE: SUN → EE IUN → EE DN → EE PN → EE SNG → EE: RT (OE) → EE DNG → EE	Not Supported Not Supported Not Supported Not Supported Not Supported Supported (0.520***) Supported (0.135***) Not Supported	Not Supported / Not Supported Not Supported Not Supported Supported (0.469***) Supported (0.106**) Not Supported	Not Supported / Not Supported Not Supported Supported (0.081**) Supported (0.432***) Supported (0.09**) Supported (0.064*)
H₉: There is a positive relationship between “issue, moral agents, and environment’s characteristics” and ethical intention. POE → INT MC → INT SC → INT: SUN → INT IUN → INT DN → INT PN → INT SNG → INT: RT (OE) → INT DNG → INT	Not Supported Not Supported Not Supported Not Supported Supported (0.086**) Supported (0.350***) Not Supported Not Supported	Supported (0.122**) / Supported (0.091*) Not Supported Supported (0.074**) Supported (0.203***) Not Supported Supported (0.103***)	Not Supported / Not Supported Not Supported Not Supported Supported (0.503***) Supported (0.104***) Not Supported

/: It is not applicable in this scenario.

Table 6.8: The Results of Hypotheses Testing (H₇, H₈, and H₉)

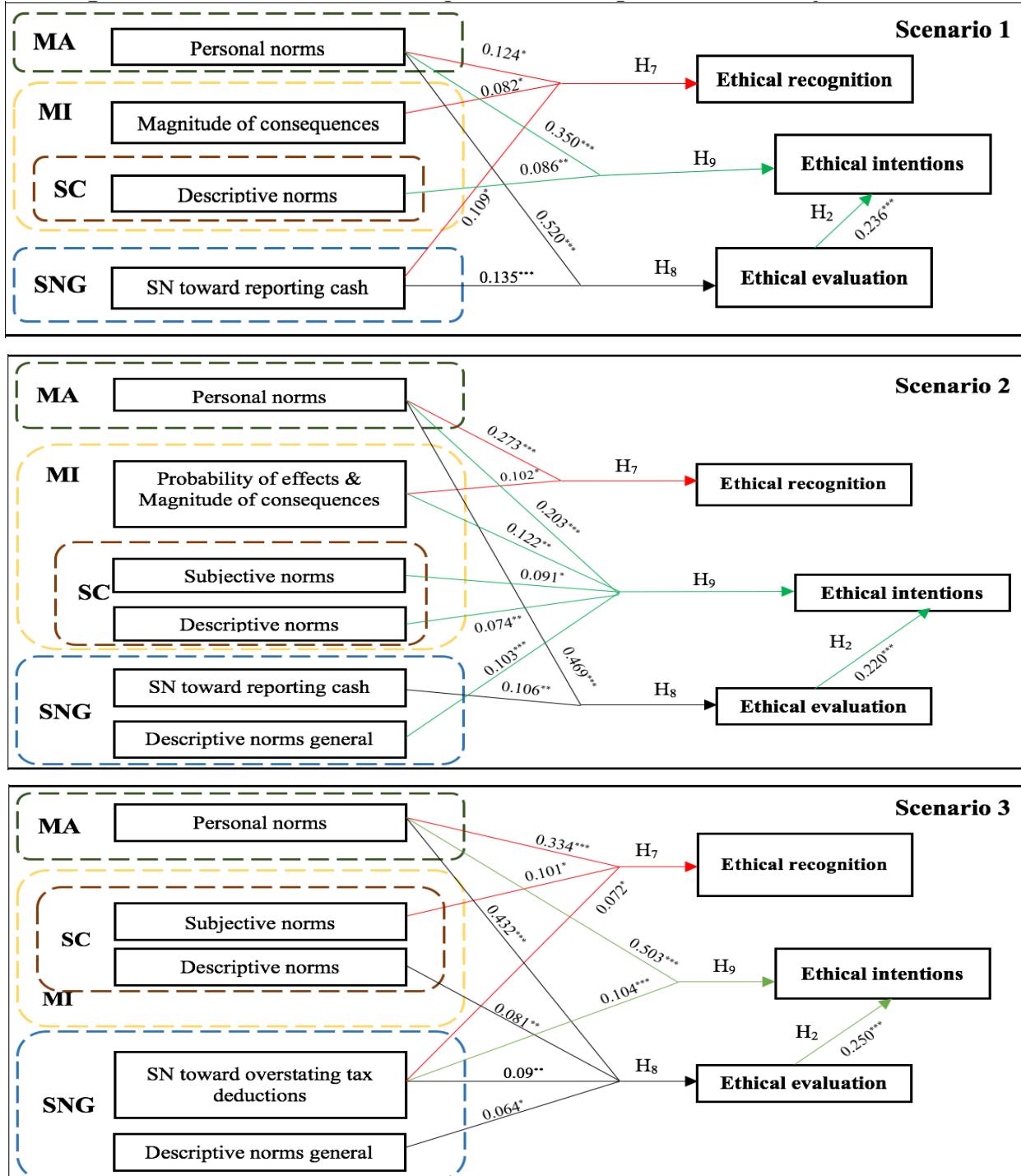
¹⁹⁵ The standard estimate values were 0.236, 0.220, and 0.250; p-values were all less than 0.001 for three scenarios respectively.

¹⁹⁶ They were supported in SEM test on Rest ‘EDM’ and Jones ‘moral intensity’ models earlier.

¹⁹⁷ The more the time participants spent in the country, the more likely they would form intentions to behave in similar manner and underreport taxes (scenario 1) and overstate taxes deductions (scenario 3). The standard estimate values were -0.081 and -0.056; and P-values were 0.02 and 0.069 in scenario 1 and 3 respectively.

¹⁹⁸ Married participants were more likely to avoid overstating tax deductions than single participants with standard estimates of .055 and 0.075.

¹⁹⁹ Some of Control variables were found to have impact on the EDM stages (see Table J in appendix J for more details).



*: significant at 90% level of confidence; **: significant at 95% level of confidence; ***: significant at 99% level of confidence.

- The arrow towards ethical recognition
- The arrow towards ethical evaluation
- The arrow towards ethical intention

Figure 6.6: The Results of SEM on the Research Synthesis Model

6. 4. 4. Fourth Objective: *To examine whether the impact of three characteristics (issue, moral agent, and environment) on ethical decision-making is moderated by the individual religiosity level.*

Tax compliance literature -tax morale Theory- posits that the religiosity level of the individuals has a potential to play an essential role in the taxpayers' compliance decision (McGee, 1999; Torgler, 2006). According to the literature, religion prevents engaging in deviant behaviours such as tax evasion by enhancing the role of certain factors (e.g., personal norms, social norms...etc.) in the process of decision making (Section 4.4). So, it was hypothesised that, there is a stronger positive relationship between three characteristics (issue, moral agents, and environment) and stages of ethical decision making for individuals with high religiosity compared to individuals with low religiosity.

In order to test this hypothesis, the data will be divided into two sub-groups (high vs. low religious groups) based on the participant's scores on the 10-RCI scale²⁰⁰ "Religious Commitment Inventory" adopted from the work of Worthington et al. (2003). The participant who scored less than 53 out of 70, was justified to be classified²⁰¹ as a less religious individual. This resulted in a sample size of 279 for the high religious group and 319 for the low religious group.

The process of comparing the two groups started with a mean-variance test (ANOVA²⁰²) for the three dependent variables (ER, EE, and INT). The aim was to establish whether the two groups behave differently in the same situation (recognise, evaluate, and built intention differently), followed by further examinations to investigate the reasons for any differences found. The first of these examinations is comparing the research model across the two groups by performing Chi-square difference test. If the test shows a significant difference, a direct path by path examination will be conducted. According to the literature (Li et al., 1998; Schumacker and Marcoulides, 1998; Byrne and Stewart, 2006; Floh and Treiblmaier, 2006), this later examination offers an adequate tool to exhibit the potential difference in the effect of each independent variable (e.g., personal norms, social norms, probability of effects...etc.) on dependent variable (ethical

²⁰⁰ Section 4 of the survey (appendix B).

²⁰¹ The classification of the participants into a highly or less religious group is according to Worthington et al. (2003)

²⁰² The use of one-way ANOVA because the religiosity level consists of three groups: high, low, and none religious; yet t-test will be conducted to confirm the ANOVA results.

recognition, evaluation, and intentions) across the two moderator groups (high vs. low religiosity)

But before formally testing the structural model across both groups (Chi-square difference test), the measurement model needs to be checked whether it is conceptually invariant across the groups, to confirm that each variable is actually capturing the same concept across the two groups. The early invariance test at the CFA section (last chapter) showed that the model is Configural and metric invariant across the two religiosity groups (more details in section 5.4). So, the analyses can safely proceed to fully examine the potential differences in the model.

Findings

The results of univariate analysis of variance are presented in below table 6.6 for each scenario.

Table 6.9: The Results of Mean-Variance Test for Religiosity Level.

Mean Difference Test	Scenario 1		Scenario 2		Scenario 3	
	P-value	Result	P-value	Result	P-value	Result
Ethical recognition		Not difference	0.036**	Difference		Not difference
Ethical evaluation		Not difference		Not difference	0.054*	Difference
Ethical intentions	0.069*	Difference	0.001***	Difference	0.09*	Difference

*: Significant at 90% level of confidence; **: Significant at 95% level of confidence; ***: Significant at 99% level of confidence.

Scenario 1

As it is demonstrated in Table 6.6, the only significant²⁰³ mean difference between the two groups is at the ethical intentions level. This mean difference suggests that the two groups had different intentions toward the same situation, with the highly religious individuals scoring higher (4.35) than less religious individuals (4.11) which might indicate that they were more likely to report the \$6,000 taxable income than the less religious individuals, however, the post hoc test²⁰⁴ showed that this difference is not significant²⁰⁵.

²⁰³ The ANOVA test showed a significant mean difference among the religious groups ($p\text{-value} = 0.069$ and $f\text{-value} = 2.380$), however, the post hoc test showed an insignificant mean difference between high and low religious groups.

²⁰⁴ The post hoc tested was conducted because the religiosity level consists of three groups: high, low, and non-religious, and the purpose, is to examine if this difference (ANOVA) is between high and low religiosity groups.

²⁰⁵ T-test was conducted and the $p\text{-value}$ (0.157) was not significant as well.

Proceeding to the structural model difference, the Chi-square difference test showed a significant²⁰⁶ model difference across the two groups. This implies that the level of religiosity of individuals moderates the relationship between the three characteristics (issue, moral agent, and social characteristics) and the three stages of EDM, in such that, the effect of those independent variables on the dependent variables are different across the religiosity groups.

Conducting a deeper analysis to detect which path(s) is causing this difference in the model by using the bootstrapping technique reveals the following paths:

- (1) injunctive norms to ethical intentions ‘IUN → INT’;
- (2) the magnitude of consequences to ethical intentions ‘MC → INT’;
- (3) ethical evaluation to ethical intentions ‘EE → INT’.

In more details, the path between IUN → INT was significant for the highly religious group, whereas, it was insignificant for the less religious group, which suggests that the highly religious group pay more intentions to what most people would approve as an acceptable behaviour in a given situation when they form their behavioural intentions compared to the less religious group. This result was further supported²⁰⁷ by the bootstrapping method.

Similarly, the path between MC → INT was significant for the highly religious group and insignificant for the less religious group and the bootstrapping technique supported²⁰⁸ this finding. This implies that highly religious individuals pay more intention to the seriousness of the consequences of the behaviour when they establish their behavioural intentions to act compared to less religious individuals.

Finally, the path between EE → INT was significant for both groups. However, the bootstrapping test showed that the effect was significantly²⁰⁹ stronger for the highly religious group (standard path estimation 0.304) compared to the less religious group (standard path estimation 0.222). This suggests that the religiosity level strengthens the effect between ethical evaluation and ethical intentions.

Thus, these findings supported hypothesis 10 which stated that the religiosity level of individuals would influence the relationship between the issue’s characteristics (social consensus ‘IUN’ and magnitude of consequences ‘MC’) and ethical evaluation ‘EE’ on one side and the ethical

²⁰⁶ The Chi-square test showed a significant difference between the two model (CMIN difference of 62.611, degree of freedom difference “DF” of 41, and the p-value of 0.016).

²⁰⁷ The bootstrapping method showed that the estimate difference was 0.379 with a significant p-value of 0.025.

²⁰⁸ The bootstrapping method showed that the estimate difference was 0.269 with a significant p-value of 0.005.

²⁰⁹ The bootstrapping method showed that the estimate difference was of 0.185 and a significant p-value of 0.007.

intentions ‘INT’ on the other side, in such that the positive effect is stronger for highly religious individuals compared to the less religious individuals.

Scenario 2

One-way ANOVA shows a significant²¹⁰ mean difference in ethical recognition and ethical intentions. The post hoc tests²¹¹ revealed that highly religious individuals recognised the ethicality of underreporting the \$500 taxable tips better than the less religious individuals, and they held significantly higher intentions to report the \$500 tips than the less religious individuals. Thus, religiosity level of individuals caused the participants to recognise and form intentions differently. Moving to study the reasons for these differences, structural model difference test was performed. The Chi-square difference test showed a significant²¹² difference in the way the three characteristics (issue, moral agent, and envoriment characteristics) are affecting the EDM stages. Proceeding further in path by path examination revealed only the following path to be significantly different between the two groups: ‘probability and the magnitude of the consequences’ to ethical evaluation (PM → EE)

In more details, the PM → EE was significant for the highly religious group and insignificant for the less religious group. The bootstrapping tests supported this result and showed that the estimate coefficient difference was 0.256 with a significant p-value of 0.089. This implies that the likelihood and the magnitude of the consequences determine the way highly religious individuals evaluated the situation, while this was not the case for the less religious individuals.

Hypothesis 10 was only supported for the effect of PM on EE. So, religiosity level of individuals was found to moderate the effect of PM on EE, such that the effect is significant for highly religious individuals and not for the less religious individuals.

²¹⁰ The Welch tests for the ethical recognition and intentions showed a significant difference (p-value of 0.036 and 0.001 respectively).

²¹¹ The post hoc tests showed that the high religious participants, on average, had mean score (4.11) significantly higher than the low religious participants (3.96) for ethical recognition with p-value of 0.086 (Scheffe test), while the same results were found for ethical intentions (3.80) vs. 3.40 with p-value of 0.03 (LSD test).

²¹² The Chi-square test showed a significant difference between the two model (CMIN difference of 52.947, degree of freedom difference “DF” of 38, and the p-value of 0.054).

Scenario 3

For scenario 3, mean-variance tests show a significant mean difference between the two groups. The highly religious group strongly judged overstating tax deductions by \$1,400 to be unethical compared to the less religious group and also had significant²¹³ higher intentions to comply and not overstate the tax deductions by \$1,400 compared to the less religious group.

To investigate the reasons for those differences, Chi-square difference test was performed. The overall structural model difference showed no significant model difference across the two groups, which, suggested that there is no evidence to support the proposition that the way the three characteristics (issue, moral agent, and environment characteristics) affecting the EDM stages are different²¹⁴ across the religiosity groups. Hence, no further investigation was conducted, and it was concluded that the religious level of the participants does not moderate the effect of the proposed characteristics on the tax compliance decisions of the participants. Thus, hypothesis 10 was not supported in scenario 3.

To sum up, Hypothesis 10 states that religiosity level of individuals will moderate the effects of three characteristics (issue, moral agents, and environment) on the EDM stages, such that for the highly religious individuals the positive effect is stronger than for the less religious individuals. This hypothesis was supported only for the role of issue's characteristics in tax compliance behaviour (IUN, MC, and PM). In the first scenario, religiosity level was found to moderate the effect of EE on INT, while in third scenario no effect of religiosity was found (see table 6.10).

Hypothesis	Outcome		
	Scenario 1	Scenario 2	Scenario 3
H₁: There is a stronger positive relationship between 3 characteristics and stages of EDM for individuals with high religiosity compared to individuals with low religiosity.	Supported only for IUN**, MC***, EE***	Supported only for PM*	Not Supported

Table 6.10: The Results of Bootstrapping for Hypothesis 10

6. 5. Chapter Summary

This chapter presented in detail the main statistical results of the thesis. The first section outlined the descriptive statistics. The highlights of this section were that tax compliance behaviour was

²¹³ The ANOVA test showed a significant mean difference among the religious groups for the both stages EE and INT with P-value of 0.027 and 0.025, and f-value of 3.071 and 3.149 respectively), and the post hoc test (LSD) showed significant mean differences between high and low religious groups with p-values of 0.046 and 0.003.

²¹⁴ The Chi-square test showed insignificant difference between the two models (CMIN difference of 34.475, degree of freedom difference “DF” of 38, and the p-value of 0.633).

different across age, residency period, gender, marital status, education level, membership of the Muslim community, tax jurisdictions, and experience level. In more details, age was found to positively impact all stages of tax compliance decision. Likewise, the gender and marital status were found to have an impact on tax compliance decision process. While residency period was found to have a negative impact on tax compliance behaviour, such that the longer the participants spent in the country, the less compliant they become. Tax jurisdictions were found to have an impact on ethical evaluation and intention of the taxpayers. Specifically, participants that live under Canadian tax jurisdiction were found to be more compliant and evaluated tax evasion as unethical stronger than participants that live under Irish jurisdiction. Finally, the findings from education level and experience were consistent with the findings from the literature.

The second section of this chapter presented the results of bivariate correlations. This results preliminary supported most the research hypotheses and provided strong support for the appropriateness of the research synthesis model.

The third section presented the results of the SEM analyses. The results have been presented under each research objective. The first objective aimed to identify the chain of reasoning (EDM process) that taxpayers apply when they face a tax compliance situation (examine Rest's model). It was found that when taxpayers face a tax compliance situation, they will first recognise that the situation involves an ethical issue, and will then evaluate the situation as either ethical or unethical situation, and will subsequently form behavioural intention toward the situation. The second objective aimed to empirically support the role of moral intensity's dimension in tax compliance behaviour (examine Jones's model). It was found that moral intensity's dimensions (POE, SC, and MC) in general and SC in particularly significantly predict the three stages of tax compliance behaviour across the three scenarios. The third objective aimed to empirically support the role of the issue, moral agent, and environment characteristics in tax compliance behaviour. It was found that the three characteristics significantly predict the tax compliance behaviour with predominated of the moral agent's characteristics (PN) across the three scenarios. Finally, the last objective aimed to empirically support the role of religiosity level in tax compliance behaviour. It was found that religiosity level strength only the role of issue's characteristics in tax compliance behaviour. The next chapter will present the discussion of the findings.

Chapter 7: Discussion of Findings

7. 1. Introduction

The aim of this chapter is to provide a conceptual and practical positioning of the reported results in Chapter 6. The findings are discussed in relation to the theories adopted to direct the research, as well as comparable relevant prior theoretical and empirical studies.

7. 2. Process of Tax Compliance Decisions

The first objective of this study was to examine the process by which taxpayers make ethical decisions and engage in tax compliance behaviour. Rest and Barnett (1986) model ‘ethical decision making’ was adopted to examine this process. The SEM analyses (section 6.4.1) revealed that recognising the ethicality of the tax evasion’s situations²¹⁵ (ethical recognition) had a positive effect on the way these situations were evaluated (ethical evaluation) and on the behavioural intention of participants toward these situations (ethical intention). Also, ethical evaluation was positively associated with ethical intention. These findings were as expected, and they lend further support to the validity of Rest’s EDM model in general, and more specifically in the context of tax compliance.

In more detail, ethical recognition had a direct and positive impact on ethical evaluation (H_1) and ethical intention²¹⁶ (H_3). These outcomes are consistent with studies from ethics literature (Singhapakdi et al., 2000; May and Pauli, 2002; Haines et al., 2008) and demonstrate the important role of ethical recognition in shaping the other two stages: ethical evaluation and intention. It is of importance to identify these relationships between different stages of ethical decision making as it provides insight into the potential to influence ethical intentions through either of the other two stages.

²¹⁵ Underreporting cash earnings and overstating tax deductions behaviours.

²¹⁶ In scenario 1, there was positive indirect effect between ethical recognition on ethical intention which is still consistent with the literature (May & Pauli 2002).

To the best of the author's knowledge, there is no research within the tax compliance area that considers or includes ethical recognition as a distinct stage of ethical decision making. These findings could be considered as an initial attempt to illustrate the significant role of ethical recognition in ethical decision-making related to tax compliance behaviour. Ho (2010: p 157) argued that "*if an issue is not recognised as ethically intensive, then there is no need to consider it in an ethically comprehensive manner because individuals would not engage in the ethical decision-making process if they are not aware of a moral aspect of the issue*". So, in order to consider and study ethical decision making in the context of tax compliance, researchers need to examine if the taxpayer is aware that the particular tax evasion involves an ethical issue. Therefore, the initial step of recognising the ethicality of the situation is of paramount importance in any model of ethical decision making in relation to tax compliance.

SEM analyses also revealed that ethical evaluation is positively associated with an intention to act across the three tax evasion scenarios. Again, this outcome is consistent with prior studies (Barnett et al., 1996; DeConinck and Lewis, 1997; Barnett, 2001; Shafer et al., 2001) and further supports the significant relationship between ethical evaluation and intention. This result points to the potential importance of education in enhancing the moral reasoning (ethical evaluation) and ultimately influencing tax compliance intention. Kornhauser (2006: p 633) argued that:

"Research indicates that high moral reasoning correlates with higher tax compliance and that education is an important factor in increasing moral reasoning".

The mean scores analyses (section 6.2.2.1) revealed that ethical recognition, evaluation, and intention varies between different tax evasion scenarios. For instance, overstating tax deduction behaviour (scenario 3) was recognised to a greater extent as an ethical issue, more strongly judged as an unethical behaviour, and participants were more likely to form an intention to comply compared to the underreporting of taxable income scenarios²¹⁷. This outcome is consistent with prior studies which found that taxpayers' behaviours vary across different types of tax evasion (Yankelovich, 1984; Thurman, 1989). Henderson and Kaplan (2005) found that ethical evaluation differs according to the nature of the compliance decision. The results here provide further evidence of the variation in ethical decision making between different tax evasion situations (ethical recognition, evaluation, and intention). Therefore, it is important to consider the types of evasion in any study that aims to investigate the tax compliance decisions.

²¹⁷ The underreporting behaviour described in scenario 2 was not recognised as an ethical issue, judged as an ethical behaviour, and participant showed strong intention to behave in similar manner (underreport) and not to comply.

It is also worth mentioning that the amounts of tax income underreported in scenarios 1 and 2 were manipulated in that the amount of underreporting in the first scenario was 12 times bigger than in the second scenario. The t-test results²¹⁸ showed that there are significantly differences in the three stages of EDM across the two scenarios (1 and 2). It could be argued, that a partial explanation for this is that the participants might evaluate the two scenarios from a purely cost-benefit perspective.

7. 3. Tax Compliance Determinants

Once the process of tax compliance decisions has been elucidated (section 7. 2. 1), determining the factors that influence this process is crucial to understanding the full picture of tax compliance behaviour. Towards this goal, two models (issue-contingent and research synthesis models) were tested, and the discussion of the findings are presented below.

7. 3. 1. Issue-Contingent Model

The second objective of this study was to examine the effects of issue characteristics on ethical decision-making in relation to tax compliance behaviour. Towards this end, the issue-contingent model of Jones (1991) was tested for its applicability in the tax compliance area. The SEM analyses (section 6.4.2.2) revealed that the ethical decision making was significantly affected by the three issue characteristics (social consensus, the magnitude of consequences, and the probability of effects) across all scenarios. This outcome is consistent with the previous empirical studies in ethical decision-making literature (Robin et al., 1996; Singhapakdi et al., 1996; Singer and Singer, 1997; Singhapakdi, 1999; Singhapakdi et al., 2000; O'Fallon and Butterfield, 2005; Craft, 2013; Loe et al., 2013) and supports for the applicability of Jones's (1991) issue-contingent model in a tax compliance context.

The effect of the three dimensions of moral intensity on EDM stages are discussed for each stage of EDM as following:

²¹⁸The results of t-test that were presented in section 6.2.2.1.

7. 3. 1. 1. Ethical Recognition

The SEM analyses revealed that the three dimensions of moral intensity were associated with ethical recognition which supports hypothesis 4. Specifically, the social consensus was by far the most important dimension of moral intensity in this stage. In fact, the effect of social consensus on ethical recognition was consistent across the three scenarios (i.e., for the two types²¹⁹ of tax evasion). This predominance of social consensus in affecting the ethical recognition is consistent with prior studies (Morris and McDonald, 1995; Robin et al., 1996; Harrington, 1997; Barnett, 2001) and suggests that promoting tax compliance as a socially approved type of behaviour would help taxpayers in recognising the ethicality of tax evasion.

The magnitude of consequences and probability of effect were positively associated with ethical recognition in scenarios related to underreporting taxable income but not in the scenario related to overstating tax deductions. The positive association between these two dimensions and ethical recognition (in scenarios 1 and 2) is consistent with the EDM literature (Singhapakdi et al., 1999; Butterfield et al., 2000; May and Pauli, 2002; Barnett and Valentine, 2004) and adds further empirical support to its relevance in the tax compliance literature. The two enforcement variables (audit and penalties) are the most frequently used tools of enforcement by tax authorities and the outcome of this study further supports the role of these enforcement tools in shaping ethical recognition. However, the inconsistency of this effect in the overstating tax deduction scenario implies that the relationship between these two dimensions and ethical recognition is contingent on the context involved, and the enforcement system is not always the ideal tool to increase taxpayers' awareness of the ethical issue of all types of tax evasion's behaviours whereas social consensus is. As referred to in Chapter 4, several studies in the literature acknowledge the fact that some dimensions of moral intensity mattered more than others; such as magnitude of consequences and social consensus (Morris and McDonald, 1995; Robin et al., 1996). The results of this study further support this conclusion.

²¹⁹ Underreport taxable income and overstate tax deduction.

7. 3. 1. 2. Ethical Evaluation

The SEM analyses revealed that the three dimensions of moral intensity were associated with an ethical evaluation which supports hypothesis 5. Again, the social consensus was by far the most important dimension of moral intensity in this stage. The effect of social consensus on ethical evaluation was consistent across the three scenarios (two types of tax evasion). This predominance of social consensus in affecting the ethical evaluation is expected in EDM literature (Harrington, 1997; Singer and Singer, 1997; Davis et al., 1998; Leitsch, 2006; Sweeney and Costello, 2009) and consistent with the middle level of cognitive moral development of Kohlberg's (1969) 'conventional level'. Individuals at this level approach the process of EDM from the perspective of conformity. This indicates that they try to live up to the expectations of the vast majority of society, family, or/and peer group. Since the participants of the current study were mostly²²⁰ students with an average age between 21 to 34 years, it is not surprising that the conformity to societal opinion was very important to them (Cialdini, 2007).

Similar to the previous stage (ER), the magnitude of consequences and probability of effect were positively associated²²¹ with ethical evaluation in scenarios related to the underreporting of taxable income but not in the scenario related to overstating tax deduction. The inconsistent effect of these two dimensions on ethical evaluation across the two types of tax evasions lends a further support to the previous finding, and suggests that taxpayers judged overstating tax deductions as unethical without considering the magnitude nor the probability of effects (partially²²² consistent with deontology theory), whereas they fully considered the magnitude of consequences²²³ and probability of effect in evaluating the underreporting tax behaviour (consistent with teleology theory²²⁴). This indicates that taxpayers are likely to base their evaluation of the underreporting scenarios on teleological approach.

²²⁰ 60% of the participants were students.

²²¹ The positive association between these two dimensions and ethical evaluation is consistent with the EDM literature (Barnett, 2001; Barnett & Valentine, 2004; Singer & Singer, 1997; Sweeney & Costello, 2009; S. Valentine & Fleischman, 2003; Weber, 1996).

²²² As the participants still consider the social consensus in evaluating the situation.

²²³ In scenario 1, magnitude of consequences was not related to ethical evaluation.

²²⁴ The taxpayers judged the behaviour to a great extent based on 'full consideration of the consequences'.

7. 3. 1. 3. Ethical Intention

The SEM analyses revealed that the three dimensions of moral intensity were associated with ethical intention which supports hypothesis 6. As with the previous two stages of EDM, the social consensus was by far the most important dimension of moral intensity. The effect of social consensus on ethical intention was consistent across all scenarios (two types²²⁵ of tax evasion). This outcome is consistent with prior studies in EDM literature (Singhapakdi et al., 1996; Harrington, 1997; Barnett, 2001; May and Pauli, 2002) and tax compliance literature (Davis et al., 2003; Wenzel, 2005; Bobek et al., 2013). For instance, Scholz et al. (1992) found that the opinions of others are extremely important in taxpayer's decision to comply. Torgler (2003) pointed out that the interactions between taxpayers themselves are significantly important in the decision of tax compliance. Hence, there is convincing evidence on the role of social norms in tax compliance literature, and the current study adds to that.

The magnitude of consequences and probability of effect were positively associated²²⁶ with ethical intention across the three scenarios (two types²²⁷ of tax evasion). This outcome is consistent with prior studies in EDM literature (Barnett, 2001; May and Pauli, 2002; Granitz, 2003; Barnett and Valentine, 2004) and the literature from tax compliance (Blanthorne and Kaplan, 2008; Bobek et al., 2013). For instance, Orviska and Hudson's (2003) empirical work indicated that both penalties and audit probabilities have a significant positive effect on tax compliance.

Unlike the previous two EDM's stages, the effects of magnitude of consequences and probability of effects on ethical intention were consistent for underreporting and overstating scenarios. This suggests that when it comes to forming an intention about tax evasion situation, taxpayers consider all the circumstance surrounded the situation (the social consensus around the situation, the probability and the magnitude of consequences of the potential behaviour). Thus, the participants based their intention on the teleological ethical orientation when it comes to forming their behavioural intention toward tax evasion situations.

SEM analyses revealed also that moral intensity's dimensions do not affect each step of the ethical decision-making process to the same degree. In fact, the moral intensity's dimensions

²²⁵ Underreport taxable income and overstate tax deduction

²²⁶ However, in scenario 1 this association was indirect through ethical evaluation.

²²⁷ Underreport taxable income and overstate tax deduction

account for approximately 6% to 14% of the variance in ethical recognition and 12% to 27% of the variance in the ethical evaluation. In contrast, moral intensity's dimensions account for approximately 28% to 39% of the variance in ethical intention. These differences in the amounts of explained variance indicate that while moral intensity's dimensions are significantly associated with all of the ethical recognition, evaluation, and intentions, their predictive value is strongest with ethical intention.

Regarding the relationships between the EDM stages, some relationships²²⁸ weakened and dropped in their significance, especially the relationship between ethical recognition and evaluation. In fact, this relationship was only significant in one scenario²²⁹ compared to the three scenarios in the previous analyses which excluded moral intensity (Rest's model test). A possible explanation for this drop is that the inclusion of moral intensity's dimensions in the model have accounted for the variation that ethical recognition had on ethical evaluation.

The drop in the significance between ethical recognition and evaluation does not undermine the model as Rest and Barnett (1986) acknowledged that each stage of EDM is conceptually distinct and the success in one stage does not essentially imply success in the following or any other stages. For instance, Jones (1991: p 368) illustrated that, "*a person with a well-developed sense of moral reasoning (Component 2) will not necessarily have great resolve to act morally (Component 3)*". In addition, a weak relationship between ethical recognition and the other two stages of EDM has been reported in several empirical studies (Valentine and Fleischman, 2003; Chan and Leung, 2006).

After providing evidence of the applicability and relevance of the issue-contingent model in the tax compliance context, the next section extends this model by inclusion of two further types of characteristics: moral agent and environmental characteristics (the research synthesis model).

²²⁸ The relationship between ethical recognition and evaluation was insignificant in scenario 1 and 3, as consequence, the indirect effect of ethical recognition on ethical intention in scenario 1 is not significant anymore (as it was found in the previous analyses).

²²⁹ Scenario 2 related to underreporting taxable tips.

7.3.2. Research Synthesis Model

The third objective of this study was to examine the effect of the issue, moral agent, and environmental characteristics on ethical decision-making in relation to tax compliance. To achieve this objective, Jones's (1991) 'issue contingent model' was extended through the inclusion of two further types of characteristics: moral agent and environment characteristics. This new 'research synthesis model' developed in this study provides a better understanding of the underlying factors that influence ethical decision making (more details in chapter 4).

SEM analyses revealed that the three characteristics²³⁰ significantly impacted tax compliance decisions. Specifically, ethical recognition, evaluation and intentions were positively associated with characteristics of the issue (moral intensity); characteristics of a moral agent (personal norms); and characteristics of the environment (general social norms in favour of tax systems). While previous studies did not test all these characteristics in one comprehensive model, the findings are consistent with prior studies which examined these variables separately (Barnett, 2001; May and Pauli, 2002; Blanhorne and Kaplan, 2008; Bobek et al., 2013) and emphasise the important role of these characteristics on the tax compliance of taxpayers.

7.3.2.1. Issue Characteristics

After validating the role of moral intensity in tax compliance decisions in the previous section, the current section discusses the role of moral intensity in tax compliance in conjunction with the other two types of characteristics (moral agent and environment characteristics). Some of the relationships between moral intensity dimensions and the three stages of EDM have weakened which is not unexpected given that more variables were introduced to the model.

The results of SEM analyses revealed that social consensus dropped in its significance in relation to ethical recognition and evaluation in scenarios related to underreporting taxable income, whereas the relationship remains significant in overstating tax deductions. Several explanations may account for the drop in the significance of these relationships. The first related to the introduction of the broader variable societal norms about tax systems into the model which is likely to account for the reduction in the explanatory power of elements of moral intensity such as social consensus. Societal norms are not specific to the situation whereas social consensus is.

²³⁰ The three characteristics: moral intensity, personal norms, and general social norms in favour of tax systems.

It is noteworthy that the reduction in importance of social consensus related to two of the stages of ethical decision making (ER and EE) but did not relate to ethical intention. Hence, it could be concluded that the broader societal norms influence participants in recognising and evaluating the situation; however, when the participants engage in forming an intention to behave, they are influenced by the social norms around the specific situation (social consensus) in addition to the general societal norms.

The second argument is that personal norms mediate the effect of social consensus on the two stages of EDM (ethical recognition and evaluation). In other words, social consensus affects the two stages of EDM through personal norms. This proposition was tested and confirmed, but the results are not reported here²³¹. So, personal norms mediate the effects of social consensus on ethical recognition and evaluation for underreporting taxable scenarios.

Finally, it seems that participants, when it comes to recognising and evaluating the underreporting taxable income situations, based the course of action (recognition and evaluation) more on the magnitude of the consequences and probability of effects. However, the opposite was found for the overstating tax deductions situation where participants based the course of action on the social consensus around the situation and did not consider either the magnitude nor the probability of effects (both variables had no effect on the model at all). This outcome again is consistent with the previous finding that for the underreporting of taxable income situation, participants used the teleological approach of evaluating the consequences of the potential behaviour, whereas the participants, in overstating tax deduction, based their evaluation of the situation on the social acceptance of the situation.

7. 3. 2. 2. Moral Agent Characteristics

The SEM analyses revealed that personal norms were positively associated with all the stages of EDM. This indicates that personal beliefs (shame, guilt, self-esteem...etc.) significantly shaped the way participants recognised, evaluated, and formed intention to act in the three scenarios. This outcome is consistent with the EDM literature²³² and the tax compliance literature. For

²³¹ The results of the mediation analysis were part of different piece of work that it was presented at TRN conference 2016 at Roehampton university.

²³² EDM literature suggest a positive relationship between personal norms and ethical recognition (Chan & Leung, 2006; Ho, 2010; Reynolds, 2006), personal norms and ethical evaluation (Ashkanasy, Falkus, & Callan, 2000; Fritzsche & Oz, 2007;

instance, Alm (1991) pointed out that a significant number of taxpayers do pay their taxes simply because they believe (personal belief) that evading taxes is morally unethical. Feld and Frey (2002) argued that the decision to comply or evade taxes is not only about the formal sanctions, but rather personal attitudes and norms (informal sanctions) also impact on reporting decisions. To further support this outcome, the mean score analysis revealed that when participants showed a more compliant behaviour²³³, their self-imposed sanctions (guilt, shame, injustice) were high compared to when they showed a less compliant behaviour. For instance, they would feel guilty, ashamed and not justified if they did underreport the \$6,000 taxable income (overstating tax deductions by \$1,400), whereas they would feel the opposite for another described behaviour where they showed less compliance behaviour²³⁴. Based on this finding and the prior empirical studies, personal norms appear to serve as an internal and self-imposed form of sanction that motivates taxpayers to comply and not engage in tax evasions. Despite the overwhelming evidence of the role of personal norms in tax compliance decisions, the use of this form of self-imposed sanctions “*is infrequent and takes place under less than ideal conditions*” as Henderson and Kaplan (2005: p 67) claimed. Hence, the current study stresses the significant benefit of incorporating personal norms (informal sanctions) in the efforts of enhancing tax compliance. For instance, using the media to reinforce tax compliance behaviour as an ethical type of behaviour could enhance the personal norms thereby improving the tax compliance level. Kornhauser (2006: p 633) confirmed that, “*Once paying tax is viewed in this light, people could be encouraged to take pride in doing so, just as they take pride in voting*”. Another possible way to enhance personal norms is through educational programs. Education has the power to increase taxpayer ethics by strengthening feelings of fairness, identity and reciprocity. In addition, it could reduce the unintentional under-compliance behaviour by increasing the knowledge of taxpayers and spreading tax compliance as a sense of civic duty.

Watson & Berkley, 2009), personal norms and ethical intention (Beams, Brown, & Killough, 2003; Buchan, 2005; Brenda L Flannery & Douglas R May, 2000; Marquardt, 2010; Mencl & May, 2009; Rabl & Kühlmann, 2008). According to Ferrell and Gresham (1985: p 90) “evaluation or intentions (or even thinking about an ethical dilemma) may be influenced by cognitive factors”.

²³³ Recognised the ethicality of the tax evasions, judged the tax evasion as unethical, and formed intention to avoid engage in similar behaviour.

²³⁴ They were uncertain about the ethicality of the behaviour, judging it as ethical, and formed behavioural intention to engage in similar behaviour.

7. 3. 2. 3. Environmental Characteristics

Environmental characteristics encompass three social norms concerning general aspects of the tax system: social norms toward reporting taxable income, social norms toward overstating tax deductions, and social norms toward paying taxes. The results of the SEM analyses revealed that the environmental characteristics were associated with the three stages of EDM. This implies that the environmental characteristics significantly shaped the way participants recognised²³⁵, evaluated, and formed intentions to act toward the described behaviours in all scenarios. This outcome is consistent with the EDM literature (Flannery and May, 2000; Craft, 2013) and tax compliance literature (Alm, 1991; Wenzel, 2004). For instance, Ferrell and Gresham (1985) argued that all stages of evaluation, intention and recognition of ethical problems are highly influenced by the socialisation process that the moral agent is surrounded by. Bobek et al. (2013) claimed that taxpayers are not an isolated entity that do not interact with their environment, and their compliance decision is not merely a result of their own assessment. Hence, there is substantial theoretical evidence of the significant role of general social norms (not just the social norms surrounding the issue ‘social consensus’) in the tax compliance decisions. The finding of this study adds to these prior findings and suggests that educating taxpayers of the potential influence of their compliance decisions on society will provide them with the opportunity to consciously consider the extent of their decisions on the welfare of others. In addition, prompting tax compliance as a social norm will put more pressure on taxpayers to comply (as violating the social norms may have informal consequences). With respect to the concept of the ‘informal self-imposed sanctions’, social norms can serve as an alternative to the deterrence system such that any violation of these norms could cause social sanctions (gossip, ostracism, and social stigma...etc.) or internal sanctions (guilt, remorse, and shame...etc.). Davis et al. (2003) argued that both enforcement systems and social norms can place a great pressure on evaders to become more compliant. The comprehensive picture provided by this study on the role of social norms (the specific social norms ‘social consensus’ and the general social norms ‘environmental characteristics’) in tax compliance decisions enables the interested parties (e.g., tax authorities and academic scholars) to re-examine the current enforcement system and explore ways to better leverage these social norms with the existent enforcement system.

²³⁵ In the second scenario, there was no relationship between general social norms and ethical recognition.

7. 3. 3. Socio-Economic Demographic Factors

In relation to demographic variables, the findings of the univariate analysis of variance (section 6. 2. 3) and the SEM analyses of the three models (ethical decision-making model, issue contingent model, and research synthesis model) were mostly consistent with the literature and previous empirical studies. Factors such as: age, marital status, gender, experience, education level, job status, residency, membership of the religious community, and the tax jurisdictions were found to have significant effects on the three stages of EDM which in most cases is consistent with the previous empirical studies in both tax compliance and ethical decision-making literatures. The following section will discuss the results of univariate analysis and SEM analyses of the demographic factors.

Age

From the results of univariate analysis and SEM analyses, age was found to have a positive impact on ethical recognition, ethical evaluation, and ethical intentions. Specifically, senior participants were found to be more likely to recognise the ethical issues involved in underreporting the \$500 taxable tips than young participants. This finding is consistent with the EDM literature which affirmed a positive correlation between age and ethical sensitivity (Chan and Leung, 2006; Shu-Hui, 2006). For instance, Shu-Hui (2006) in his multicultural comparison study reported that older students perceived the ethical issue better than the younger students in America, China, Egypt, Finland, Korea, and Russia. He explained it by arguing that general life experiences that simply come with age make the individual more sensitive to the ethical content of situations. In addition, senior participants judged the underreporting of \$6,000 taxable income to be strongly unethical compared to the young and adult participants, and they had a higher intention to comply and report the \$6,000 taxable income and the \$500 taxable tips. Also, the results of SEM analyses of ethical decision-making model revealed that age had a positive impact on the ethical intention²³⁶.

The majority of empirical studies in the EDM literature support this finding (Richardson, 2006; Valentine and Rittenburg, 2007; Marques et al., 2009; McGee et al., 2011), and they explained it

²³⁶ The significant and positive relationship was found in scenario 2.

by two concepts: ‘the lifecycle variations’ and ‘generational difference’. Tittle (1980) brought up those concepts, and he argued that younger taxpayers are more risk-seeking and less caring about penalties (lifecycle variation), and they reflect the social and psychological differences of the period they are from (generation difference).

Marital Status

From the results of univariate analyses and SEM analyses (section 6.2.3 and 6.4), marital status was found to affect all the three stages of EDM. The SEM analyses²³⁷ revealed that married participants recognised better the ethicality of the behaviour described compared to the single participants. Also, marital status was found to matter in evaluating ethical situations. It was found (univariate analysis) that married participants showed a stronger evaluation of the underreporting of \$6,000 taxable income to be unethical compared to single participants. Linked back to the literature, this finding was anticipated by most prior empirical studies. Indeed, they pointed out that married taxpayers are more compliant than single taxpayers (Torgler, 2004; Alm and Torgler, 2006) and they judged a given situation differently (Tittle, 1980).

Tittle (1980) pointed out that marital status has the potential to impact the decision-making process and the evaluation of the behaviour to be legal or illegal depending on whether the individuals are constrained by their social context (married individual face more social pressure). Furthermore, Alm and Torgler (2006) gave another explanation and reported that marital status is believed to interact with the tax system due to different treatments married taxpayers have, compared to single taxpayers. However, the results of SEM analyses challenge the results of Alm and Torgler (2006) and found that single participants were more compliant than married participants in scenario 3. This outcome could be explained by arguing that single participants usually are less familiar with the tax system and less experience in filing tax return compared to the married participants²³⁸ which made them more compliant (age effect as married participants tend to be older than single participants).

²³⁷ The results of SEM analyses form scenario 2 on all three models: EDM’s model, issue contingent model and research synthesis model.

²³⁸ The univariate analyses showed that married participants tended to hold better experience with filling tax return than single participants.

Gender

From the results of univariate analyses and SEM analyses (Section 6.2.3 and 6.4), gender was found to have an impact on ethical recognition and intention. Specifically, female participants were able to recognise that underreporting \$500 of taxable tips is an ethical issue to a larger extent than male participants. Also, the results of the SEM analyses showed that female participants had a better intention to comply and report the \$6,000 taxable income than male participants. Again, this finding was expected based on the literature. A consensus that in most cases, women are more compliant than men appears to exist among social psychologists (Torgler, 2004). The empirical studies on ethical decision making literature provided further confirmation for this finding (Krambia-Kapardis and Zoppiatis, 2008; Eweje and Brunton, 2010). Gilligan (1982) explained it by suggesting that men and women differ in the way they solve moral dilemmas. She emphasised that men are more likely to incorporate the terms of justice, rules and individual rights in considering the moral issues, whereas women are inclined to consider the moral issues in terms of relationships, care and compassion.

Education Level

From the results of univariate analyses and SEM analyses (section 6.2.3 and 6.4), education level was found to have a positive impact on the ethical evaluation stage. The postgraduate participants evaluated the underreporting of the \$6,000 to be unethical, to a greater extent compared to the high school level participants. Torgler and Schneider (2007) argued that an increase in the education level of taxpayers would lead to a better compliance level due to an increased awareness of tax law and its objectives among taxpayers, as well as the appreciation of the reward system offered by the state as a result of honestly reporting taxable income. However, surprisingly enough, there is hardly any empirical study that supports the effect of education level on ethical evaluation and ethical decision-making process in general (Craft, 2013). According to Craft (2013) who reviewed most empirical studies in EDM literature between 2004 and 2011, all of the 8 empirical studies found in EDM literature failed to provide an empirical proof of the theoretical effect of education level on ethical evaluation. Hence, this finding here could be used to support the theoretical proposed impact of education level on the EDM, and on ethical evaluation in particular.

Job Status

The job status of the participants was found to have an impact in the evaluation stage of EDM. In particular, the participants who identified themselves to be “at home” judged the underreporting of the \$6,000 to be ethical, whereas, the full-time employed participants judged the same behaviour to be unethical. This difference in the evaluation could be explained by multiple reasons such as opportunity and incentive. Full-time employees are usually classified as low opportunity compared to part-time, occasional employees and unemployed who are classified as a high opportunity. According to Blanhorne and Kaplan (2008), the high opportunity taxpayers are expected to underreport their taxes more often than the low opportunity taxpayers, and given the ethical ambiguity of tax evasion, taxpayers may form ethical beliefs about the underreporting egocentrically. Therefore, following this argument, the at home participants formed an ethical judgment that underreporting the \$6,000 taxable income is ethical behaviour. Another possible explanation is that unemployed individuals tend to hold a higher incentive to act in the shadow economy, which may impact the way they evaluate tax evasion (Torgler, 2004). Hence, it is not surprising to find that the participants who identified themselves to be ‘at home’ to judge the underreporting of \$6,000 taxable income to be an ethical behaviour.

Experience Level

The experience level²³⁹ showed an unexpected effect on ethical evaluation stage. The literature predicts a positive relationship between experience and ethical evaluation (Valentine and Rittenburg, 2007). However, in the current analysis, a contrary effect was observed. The experience level was negatively associated with the evaluation of the ethicality of the underreporting of \$500 taxable tips²⁴⁰. While the participants with no experience were uncertain whether this behaviour is ethical or not, the participants with a reasonable experience²⁴¹ were firmly certain that this behaviour is ethical. Consulting the tax compliance literature, a study by Spicer and Thomas (1982) suggested that a direct experience with tax authorities could have a

²³⁹ The experience level refers to the experience of the participants with revenue (filing tax returns).

²⁴⁰ In the context of the scenario, the word ‘taxable’ was emphasised enough to take out the element of doubt whether tip is taxable or not. In fact, ‘taxable’ was bolded and font size was bigger than the rest of the context.

²⁴¹ The participants with a reasonable experience refers to participants who have filed tax returns for a period between 1 to 4 years compared to no experience (never filled tax returns) or high experience (filed tax returns for more than 5 years)

negative impact on the tax compliance level. Indeed, they found that taxpayers' direct experiences with the revenue authority was positively related to a higher tax resistance and admitting the tax evasion. Hence, it could be concluded that the direct experience of the participants with the tax authorities and the deeper knowledge in filing tax returns may have led the participants to be more relaxed in judging this behaviour (underreporting the taxable tips) and cause them to overlook the ethicality of this behaviour and form a judgement that this behaviour could be an ethical behaviour.

Religiosity Level

Religiosity level was found (in the univariate mean analysis) to have a positive effect on ethical recognition and ethical intentions. This finding was consistent with the literature which supports the positive role of religiosity in the three stages of EDM, and specifically in the ethical recognition and intention stages (McCullough and Faught, 2005; Kurpis et al., 2008; Ho, 2010). Specifically, it was found that highly religious participants recognised better the ethicality of underreporting of the \$500 taxable tips and they were more inclined to intent to report those tips than the less religious participants. Additionally, the participants who indicated themselves to have no religion had the lowest intention to comply compared to the high and less religious groups. Likewise, in scenario 3, highly religious participants had a higher intention to not overstate tax deduction and comply with tax system than the less religious participants.

All in all, the role of religiosity in the perception of an ethical issue and on establishing an intention to behave in an ethical manner was supported, which preliminary²⁴² supports the objective of this study in providing evidence of the role of religion in taxpayers' compliance behaviour decision. However, the ultimate objective is to determine the precise way by which religion is affecting the tax compliance behaviour (see section 7.2.4).

Tax Jurisdictions

The tax jurisdictions, under which the participants were currently living in, were found to have an impact on the way they evaluated different behaviours and also on their intention to behave in

²⁴² The role of religiosity will be investigated more in objective four (section 7.2.4)

similar circumstances. In particular, the participants who lived under the Canadian tax jurisdiction strongly judged the underreporting of the \$6,000 taxable income and overstating the \$1,400 tax deductions to be unethical, compared to the participants who lived under the Irish tax jurisdiction²⁴³. Also, the participants who lived under the Canadian tax jurisdiction were more inclined to report the \$6,000 taxable income than the participants under the Irish tax jurisdiction. This result suggests that the interaction between taxpayers and the tax system in their country of residence do matter in tax compliance behaviour (evaluation and intentions).

Some empirical studies with results consistent with this finding were reported in the literature. An early study by Strümpel (1969) who analysed the tax morale among the taxpayers and compared the tax systems of various European countries by conducting an international comparative survey, found that tax morale level of German taxpayers was relatively low, whereas, the tax morale level of English taxpayers was relatively high. He attributed the observed difference in tax morale level to tax systems differences in these two countries. He pointed out that the German government at that time used coercive tax enforcement techniques, while the English tax system treated taxpayers with more respect and less control (procedural justice and restorative justice). So, he concluded that the difference in enforcement systems (the treatment of taxpayers by tax authorities) had a negative impact on the tax morale of taxpayers, which would eventually affect the compliance decision. Another more recent study provided more support for the role of tax institutions in the individual tax compliance level. According to Kountouris and Remoundou (2013: p 104) “*The degree of tax compliance is commonly attributed to institutional characteristics of the decision-making environment such as the tax system, the audit probability and the severity of tax enforcement mechanism*”.

Using this theoretical explanation, the current study argued that the difference in evaluating the tax evasion between the two countries, with Canadian participants having higher compliance intention compared to the participants under the Irish tax jurisdiction, could be at least partially due to the perception of those participants of their respective tax systems, and how this perception impacts their intrinsic motivation (e.g., tax morale) to comply with tax systems.

²⁴³ The results here are from the univariate analysis that was conducted on all data from each country. Alternatively, the same mean difference analysis was conducted on Muslim communities on both countries, and revealed just one difference which is the ethicality of underreporting \$6,000. It was found that Canadian Muslim community showed a stronger evaluation of the behaviour to be unethical than the Irish Muslim community.

Residency Period

Worthwhile findings emerged from the univariate analyses and SEM analyses on the role of the period of residency on the three stages of EDM. The period of residence was found to be negatively associated with the intention to comply in all scenarios and in the evaluation of some of the scenarios. Specifically, the long-term residents (over 10 years in country) were found to have the least intention to comply compared to the rest of the groups²⁴⁴ across all scenarios (the two underreporting and overstating tax expenses behaviours). Similar findings were seen in the evaluation of the tax evasion behaviours in scenario 2 and 3. The new residents (less than 1 year in country) evaluated the underreporting of \$500 taxable tips to be unethical, while all of short, medium, and long-term residents showed stronger evaluation of ethicality of this behaviour.

The interpretation of this findings falls within two levels: (1) the existence of the difference across all groups; and (2) the lower compliance intention (the ethical evaluation in favour of tax evasion) of the long-term residents compared to the other groups.

The existence of such differences across the residency groups could be interpreted as an indication of the role of the tax culture on tax compliance behaviour. In particular, since the participants share the same institutional and economic environment²⁴⁵, the only variability across those residency groups are the tax cultural backgrounds which could be the reason for such difference in evaluating and establishing intentions toward tax behaviour. This finding is consistent with the empirical findings of Kountouris and Remoundou (2013: p 105) who examined the existence of a cultural component in the individual tax morale using immigrants data drawn from the European Social Survey. They concluded that “*tax culture in the country of origin is a significant determinant of individual tax morale in the destination country*”. They added that “*immigrants originating from countries with higher tax morale report higher individual moral persuasion towards paying taxes.*”

Thus, the adoption and integration with the destination country’s tax culture could explain the difference in intentions and evaluation of tax behaviour. Another plausible reason for a lower intention to comply, and judging the tax evasion behaviour (underreporting the \$500 taxable tips) to be ethical by the long-term residents could be their superior familiarity with the tax systems as

²⁴⁴ The residency groups are: new residence; short-term residence; medium-term residence; and long-term residence.

²⁴⁵ The same results were found in the Irish dataset only.

well as the tax evasion opportunities compared to new, short, and medium term residents. Indeed, the long-term residents are deemed to possess a more sophisticated knowledge about the probability of consequences; and their magnitude, as well as the social consensus around the tax evasion. This might have led to a different type of evaluation and intention regarding the same behaviour across the groups. Finally, a more plausible explanation is that the new residents when they moved to a country are more conscious of all the rules and laws, and especially if their intention is to apply for citizenship in the long run. For instance, in Canada²⁴⁶, having personal taxes filed for the residency period is a requirement to apply for citizenship.

In summary, since the participants share the same institutional and economic environment of the destination country²⁴⁷, the difference in tax intentions (evaluation) can be at least partially attributed to differences in the tax culture of the home country.

Inside and Outside of the Islamic Community

Mean differences were found in the three stages of EDM across Muslim²⁴⁸ and non-Muslim²⁴⁹ groups. The non-Muslim participants were found to recognise better that the described behaviours²⁵⁰ involved an ethical issue compared to Muslim participants. However, compared to non-Muslim participants, Muslim participants strongly judged overstating tax expenses by \$1,400 to be unethical and had a higher intention to comply and report the \$6,000 taxable income, and not to overstate tax expenses by \$1,400.

The observed higher level of recognition by non-Muslim students compared to Muslim-students could be due to the tax cultural and social norms differences. According to the literature, a moral behaviour takes place in a social context and can certainly be heavily impacted by cultural and social differences. Ferrell and Gresham (1985: p 90) confirmed that by stating that “*Cultural differences would influence the perceptions of problems*”. Since, the main difference among the two groups (Muslim and non-Muslim) are religion affiliation, cultural and social, those three elements are believed to cause the difference in perception of tax issues.

²⁴⁶ Similar citizenship requirements are found in Ireland and Scotland.

²⁴⁷ The results were the same using the Irish dataset only.

²⁴⁸ Muslim participants consist of students (%52) and non-students (%48). To have a more homogenous comparison, the focus of the mean differences was on the Muslim students' participants and non-Muslim students' participants.

²⁴⁹ Non-Muslim participants are mainly students.

²³⁷ In scenario 2 and 3; underreporting \$500 taxable tips and overstating tax expenses by \$1,400.

On the other hand, Muslim students were found to have a more favourable evaluation toward tax compliance and better intention to comply than non-Muslim students which could be explained by the same previous justification which is cultural and social norms differences of this religious community compared to the non-member of this community.

Accepting that there are cultural and social norms differences between those inside and those outside of a community could explain the source of noticeable differences in the recognition, evaluation, and intentions among members and non-members of the Islamic community. This falls in agreement with the theoretical claim by Bartels (1967: p 23) “*Contrasting cultures of different societies produce different expectations and become expressed in the dissimilar ethical standards of those societies.*”

7. 3. 4. Religiosity Level

The fourth objective of this study was to examine whether the impact of three characteristics (issue, moral agent, and environment) on ethical decision-making is moderated by the individual religiosity²⁵¹ level. To achieve this objective, further SEM analyses (multi-group comparison) were conducted, and the results showed that only the effect of the issue characteristics on ethical evaluation²⁵² and intention²⁵³ was moderated by the individual religiosity level while no evidence of any moderation effect for the other two characteristics.

Specifically, the effects of magnitude of consequences and social consensus on ethical intention were positively moderated by the individual religiosity level in scenario 1. This implies that for highly religious participants, the perception of the magnitude of consequences and social consensus of the situation would strongly affect their intention to behave compared to less religious participants. Hence, the religiosity level strengthens the positive role of the magnitude of consequence and social consensus on ethical intention which would put more pressure on the individuals to form the intention to act ethically. In other words, religion motivates the individual to consider the social norms and consequence of their behaviours on the process of building their intention about a situation.

²⁵¹ The religiosity of all the participants from different religion affiliations.

²⁵² The effect of probability and magnitude of consequences on ethical evaluation was moderated by religiosity in just scenario 2.

²⁵³ The effects of magnitude of consequences and social consensus (IUN) on ethical intention were moderated by religiosity in just scenario 1.

In scenario 2, the effect of probability and magnitude of consequences on ethical evaluation was positively moderated by religiosity level. This implies that for highly religious participants, the perception of the probability and the magnitude of consequences would strongly affect their evaluation's process of the situation compared to less religious participants. So, the religiosity level strengthens the positive role of the probability and the magnitude of consequences on ethical evaluation²⁵⁴ which means that religion imposes on the individual to devote more efforts to evaluate the situation by considering the consequences and the probability of effect of the potential behaviour.

Taking the results from scenario 1 and 2, it can be concluded that religiosity drives the individuals to fully consider the characteristics of the situation in the process of evaluating and building their intention. In scenario 3, the SEM analyses found no support for the effect of religiosity on tax compliance decisions.

Considering the results in the three scenarios, it can be concluded that religiosity level had a moderating effect in situations where the participants were found to base their ethical decision-making process on the ‘teleological approach’, whereas the religiosity level had no such effect in situation where the participants were found to base ethical decision-making process on the deontological approach. So, religion can play two roles depends on the approach that individual use in considering the situation. In a situation where the individuals seem to base their decision-making process on teleological approach, religion strengthens the relationships between the characteristics of the issue and the decision-making process which could be explained as religion urge its follower to consider the consequences of their behaviour before engaging in any behaviour. Whereas, in the situation where the individuals seem to base their decision-making process on deontological approach and social norms²⁵⁵, religion would serve as a ‘moral guidance’ and helps the individuals to assess the inherent rightness of the situation by setting the guidance of what is considered to be right or wrong behaviours.

SEM analyses also revealed that individual’s religiosity level strengthens the positive effect between ethical evaluation and intention. So, the way the situation is assessed will strongly influence the process of building intention to behave for highly religious participants compared to less religious participants. This suggests that religion helps to link the ethical evaluation and

²⁵⁴ There was a moderate mediation effect of probability and the magnitude of consequences on ethical intention.

²⁵⁵ In scenario 3, social norms (social consensus and general social norms) had a direct effect on ethical evaluation.

intention together by encouraging the individuals to devote more efforts in evaluating and assessing the situation and form their intention according to the outcome of the evaluation.

Overall, there was some support for the moderation effect of religiosity on the relationships between the issue characteristics and ethical evaluation and intention. The result of this study suggests further research should be conducted which reconsiders the role of religiosity level as a moderate variable rather than a direct independent variable.

7.4. Chapter Summary

This chapter discussed the findings reported in the last chapter in light of previous literature. Section 7.2 discussed the findings of the EDM model. Each of the three stages of EDM was significantly important in the process of tax compliance decisions which led further support to the EDM literature and provide empirical evidence of the validity of Rest's model in the tax compliance area. Section 7.3 discussed the factors that impact the tax compliance decisions. The findings of the issue contingent model were discussed in first part, while the findings of the research synthesis model were discussed in the second part. The role of socio-demographics characteristics in tax compliance decision was discussed in the third part, and the last part discussed the role of religiosity level in the research synthesis model.

Overall, the role of moral intensity in tax compliance decision was supported which is consistent with the EDM literature and provides empirical evidence of the applicability of Jones's model in tax compliance area. A some of moral intensity's dimensions were found to matter more than others (i.e., social consensus) which is again consistent with the previous empirical studies.

The three characteristics (issue, moral agent, and environmental characteristics) were significantly associated with the three stages of EDM which is expected and provide empirical evidence of the validity of the research synthesis model in tax compliance. Several socio-demographic factors were found to impact the tax compliance decisions, and religiosity level was found to moderate the effects of issue characteristics on EDM's stages, which clarify the role of religiosity in tax compliance decision. The next chapter will provide a summary of the thesis along with the contributions and the practical implications. Strengths and limitations of the study and recommendations for future research will also be provided.

Chapter 8: Summary and Conclusion

8. 1. Introduction

This chapter summarises the main results of the study along with the key contributions of the research. It also addresses the implications for Tax Authorities, strengths and limitations, and identifies areas for future research. This chapter is set out as follows: Section 8.2 summarises the research objectives, hypotheses, and results. Section 8.3 outlines the contributions of the study to existing knowledge. Section 8.4 addresses the practical implications for Tax Authorities and Section 8.5 describes the main strengths and limitations of the study. Section 8.6 outlines a number of avenues and areas for further research. Finally, Section 8.7 presents an overall conclusion.

8. 2. Summary of Research Objectives, Hypotheses and Results

The research objectives, related hypotheses and the outcome of each generated hypothesis are summarised in Table 8.1. To recap, the first objective of this study was, '*To examine the process by which taxpayers make ethical decisions and engage in tax compliance behaviour*'. In order to achieve this objective, Rest and Barnett's (1986) model of 'ethical decision making' was used to examine its applicability to explain tax compliance decisions. Three hypotheses were developed and tested using survey data collected from three countries: Ireland, Canada, and Scotland. Over 600 self-completed questionnaires were analysed using the 'Structural Equation Modelling' technique supplemented by correlation and variance analyses. As set out in chapter 4, the three hypotheses were supported. So, when taxpayers face a tax compliance situation, they will first recognise that the situation involves an ethical issue, and will then evaluate the situation as either an ethical or unethical situation, and will subsequently form behavioural intention toward the situation. This result is of paramount importance as it contributes towards the call to determine and clarify the mechanisms or process through which taxpayers form their tax compliance decision (Henderson and Kaplan, 2005). It provides empirical evidence on the role of ethical

recognition as an important stage of ethical decision making and on its ability to impact the other stages (ethical evaluation and intention). In particular, it addresses the mixed²⁵⁶ findings on the relationship between ethical recognition and evaluation (see section 4.2.1) and supports Rest's proposition of the positive effect of ethical recognition on ethical evaluation.

The second objective of this study was, '*To examine the effect of issue characteristics on ethical decision-making in relation to tax compliance*'. In order to achieve this objective, the 'issue contingent model' of Jones (1991) was tested for its applicability in the tax compliance area and the proposition that the actual content of the issue itself would affect the ethical decision-making process was examined. Three other hypotheses (H_4 , H_5 , and H_6) were developed and examined across the three scenarios using the SEM technique after confirming the validity and reliability of the measurement scale using 'Exploratory Factor Analysis' and 'Confirmatory Factor Analysis' (see section 5.6.3 and 5.6.4). The three hypotheses were largely supported as they showed that the moral intensity's dimensions²⁵⁷ had a direct and positive impact on EDM's stages. Finding evidence of the applicability of the issue-contingent model in the tax compliance area and the role of moral intensity's dimensions in making tax compliance situations more vivid and salient contributes to the call raised by Smith and Kinsey (1987: p 657) that, "*We have not yet seen the in-depth qualitative and quantitative research that will yield insights into factors affecting the movement of taxpayers from inertia to active decision effort and back to inertia again*". Although this call for research was made 30 years ago, to the best of the author's knowledge, there is a dearth of studies on how tax compliance situations become salient.

The third objective of this study was, '*To examine the effect of the issue, moral agent, and environmental characteristics on ethical decision-making in relation to tax compliance*'. In order to achieve this objective, the issue contingent model was extended through the inclusion of two further types of characteristics: moral agent and environment characteristics, resulting in a new model. This newly developed 'research synthesis model' was examined over three scenarios and the developed hypotheses (H_7 , H_8 , and H_9) obtained a significant support to confirm the role of the three characteristics in positively affecting the three stages of EDM. The confirmed model

²⁵⁶ A small number of scholars found no relationship between ethical recognition and evaluation, for instance, Chan and Leung (2006) in their empirical study among accounting students found no relationship between the two stages (see section 4.2.1).

²⁵⁷ The most dominated dimensions of moral intensity are included in the analysis, namely, social consensus; magnitude of consequence, and probability of effects (see section 4.2.2).

provides a more comprehensive examination in the chain of reasoning (mechanism or dynamics) that taxpayers use in the process of making tax compliance decisions.

The fourth objective of this study was, '*To examine whether the impact of the issue, moral agent, and environment characteristics on ethical decision making is moderated by the individual's religiosity level*'. In order to achieve this objective, the research synthesis model was examined for a moderation effect using a group comparison technique which consists of variance analysis, structural model difference, and path by path examination. The results of the analysis showed that the effects of issue characteristics on the ethical decision-making process were positively moderated by the individual religiosity level. So, the religiosity level strengthens the role of the issue characteristics on the EDM's stages. Finding evidence of the moderation effect of religiosity provides evidence of the important role of religiosity in tax compliance decisions. Findings show that a higher level of religiosity increases the salience and vividness of tax situations through strengthening the relationships between issue characteristics and the stages of EDM. It also addresses the mixed findings on the role of religiosity in tax compliance by proposing a different relationship between religiosity and tax compliance. The current study argues that religiosity should be examined as a moderator variable rather than an independent variable or mediator variable and finds support for this relationship.

Table 8.1 sets out a summary of the findings on each of the hypotheses examined in the study.

Table 8.1: Summary of Research Objectives, Hypotheses, and Findings

Research objective	Hypothesis	Finding
RO1: To examine the process by which taxpayers make ethical decisions and engage in tax compliance behaviour. ¹	H1: Ethical recognition is positively related to ethical evaluation.	Supported ¹
	H2: Ethical evaluation is positively related to ethical intention.	Supported ²
	H3: Ethical recognition is positively related to ethical intention.	Supported ³
RO2: To examine the effect of issue characteristics on ethical decision-making in relation to tax compliance	H4: There is a positive relationship between moral intensity and ethical recognition.	Supported ⁴
	H5: There is a positive relationship between moral intensity and ethical evaluation.	Supported ⁵
	H6: There is a positive relationship between moral intensity and ethical intention.	Supported ⁶
RO3: To examine the effect of the issue, moral agent, and environment's characteristics on ethical decision-making in relation to tax compliance.	H7: There is a positive relationship between “issue, moral agents, and environment’s characteristics” and ethical recognition.	Supported ⁷
	H8: There is a positive relationship between “issue, moral agents, and environment’s characteristics” and ethical evaluation.	Supported ⁸
	H9: There is a positive relationship between “issue, moral agents, and environment’s characteristics” and ethical intention.	Supported ⁹
RO4: To examine whether the impact of issue, moral agent, and environment’s characteristics on EDM is moderated by the individual religiosity level.	H10: There is a stronger positive relationship between three characteristics (issue, moral agents, and environment) and stages of ethical decision making for individuals with high religiosity compared to individuals with low religiosity.	Supported ¹⁰

1: Hypothesis 1 was supported in all scenarios for Rest’s model ‘EDM’, only in scenario 2 for Jones’s model ‘issue-contingent’, and was not supported for ‘research synthesis model’.

2: hypothesis 2 was supported in all scenarios for the three models.

3: The hypothesis 3 was supported in scenarios 2 and 3 for Rest’s model ‘EDM’ and Jones’s model ‘issue-contingent’, and was not supported for ‘research synthesis model’.

4: Hypothesis 4 was supported for SC and MC in scenario 1, all dimensions in scenario 2, and only SC in scenario 3.

5: Hypothesis 5 was supported for SC and POE in scenario 1, all dimensions in scenario 2, and only SC in scenario 3.

6: Hypothesis 6 was supported for SC in scenario 1, all dimensions in scenario 2 and 3.

7: Hypothesis 7 was supported for the moral agent (PN) and environment characteristics (RT) in scenario 1 and 2, all three types of characteristics (SC, PN, OE, and DNG) in scenario 3.

8: Hypothesis 8 was supported for the moral agent (PN) and environment characteristics (RT) in scenario 1 and 2, all three types of characteristics (SC, PN, OE, and DNG) in scenario 3.

9: Hypothesis 9 was supported for the issue (SC) and moral agent characteristics (PN) in scenario 1, all three types of characteristics (SC, PM, PN, DNG) in scenario 2, and just moral agent (PN) and environment characteristics (OE) in scenario 3.

10: Hypothesis was supported only for issue characteristics (SC, MC) in scenario 1 and (PM) in scenario 2, and it was not supported in scenario 3.

8. 3. Research Contributions

The results of this research have several noteworthy contributions.

First of all, this study demonstrates that the process of tax compliance decisions follows the same stages and steps as other ethical decisions and can be captured by Rest's (1986) model of EDM. The EDM model contains all the key stages (steps) of ethical decision making which are ethical recognition, evaluation, intention, and actual behaviour. Consulting the literature in tax compliance, most of the empirical studies have focused only on one or two stages²⁵⁸ of ethical decision making (mainly on ethical intention). This study contributes to the literature by including the three stages of EDM and provides evidence of the validity of the EDM's model in tax compliance. It also demonstrates the superiority of the ethical decision-making model over the existent models in the tax compliance literature, as it includes all the stages of decision making. Validating the EDM model is of paramount importance as it contributes towards the call to determine and clarify the mechanisms or processes through which taxpayers form their tax compliance decision (Henderson and Kaplan, 2005). In particular, it addresses the mixed findings²⁵⁹ on the relationship between ethical recognition and the other stages (ethical evaluation and intention) and supports Rest's proposition of the positive effect of ethical recognition on ethical evaluation and intention.

Secondly, the current study extends the academic tax compliance research by proposing and testing the issue contingent model developed by Jones (1991) in the tax compliance context. It contributes to the call for more research on the factors that have the potential to affect the movement of taxpayers from inertia to an active course of action. In fact, the findings of this study confirm that the moral intensity's dimensions have the ability to facilitate the recognition of the ethicality of the situation, to assist the ethical evaluation stage, and to encourage taxpayers to build a more ethical intention toward the tax situation. Equally important, the findings of this study also contribute to the model of Jones (1991) by extending one of the variables of this model, namely social consensus. The social consensus was described by Jones (1991: p 375) as

²⁵⁸ For instance, most studies apply the planned behaviour theory which includes just one stage 'ethical intention'.

²⁵⁹ Little evidence was found for the relationship between ethical recognition and evaluation. For instance, Chan and Leung (2006) found no significant relationship between the two stages among accounting students. Also, Valentine and Fleischman (2003) reached the same conclusion. Whereas, Singhapakdi et al (1996) found that participants who perceive the situation as having an ethical issue will judge the situation more ethically. To sum up, there is dearth of studies that could provide evidence of the significance relationship between the two stages (see section 4.2.1).

“The degree of social agreement that a proposed act is evil (or good)”. This definition fails to detail the different facets of social agreement. According to the social norms theory (Cialdini, 1998), social agreement could be interpreted as the expectations of significant others for the individual’s own behaviour (subjective norms); the expectations of general society of the behaviour (injunctive norms); and the standards that develop out of the observation of other’s behaviour in the society (descriptive norms). However, the literature on social norms theory has not been previously related to Jones’s model. This study makes a noteworthy contribution to Jones’s (1991) model by unpacking the social consensus dimension into three different components and providing empirical evidence of the importance of each of these components in tax compliance decisions.

Thirdly, in response to the complexity of tax compliance behaviour, this study contributes to the literature by developing a comprehensive and novel framework which is labelled as a research synthesis model. This new model incorporates issue-contingent characteristics, environmental characteristics and moral agent characteristics. It provides in-depth insights into the impact of these characteristics on how taxpayers make ethical decisions about tax compliance situations. The results of the model developed in this study contribute to deepening our understanding of the importance of the three characteristics on drawing one’s attention to the situation and it confirms the relevance of these characteristics in ethical decision making. Most research and frameworks in the tax compliance literature primarily focused on predicting the decision outcome of tax situations [e.g., the theory of planned behaviour (Ajzen, 1985) focusing only on intention] with little attention devoted to the mechanism or dynamics of the decision process. Therefore, the research synthesis model shifts the attention from the simple comply or not comply concerns, to the dynamics of the tax compliance decision and the complex nature of ethical decision making in order to meet the contemporary requirements of tax systems and regulations.

Fourthly, related to the previous contribution, calls have been made to investigate and provide a specific definition of social norms along with a valid operationalisation of these norms in a tax compliance context. According to Torgler (2002: p 663) “*When working with social norms, we have the difficulty of specifying their exact meaning*”. This study identified two separate and theoretically valid types of social norms (social consensus related to the specific situation and societal norms related to the general aspect of the situation). Social consensus can be seen as social norms related to the specific situation, and it is composed of three components consistent

with Cialdini (1998) taxonomy: subjective norms, injunctive norms, and descriptive norms. In contrast, societal norms are social norms related to the general aspect of a situation, and they are not related to the context of the situation. For instance, the social norms around overstating a tax deduction loaded into: (1) social consensus²⁶⁰ related to the scenario, and (2) societal norms related to the general opinion on overstating tax deduction. This finding challenges²⁶¹ the previous studies²⁶² that grouped the two types of social norms under a single type (social consensus and societal norms). Also, it points out the difficulty of separating the social norms into its different components (subjective, injunctive, and descriptive norms) as the theory of social norms predicted (Cialdini, 1998), when the social norms are related to the general opinion on the situation (societal norms) as opposed to when they are related to the specific situation (social consensus). This study, therefore, attempts to make a small, but useful, contribution to the body of literature by distinguishing between ‘social consensus and its components’ and ‘general societal norms’; and drawing attention to the difference that exists among these types of social norms.

Finally, this study goes beyond the traditional view of modelling the religiosity level as an antecedent or mediator variable and contributes to the literature by proposing an alternative modelling of religiosity as a moderator variable. Evidence presented on the significance of religiosity as a moderator variable implies that it has the potential to impact positively on the other relationships in the model (i.e. the relationships between the three dimensions²⁶³ of moral intensity and the ethical decision-making stages²⁶⁴ are stronger when religiosity level is higher). To the best of the author’s knowledge, this study is the first to examine religiosity level as a moderator variable in tax compliance literature, and it addresses the mixed findings²⁶⁵ that other studies reported and provides empirical evidence of the significant role of religiosity in tax compliance decisions.

²⁶⁰ Social consensus was in turns divided into three components which is consistent with social norms theory.

²⁶¹ The results of this study were validated over the three scenarios unlike the previous studies where they used a single scenario in their empirical studies.

²⁶² For instance: Wenzel (2004); Bobek, Roberts, & Sweeney (2007); and Bobek, Hageman, & Kelliher (2013);

²⁶³ Social consensus, magnitude of consequences, and probability of effects.

²⁶⁴ Mainly ethical evaluation and intention.

²⁶⁵ Some studies argued that religiosity level has a limited or no impact on inhibiting the deviant behaviours such as Albrecht et al (1977), Stack and Kposowa (2006), and McKerchar et al (2012). See section 3.4.1.2 for more details.

8. 4. Implications for Tax Authorities

There are practical implications from this study for tax authorities which are addressed in this section. Increasing tax compliance is an ongoing challenge for Revenue Authorities which certainly have a clear focus on reducing the level of tax evasion in society. The results of the research provide the tax authorities with greater insights into the mechanisms (steps) by which taxpayers form their tax compliance decisions and motives/factors that impact this process. Recognising and understanding these steps and factors enables tax authorities to develop more focused strategies to increase tax compliance. In fact, an increase in the level of tax compliance will significantly help to shrink the tax gap (the difference between the actual tax revenues collected and the predicted amount which it should have been collected if the tax compliance was impeccable) thereby generating more revenue by the Revenue Authorities (the income taxes are one of the main sources of revenue for any government in most modern societies). In particular, the findings of this study have an economic significance as it helps to improve the tax compliance level which should lead to: (1) an increase in the revenues for the government, (2) an improvement in the provision of public services; (3) better distribution of income; (4) enhance satisfaction with the tax system; and (5) an increase in the trustworthiness of tax authorities. The areas where these implications are most apparent are: informal sanction systems, complexity of the tax system, immigration and integration, media, and education program.

8. 4. 1. Informal Sanction Systems

There is a substantial body of literature²⁶⁶ that provides evidence that informal sanctions²⁶⁷ are more effective than legal or formal sanctions²⁶⁸ in inhibiting taxpayers from engaging in tax evasion behaviours. This study contributes to that evidence and highlights the superiority of the informal sanction (guilt, shame, social stigma...etc.) over the formal based sanction (tax rates, audits, penalties...etc.). The implication for the tax authorities is, therefore, to focus more on increasing this type of sanction over the legal based sanctions. Although influencing personal norms could be a very challenging task to undertake, tax authorities can still send messages that

²⁶⁶ For instance: Elster (1989), Hasseldine, Kaplan, and Fuller (1994), and Orviska and Hudson (2003).

²⁶⁷ Whether are self-imposed sanctions ‘personal norms’ or socially-imposed sanction ‘social stigma’.

²⁶⁸ Legal based enforcement ‘audits and penalties’.

highlight the importance of compliance and build up positive personal norms by maximising the taxpayers' satisfaction, building trust with taxpayers, and most importantly treating taxpayers in a fair manner. Social stigma and pressure is another type²⁶⁹ of informal sanction. Evidence was reported that the taxpayers' perception of social norms²⁷⁰ is directly predictive of their tax compliance decisions. This implies that tax authorities would benefit considerably from aligning social norms with tax compliance behaviour. Tax authorities could increase the taxpayers' awareness of the potential effects of their tax compliance decisions in society and lead them to consciously consider the extent to which society is positively or negatively affected by their tax compliance decisions. Going public with details of tax evaders would increase the informal sanction (social stigma). However, this tactic could also backfire by sending a wrong message to the taxpayers, whereby it suggests non-compliance might be commonly occurring, i.e., it is the norm. On the other hand, it is important to inform the public that the large majority of taxpayers comply with tax systems and highlight the successes of tax authorities in detecting and prosecuting the tax evaders as, "*The longer higher levels of tax evasion persists, the greater is the threat to public confidence in the tax system and the higher is the risk that tax evasion will become more widespread*" (Caragata, 1998 : p 60).

To sum up, the informal type of sanction is more cost efficient and a more effective enforcement sanction, as a violation of the social norms would cause internal self-imposed sanctions (guilt, remorse and shame) or social sanctions (gossip, ostracism, and social stigma).

8. 4. 2. Complexity of the Tax System

Many researchers²⁷¹ claim that the complexity of the tax systems can largely contribute to non-compliance behaviours. In fact, this study found that taxpayers think that more than 60% of taxpayers in their country unknowingly pay less than they legally owe.

This study supports a recommendation to the tax authorities to reconsider the complexity of the tax system and work toward simplifying the tax system, so the unintentional tax non-compliance behaviour will be diminished. Indeed, with a less complex tax system, the ethical recognition ability of taxpayers should increase and so should their tax compliance intentions given the

²⁶⁹ Compared to self-imposed sanction (personal norms).

²⁷⁰ The two types of social norms: social consensus and the broader societal norms.

²⁷¹ For instance: Bobek and Hatfield (2001) and Richardson (2006).

positive relationship found between ethical recognition and intention. In contrast, with a highly complex tax system, tax authorities may risk legitimising undesirable behaviour by increasing the ‘lazy non-compliers’ who would have complied with the tax system if the system had been simpler.

8. 4. 3. Immigration and Integration

Evidence was reported that tax culture, residency period, and membership of a specific religious community had certain effects on tax compliance decisions which in aggregate imply that targeting these factors to increase the level of tax compliance could be fruitful avenues to pursue by tax authorities. Population mobility across the world (especially in developed countries) is on the rise for many reasons, and as a consequence, the cultural heterogeneity among the hosted population is increasing. Therefore, tax authorities (tax policy makers) should respond by implementing strategies that in the medium and long terms, mitigate this cultural heterogeneity and increase the integration with local tax culture. In fact, introducing and educating immigrants about the objectives of the tax system in the country of residence is very crucial in minimising the cultural impact on the tax compliance behaviour (Kountouris and Remoundou, 2013). For instance, sending messages that stress the public need for funds to provide better public services to all citizens regardless of their cultural background or the period they have spent in the country should lead to the integration of immigrants in the society. Also, encouraging immigrants to engage in social and political institutions could speed up the process of integration and spread the feeling of being part of the local society which would subsequently motivate them to contribute to the wider community.

8. 4. 4. Media

Media is one of the channels of interactions between taxpayers and tax authorities. Tax authorities can use media to increase the awareness of taxpayers about the ethical dimensions of tax evasion behaviours through, for example, stressing the harm and the losses that tax evasion behaviours are causing, not only to the government, but also the harm inflicted on the citizens who would be forced to carry a heavier tax burden and others who suffer from poorer public

services. Subjective norms and injunctive norms (social consensus) were found to be positively associated with tax compliance decisions. So, instead of describing the losses and harm to a faceless public welfare, media messages should show how a specific part of the community would be negatively affected and harmed as a consequence of tax evasions (e.g., citizens affected by a reduction in health and research funds, education funds...etc.). The intrinsic motivation (personal norms) was found to be positively associated with tax compliance decisions. Tax authorities need to be cautious when using the media and not to lead individuals to think that tax evasion is ‘okay’ by promoting for instance tax amnesty programs²⁷² (these could send a wrong message to taxpayers) or sending the wrong message by over highlighting the negative side²⁷³ of the tax gap. Instead, tax authorities should promote tax compliance as an ethical pattern of behaviour and encourage taxpayers to take pride in paying their own taxes. Evidence was reported that taxpayers base their own evaluation of the tax evasion situations on full consideration of the circumstances of the situation which is consistent with the teleological approach. So, when tax authorities use the media in promoting tax compliance behaviour, they should send a message that emphasises more the full consequences of tax evasion as well as the seriousness and the certainty of the punishment.

8. 4. 5. Education Program

The findings of this study emphasise the importance of ethical evaluation in tax compliance decisions. According to the literature²⁷⁴, education is an important factor in increasing moral reasoning (ethical evaluation). Tax authorities need to design an education program that aims to enhance the moral reasoning of taxpayers through educating taxpayers on the objectives of the tax system, so more appreciation of the tax system can be observed. The public also needs to be educated that tax evasion is not a victimless crime and they need to be notified of the potential victims of tax evasions (e.g., citizens needing social support, education system, medical care...etc.). As social norms were found to be very important in tax compliance decisions, education programs designed to strengthen social norms around tax compliance and the social

²⁷² According to Kornhauser (2007).

²⁷³ It is often true that only the tax burden and the need for more cut taxes are communicated to the taxpayers, whereas, the positive side, such as the tax burden is relatively decreasing historically or comparing to the other countries never been communicated to the taxpayers (Kornhauser, 2007).

²⁷⁴ For instance, Kornhauser (2007) and Henderson & Kaplan (2005).

integrity of taxpayers could, therefore, have a positive impact on tax compliance decisions. Education also can be used as a powerful tool for enhancing the taxpayers' personal norms by strengthening the feelings of identity, fairness, and reciprocity. In addition, education programs can prevent unintentional²⁷⁵ tax evasion by increasing the knowledge of taxpayers and spreading tax compliance as a sense of civic duty.

8. 5. Strengths and Limitations

This section illustrates the strengths and limitations of this research to put the contributions and implications into context. Section 8.5.1 outlines the strengths of the study and Section 8.5.2 points out the limitations of the study.

8. 5. 1. Strengths

This study builds on the existing body of literature in which tax compliance (tax morale) problems have been well identified. Taxation is an interdisciplinary research field, and it is common that different disciplines are consulted to approach a specific tax matter. The strengths of the current research lie in the multiple strands of literature that were consulted from different disciplines (i.e., economic, psychology, sociology, ethical decision making) to develop the research synthesis model.

Also, the research instrument (survey) was carefully constructed using well-established instruments which have already tested for validity in the tax compliance context (the three scenarios were adopted from well-established studies). Moreover, a rigorous approach was followed in the data analysis to minimise any reliability and validity concerns (i.e., data screening, exploratory factor analysis, and confirmatory factor analysis). The inclusion of three tax jurisdictions (three countries) and collection of data from students and non-students (i.e., full and part time employee, unemployed participant...etc.) is also seen as a strength for analytical and theoretical generalisation purposes.

²⁷⁵ The study's participants think that more than 60% of taxpayers engage in paying less taxes than they legally owe due to unknowingly or unintentionally reasons.

Furthermore, this study attempts to respond to the call in the literature highlighting the need for utilising different statistical techniques to examine tax compliance behaviour. This study used the Structural Equation Modelling method²⁷⁶ to analyse the designed survey data. Unlike the other commonly used techniques (for instance multivariate analysis of variance, multiple regression, and factor analysis), SEM can examine multiple relationships simultaneously and enables researchers to assess both the measurement model and the structural model (see section 5.5.3 for the advantages of SEM).

8. 5. 2. Limitations

The findings of the current study should be interpreted in light of its potential limitations. The common shortcoming that is inherent in most studies that utilise surveys is the non-response bias. The total number of surveys that was distributed to the participants was over 2100 questionnaires, and 679 questionnaires were completed which results in a response rate of 32.2%. This is not out of line with surveys in social sciences where response rates can be as low as 10%. Moreover, the findings of this study were mainly based on data collected from a self-reported survey, and it has not been possible to triangulate with data from other sources. Therefore, the possibility of biases such as ‘halo effect’ or acquiescence cannot be ruled out. It is also possible that participants did not honestly declare their true tax compliance intentions, especially since the current study dealt with illegal behaviour. Whilst care was taken to minimise this effect, and complete anonymity and confidentiality were ensured, this is a limitation. Despite this weakness, the self-reported survey is the most practical method in the tax compliance area (Bobek and Hatfield, 2003; Torgler, 2007). Self-presentation, socially desirable responses, poor memory, and responses not reflecting the actual behaviour are all widely accepted to be limitations inherent in self-reports surveys and attempts were made to mitigate the effect of these biases. For instance, the survey was designed to detect the unengaged responses by utilising reversed scales items throughout the survey, as well as calculating the standard deviations of all scales items and excluding the unengaged responses (see section 5.6.1.2). Also, the common method bias was checked at confirmatory factor analysis level (see section 5.6.4.4).

²⁷⁶ Using the SEM with the statistical program package AMOS (path modelling technique).

This study adheres strictly to Dillman's (2011) 'Tailored Design Approach' in the process of developing and designing the survey to ensure the quality of the survey and to reduce these biases. As with any statistical tools currently available, SEM using AMOS statistical package suffers from shortcomings as discussed in Chapter 5. Regarding the hypothesised causal relationships in the model, these relationships may not be uni-directional (i.e., ethical intention may have some degree of reverse-directional relationship with ethical evaluation). To sum up, steps were taken to minimise and mitigate some of the limitations in order to improve the reliability and validity of the study's findings. However, most of the limitations listed above are unavoidable and inherent in any study with similar features. Despite these limitations, the findings of the current study undoubtedly contribute a new body of knowledge to the literature.

8. 6. Future Research

Despite the existence of a body of literature on tax compliance behaviour, more research is still needed in this area. There are a number of fruitful research opportunities arising from the findings of this study.

First of all, this study based its research synthesis model on Rest's (1986) 'ethical decision making' model. However, it included just the first three stages of the EDM model due to the impossible task of measuring the actual behaviour in a survey with the other three stages. Further studies that fully capture the EDM model (specifically the 'ethical behaviour' stage) in the tax compliance context could be the next study to follow this one. However, this can prove challenging to achieve as such studies would need different research instruments (e.g., experiment, focus group...etc.) to overcome the sensitivity of measuring this stage in the tax compliance area i.e., 'actual tax behaviour'.

Secondly, the issue contingent model was explored and examined for its applicability in tax compliance. The current study included just three out of six dimensions of moral intensity due to the lack of comparable studies that measured the other dimensions (such as concentrate effect) in tax compliance²⁷⁷. Further studies could include the other three dimensions or all the dimensions of moral intensity and contribute more empirical evidence to the literature, although, operating or

²⁷⁷ It is extremely difficult to operationalise the concentrate of the effect in tax compliance context.

measuring some of the moral intensity's dimensions can be extremely difficult. For example, it is exceptionally difficult to operate and capture 'proximity' in tax compliance as the degree of closeness of the victims to the taxpayers is unknown, and hard to track. Further studies that attempt to overcome this challenge have a great potential to contribute to the literature.

Thirdly, following the social norms theory developed by Cialdini (1998), social consensus was divided into three components, namely, subjective, injunctive, and descriptive norms. These components had direct effects on tax compliance decisions. The theory of social norms indicates that individuals internalise the social norms to become their internal norms (personal norms) and the effect of social norms on the decision-making process, therefore, will be mediated by personal norms. Future research that examines the mediation effect of personal norms between social norms and the tax compliance decision process could contribute to the literature.

Another important and interesting area for future research is to further explore the finding of this study on the effect of residency period on tax compliance decisions. A negative relationship was found between the time the participants have spent in the country and their intention to comply. This outcome was surprising and not easily explained. This could be further investigated through an in-depth study (ideally a qualitative study) that aims to understand the drivers of this negative relationship.

Social norms are a broad concept, and the current study unpacked this broad concept into more precise elements following the social norms theory. Future research needs to focus more on a better operationalisation of these elements. Also, replicating this study could make a useful contribution to the literature (McKerchar, 2010).

Finally, another area for future research is the relationship between taxpayers and tax authorities and governments. Some comments were included in the survey indicating that taxpayers are unhappy with government spending their money on areas that have no benefit to them. For instance, participant 'A' stated that "*I believe people should pay taxes, if the taxation was not misused or abused*". While, participant 'B' claimed that, "*The governments double standards are a contributing factor for people to underreport taxes. When MP can claim expenses on fine dining, and the public relies on extra cash*". This illustrates the complexity of the factors impacting on tax compliance decisions and the rationales that may be constructed by taxpayers to justify non-compliant behaviour. In particular, the concepts of distributive, procedural, restorative, and retribution justice provide fruitful avenues for future research. For instance,

participant ‘A’ claimed that the misuse of the tax revenue is one of the causes of tax evasion (distributive and exchange justice). Research in exchange justice is scarce and a call has been made in the literature to investigate this matter in more detail (Wenzel, 2002; Kornhauser, 2006). Participant ‘B’ claimed that the lack of trust in the government and the way the tax revenue is distributed are the main reasons of the tax evasion behaviour (distribution justice). Although there is some evidence in the literature on the positive relationship between distributive justice and the individual tax compliance (see section for further details 3.4.2.2), the findings are still quite mixed (Wenzel, 2002). Therefore, it would be valuable to conduct a more in-depth qualitative study on this perspective of tax compliance.

8. 7. Chapter Summary

Increasing tax compliance behaviour is an ongoing challenge for tax authorities, policymakers, and researchers despite the large body of literature. It is only by addressing different aspects of the tax compliance behaviour and applying various methodologies that progress can be observed, and a more comprehensive understanding of the tax compliance behaviour can be reached.

Overall, the current study responds to the call in the literature to provide a better understanding of the mechanism which taxpayers use to form their tax compliance decision and the factors that have the potential to impact this decision-making process. Applying a framework that was successfully used in the ethical decision-making area, this research contributes to the theoretical advancement of the tax compliance field and provides noteworthy implications for tax authorities to develop strategies to enhance tax compliance behaviour.

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Appendices

Appendix A: Survey Covering Letter (Irish version)

Dear Participant,

My name is Riad Cheikh and I am a PhD student at the National University of Ireland, Galway. The discipline of Accounting and Finance of NUI Galway is conducting research examining attitudes and behaviours towards taxation in Ireland. This will help us to better understand the decision-making processes of taxpayers.

The following questionnaire will require approximately **10 to 15 minutes** to complete. The questionnaire is anonymous and please *do not* include your name. Participation is completely voluntary.

This study is conducted by academic researchers and is not connected to the State Tax Authorities. If you choose to participate in this project, please answer all questions as honestly as possible and return the completed questionnaires to any of those places (the two mosques, NUIG prayer rooms, Halal shops in Galway).

Thank you for taking the time to assist me in my educational endeavours. The data collected will provide useful information regarding the general attitudes towards the tax system and the chain of reasoning that the taxpayer uses to make his/her compliance decision. Besides, all responses received are very gratefully received, as the completion of my PhD will not be possible without them.

Thank you for agreeing to participate in this research project. Your cooperation is greatly appreciated.

Sincerely,

Riad Cheikh El Ghanama
r.cheikhelghanama1@nuigalway.ie
00 353 86 72 65 65 8



Appendix B: Survey Instrument (Irish version)



NUI Galway
OÉ Gaillimh

Survey Attitudes and Behaviours Towards Taxation

2014/2015

Cairnes School of Business and Economics
National University of Ireland Galway
University road
Galway
Ireland

Thank you for agreeing to participate in this research project. Your cooperation is greatly appreciated. The survey should take approximately *10 to 15 minutes* to complete and does not require any prior knowledge of taxation rules.

The purpose of this study is to better understand the decision-making processes of taxpayers and you are requested to evaluate a series of tax-related scenarios.

Please answer all questions as honestly as possible and return the completed questionnaires in the prepaid stamped envelope. The survey is **anonymous** and you are requested not to write your name on the document.

INSTRUCTIONS:

The following 3 scenarios represent typical decisions that self-employed individuals may face when preparing their annual income tax returns. Please read each scenario and circle your responses to the questions. It is important that you consider each scenario and answer all the questions to the best of your ability. It is **not** required that you have experience of self-employment to answer the questions.



Email: r.cheikhelghanama1@nuigalway.ie, Mobile: 00 353 86 72 65 65 8

No.

Section 1: Tax scenarios

Scenario 1

Jack is a 40-year-old married father of two boys. He is a full time employee in a small company and his wife, Laura, works part-time. Jack was paid €6,000 in cash earlier this year for work that was outside his regular job. Because the payment was in cash and not recorded anywhere, he chose not to report it on his annual tax return.

	Strongly disagree							Strongly agree						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Q1. To what extent do you agree that there is a moral (ethical) issue involved in Jack's behaviour.														
	Very unethical							Very ethical						
Q2. Overall, how would you rate Jack's decision?	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Q3. If you were responsible for making the decision on whether to report the taxable cash described in the scenario:	Very unlikely							Very likely						
a. How likely would you be to make the same decision as Jack and <u>underreport</u> (NOT report) the cash?	1	2	3	4	5	6	7	€0 (0%)	€1,200 (20%)	€2,400 (40%)	€3,600 (60%)	€4,800 (80%)	€6,000 (100%)	
b. Which of the following amounts of the €6,000 cash do you think is closest to the amount you would <u>underreport</u> ?														
Q4. Please indicate the extent to which you agree or disagree with the following statements:	Strongly disagree							Strongly agree						
a. You would definitely feel guilty if you did <u>underreport</u> the €6,000 cash.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
b. You would definitely feel justified if you did <u>underreport</u> the €6,000 cash.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
c. You would definitely feel ashamed if you did <u>underreport</u> the €6,000 cash.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
d. If you decided to <u>underreport</u> the €6,000 cash, you would definitely be audited by the tax authorities.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
e. If you were audited by the tax authorities, they would definitely discover that you had engaged in under reporting behaviour.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
f. Your family would definitely <u>NOT</u> think it is okay (i.e., morally right) to <u>underreport</u> the €6,000 cash.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
g. Your friends would definitely <u>NOT</u> think it is okay (i.e., morally right) to <u>underreport</u> the €6,000 cash.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
h. Most people would definitely <u>NOT</u> feel ashamed if they did <u>underreport</u> the €6,000 cash as taxable income.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
i. Most people would definitely feel guilty if they did <u>underreport</u> the €6,000 cash as taxable income.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Q5. If you were audited by the tax authorities, how would you rate the seriousness of the consequences (fines, self-image, reputation, social stigma...etc.)?	Minor							Severe						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Q6. What percentage of €6,000 cash do you think is the closest to the amount that the average Irish taxpayer would report?	0% (€0)	20% (€1,200)	40% (€2,400)	60% (€3,600)	80% (€4,800)	100% (€6,000)								

Scenario 2

Julie, a university student, is a waitress at a popular local restaurant located near her residence. Julie's income from the restaurant helps her to finance her university education. In addition to her wage income, this year Julie received income of €500 in the form of tips which is **taxable**. Julie neither keeps a record of the tip income, nor reports it on her annual tax return.

Q1. To what extent do you agree that there is a moral (ethical) issue involved in Julie's behaviour?	<table border="0"> <tr> <td style="width: 10px;"></td> <td style="width: 10px;">Strongly disagree</td> <td style="width: 10px;">1</td> <td style="width: 10px;">2</td> <td style="width: 10px;">3</td> <td style="width: 10px;">4</td> <td style="width: 10px;">5</td> <td style="width: 10px;">6</td> <td style="width: 10px;">7</td> <td style="width: 10px;">Strongly agree</td> </tr> </table>		Strongly disagree	1	2	3	4	5	6	7	Strongly agree
	Strongly disagree	1	2	3	4	5	6	7	Strongly agree		
Q2. Overall, how would you rate Julie's decision?	<table border="0"> <tr> <td style="width: 10px;"></td> <td style="width: 10px;">Very unethical</td> <td style="width: 10px;">1</td> <td style="width: 10px;">2</td> <td style="width: 10px;">3</td> <td style="width: 10px;">4</td> <td style="width: 10px;">5</td> <td style="width: 10px;">6</td> <td style="width: 10px;">7</td> <td style="width: 10px;">Very ethical</td> </tr> </table>		Very unethical	1	2	3	4	5	6	7	Very ethical
	Very unethical	1	2	3	4	5	6	7	Very ethical		
Q3. If you were responsible for making the decision on whether to report the taxable tips described in the scenario:	<table border="0"> <tr> <td style="width: 10px;"></td> <td style="width: 10px;">Very unlikely</td> <td style="width: 10px;">1</td> <td style="width: 10px;">2</td> <td style="width: 10px;">3</td> <td style="width: 10px;">4</td> <td style="width: 10px;">5</td> <td style="width: 10px;">6</td> <td style="width: 10px;">7</td> <td style="width: 10px;">Very likely</td> </tr> </table>		Very unlikely	1	2	3	4	5	6	7	Very likely
	Very unlikely	1	2	3	4	5	6	7	Very likely		
a. How likely would you be to make the same decision as Julie and <u>underreport</u> (<i>NOT</i> report) the tips?	<table border="0"> <tr> <td style="width: 10px;"></td> <td style="width: 10px;">€0 (%)</td> <td style="width: 10px;">€100 (20%)</td> <td style="width: 10px;">€200 (40%)</td> <td style="width: 10px;">€300 (60%)</td> <td style="width: 10px;">€400 (80%)</td> <td style="width: 10px;">€500 (100%)</td> </tr> </table>		€0 (%)	€100 (20%)	€200 (40%)	€300 (60%)	€400 (80%)	€500 (100%)			
	€0 (%)	€100 (20%)	€200 (40%)	€300 (60%)	€400 (80%)	€500 (100%)					
Q4. Please indicate the extent to which you agree or disagree with the following statements:											
a. You would definitely feel guilty if you did <u>underreport</u> the €500 tips.	<table border="0"> <tr> <td style="width: 10px;"></td> <td style="width: 10px;">Strongly disagree</td> <td style="width: 10px;">1</td> <td style="width: 10px;">2</td> <td style="width: 10px;">3</td> <td style="width: 10px;">4</td> <td style="width: 10px;">5</td> <td style="width: 10px;">6</td> <td style="width: 10px;">7</td> <td style="width: 10px;">Strongly agree</td> </tr> </table>		Strongly disagree	1	2	3	4	5	6	7	Strongly agree
	Strongly disagree	1	2	3	4	5	6	7	Strongly agree		
b. You would definitely feel justified if you did <u>underreport</u> the €500 tips.	<table border="0"> <tr> <td style="width: 10px;"></td> <td style="width: 10px;">1</td> <td style="width: 10px;">2</td> <td style="width: 10px;">3</td> <td style="width: 10px;">4</td> <td style="width: 10px;">5</td> <td style="width: 10px;">6</td> <td style="width: 10px;">7</td> </tr> </table>		1	2	3	4	5	6	7		
	1	2	3	4	5	6	7				
c. You would definitely feel ashamed if you did <u>underreport</u> the €500 tips.	<table border="0"> <tr> <td style="width: 10px;"></td> <td style="width: 10px;">1</td> <td style="width: 10px;">2</td> <td style="width: 10px;">3</td> <td style="width: 10px;">4</td> <td style="width: 10px;">5</td> <td style="width: 10px;">6</td> <td style="width: 10px;">7</td> </tr> </table>		1	2	3	4	5	6	7		
	1	2	3	4	5	6	7				
d. If you decided to <u>underreport</u> the €500 tips, you would definitely be audited by the tax authorities.	<table border="0"> <tr> <td style="width: 10px;"></td> <td style="width: 10px;">1</td> <td style="width: 10px;">2</td> <td style="width: 10px;">3</td> <td style="width: 10px;">4</td> <td style="width: 10px;">5</td> <td style="width: 10px;">6</td> <td style="width: 10px;">7</td> </tr> </table>		1	2	3	4	5	6	7		
	1	2	3	4	5	6	7				
e. If you were audited by the tax authorities, they would definitely discover that you had engaged in under reporting behaviour.	<table border="0"> <tr> <td style="width: 10px;"></td> <td style="width: 10px;">1</td> <td style="width: 10px;">2</td> <td style="width: 10px;">3</td> <td style="width: 10px;">4</td> <td style="width: 10px;">5</td> <td style="width: 10px;">6</td> <td style="width: 10px;">7</td> </tr> </table>		1	2	3	4	5	6	7		
	1	2	3	4	5	6	7				
f. Your family would definitely <u>NOT</u> think it is okay (i.e., moral right) to <u>underreport</u> the €500 tips.	<table border="0"> <tr> <td style="width: 10px;"></td> <td style="width: 10px;">1</td> <td style="width: 10px;">2</td> <td style="width: 10px;">3</td> <td style="width: 10px;">4</td> <td style="width: 10px;">5</td> <td style="width: 10px;">6</td> <td style="width: 10px;">7</td> </tr> </table>		1	2	3	4	5	6	7		
	1	2	3	4	5	6	7				
g. Your friends would definitely <u>NOT</u> think it is okay (i.e., moral right) to <u>underreport</u> the €500 tips.	<table border="0"> <tr> <td style="width: 10px;"></td> <td style="width: 10px;">1</td> <td style="width: 10px;">2</td> <td style="width: 10px;">3</td> <td style="width: 10px;">4</td> <td style="width: 10px;">5</td> <td style="width: 10px;">6</td> <td style="width: 10px;">7</td> </tr> </table>		1	2	3	4	5	6	7		
	1	2	3	4	5	6	7				
h. Most people would definitely <u>NOT</u> feel ashamed if they did <u>underreport</u> the €500 tips as taxable income.	<table border="0"> <tr> <td style="width: 10px;"></td> <td style="width: 10px;">1</td> <td style="width: 10px;">2</td> <td style="width: 10px;">3</td> <td style="width: 10px;">4</td> <td style="width: 10px;">5</td> <td style="width: 10px;">6</td> <td style="width: 10px;">7</td> </tr> </table>		1	2	3	4	5	6	7		
	1	2	3	4	5	6	7				
i. Most people would definitely feel guilty if they did <u>underreport</u> the €500 tips as taxable income.	<table border="0"> <tr> <td style="width: 10px;"></td> <td style="width: 10px;">1</td> <td style="width: 10px;">2</td> <td style="width: 10px;">3</td> <td style="width: 10px;">4</td> <td style="width: 10px;">5</td> <td style="width: 10px;">6</td> <td style="width: 10px;">7</td> </tr> </table>		1	2	3	4	5	6	7		
	1	2	3	4	5	6	7				
Q5. If you were audited by the tax authorities, how would you rate the seriousness of the consequences (fines, Self-image, reputation, social stigma...etc.)?	<table border="0"> <tr> <td style="width: 10px;"></td> <td style="width: 10px;">Minor</td> <td style="width: 10px;">1</td> <td style="width: 10px;">2</td> <td style="width: 10px;">3</td> <td style="width: 10px;">4</td> <td style="width: 10px;">5</td> <td style="width: 10px;">6</td> <td style="width: 10px;">7</td> <td style="width: 10px;">Severe</td> </tr> </table>		Minor	1	2	3	4	5	6	7	Severe
	Minor	1	2	3	4	5	6	7	Severe		
Q6. What percentage of €500 tips do you think is the closest to the amount that the average Irish taxpayer would report?	<table border="0"> <tr> <td style="width: 10px;"></td> <td style="width: 10px;">0% (€0)</td> <td style="width: 10px;">20% (€100)</td> <td style="width: 10px;">40% (€200)</td> <td style="width: 10px;">60% (€300)</td> <td style="width: 10px;">80% (€400)</td> <td style="width: 10px;">100% (€500)</td> </tr> </table>		0% (€0)	20% (€100)	40% (€200)	60% (€300)	80% (€400)	100% (€500)			
	0% (€0)	20% (€100)	40% (€200)	60% (€300)	80% (€400)	100% (€500)					

Scenario 3

James has a car/van, which he uses for business and personal reasons. The tax laws provide that automobile expenses are deductible to the extent that the automobile is used for business. In preparing his tax return, James calculates that the automobile was used 50% for business. However, James knows that if he *falsely* claimed it was used 80% for business, he could deduct an additional €1,400 in expenses. At the end of the year, James claimed that the automobile was used 80% for business, and as a result, he claimed an additional expense of €1,400.

		Strongly disagree							Strongly agree						
		1	2	3	4	5	6	7			Very unethical	Very ethical			
Q1. To what extent do you agree that there is a moral (ethical) issue involved in James's behaviour.															
Q2. Overall, how would you rate James's decision?		1	2	3	4	5	6	7							
Q3. If you were responsible for making the decision on whether to falsely claim the additional €1,400 automobile expenses described in the scenario:		Very unlikely							Very likely						
a. How likely would you be to make the same decision as James and take the additional €1,400 deduction?		1	2	3	4	5	6	7							
b. Which of the following amounts of the additional €1400 expense, do you think is closest to the amount you would deduct as automobile expense?		€0 (0%)	€280 (20%)	€560 (40%)	€840 (60%)	€1,120 (80%)	€1,400 (100%)								
Q4. Please indicate the extent to which you agree or disagree with the following statements:															
		Strongly disagree							Strongly agree						
a. You would definitely feel guilty if you took the additional €1,400 deduction.		1	2	3	4	5	6	7							
b. You would definitely feel justified in taking the additional €1,400 deduction.		1	2	3	4	5	6	7							
c. You would definitely feel ashamed if you took the additional €1,400 deduction.		1	2	3	4	5	6	7							
d. If you decided to take the additional €1,400 deduction, you would definitely be audited by the tax authorities.		1	2	3	4	5	6	7							
e. If you were audited by the tax authorities, they would definitely discover that you had engaged in over claiming expenses.		1	2	3	4	5	6	7							
f. Your family would definitely <i>NOT</i> think it is okay (i.e., morally right) to deduct the additional €1,400.		1	2	3	4	5	6	7							
g. Your friends would definitely <i>NOT</i> think it is okay (i.e., morally right) to deduct the additional €1,400.		1	2	3	4	5	6	7							
h. Most people would definitely <i>NOT</i> feel ashamed if they took the additional €1,400 deduction.		1	2	3	4	5	6	7							
i. Most people would definitely feel guilty if they did took the additional €1,400 deduction.		1	2	3	4	5	6	7							
		Minor							Severe						
Q5. If you were audited by the tax authorities, how would you rate the seriousness of the consequences (fines, Self-image, reputation, social stigma...etc.)?		1	2	3	4	5	6	7							
Q6. What percentage of the additional €1,400 in automobile expenses do you think is the closest to the amount the average Irish taxpayer would deduct?		0% (€0)	20% (€280)	40% (€560)	60% (€840)	80% (€1,120)	100% (€1,400)								

Section 2: Demographic and personal data

The following questions ask you for information about personal status. Your answers to these questions are confidential.



Q1. Age

Under 20 21-34 35-54 Over 55

Q2. Nationality _____

Q3. In which country were you born? _____

Q4. How long have you lived in Ireland? Less than 1 year 1 - 3 years 4 – 10 years Over 10 years

Q5. What is your gender? (Please tick one) Male Female

Q6. What is your marital status? (Please tick one) Married Single Other _____

Q7. Please indicate the major field of your education: (Please tick one)

Business Law Sciences & Engineering Humanities Medicine Other _____

Q8. What is your highest educational level achieved/completed? (Please tick one)

No formal qualification High school graduate University study Post-graduate study Other _____

Q9. Are you currently?

Part time employed Self-employed Unemployed Full time employed
 At home Student Retired Other _____

Q10. For how many years have you filed tax returns? Never 1 – 4 years Over 5 years

Q11. Who prepares your tax returns? (Please tick one) Myself/Ourselves Tax preparer Not applicable

Q12. What is your religious affiliation? (Please tick one)

Christian Buddhist Jewish Muslim
 Hindu Atheist/ Agnostic/ None Other _____

If your answer was Muslim, answer all of the following questions.

If your answer was Atheist / Agnostic / None, please go directly to question 18.

In all other cases, go to question 17 now.

Section 2: Demographic and personal data

The following questions ask you for information about personal status. Your answers to these questions are confidential.

Q1. Age Under 20 21-34 35-54 Over 55

Q2. Nationality

Q3. In which country were you born? _____

Q4. How long have you lived in Ireland? Less than 1 year 1 - 3 years 4 – 10 years Over 10 years

Q5. What is your gender? (Please tick one) Male Female

Q6. What is your marital status? (Please tick one) Married Single Other

Q7. Please indicate the major field of your education: (Please tick one)

Business Law Sciences & Engineering Humanities Medicine Other

Q8. What is your highest educational level achieved/completed? (Please tick one)

No formal qualification High school graduate University study Post-graduate study Other _____

Q9. Are you currently?

Part time employed Self-employed Unemployed Full time employed
 At home Student Retired Other _____

Q10. For how many years have you filed tax returns? Never 1 - 4 years Over 5 years

Q11. Who prepares your tax returns? (Please tick one) Myself/Ourselves Tax preparer Not applicable

Q12. What is your religious affiliation? (Please tick one)

Christian Buddhist Jewish
 Hindu Atheist/ Agnostic/ None Other _____

*If your answer was **Muslim**, answer all of the following questions.*

If your answer was Atheist / Agnostic / None, please go directly to question 18.

In all other cases, go to question 17 now.

Section 2: Demographic and personal data

The following questions ask you for information about personal status. Your answers to these questions are confidential.

Q1. Age Under 20 21-34 35-54 Over 55

Q2. Nationality

Q3. In which country were you born? _____

Q4. How long have you lived in Ireland? Less than 1 year 1 - 3 years 4 - 10 years Over 10 years

Q5. What is your gender? (Please tick one) Male Female

Q6. What is your marital status? (Please tick one) Married Single Other

Q7. Please indicate the major field of your education: (Please tick one)

Business Law Sciences & Engineering Humanities Medicine Other

Q8. What is your highest educational level achieved/completed? (Please tick one)

No formal qualification High school graduate University study Post-graduate study Other _____

Q9. Are you currently?

Part time employed Self-employed Unemployed Full time employed
 At home Student Retired Other _____

Q10. For how many years have you filed tax returns? Never 1 – 4 years Over 5 years

Q11. Who prepares your tax returns? (Please tick one) Myself/Ourselves Tax preparer Not applicable

Q12. What is your religious affiliation? (Please tick one)

Q12. What is your religious affiliation? (Please tick one)

Q12. What is your religious affiliation? (Please tick one)

Q12. What is your religious affiliation? (Please tick one)

Hindu Atheist/ Agnostic/ None Other _____

If your answer was Muslim, answer all of the following questions.

If your answer was Atheist / Agnostic / No

Appendices

Q13. Do you identify yourself as a member of Muslim community of Ireland? (Please tick one)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not eligible	<input type="checkbox"/> Yes	<input type="checkbox"/> No			
Q14. Have you paid Zakat before? (Please circle one)								
	Highly improbable	1	2	3	4	5	6	7
Q15. What is the probability that you would pay your own Zakat if you were eligible to pay?							Highly probable	
Q16. Please indicate the extent to which you agree or disagree with the following statements:								
	Strongly disagree							Strongly agree
a. Tax deductibility (deduction of Zakat from your taxable income) is very important for you.	1	2	3	4	5	6	7	
b. Paying Zakat is NOT very important for you.	1	2	3	4	5	6	7	
c. You would definitely feel guilty if you did <u>NOT</u> pay your own Zakat.	1	2	3	4	5	6	7	
d. You would definitely feel justified if you did <u>NOT</u> pay your own Zakat.	1	2	3	4	5	6	7	
e. The people close to you (e.g., family and/or friends, etc.) think they should definitely pay their own Zakat.	1	2	3	4	5	6	7	
f. Most Muslims think that they should honestly pay their own Zakat.	1	2	3	4	5	6	7	
g. Non-payment of Zakat is widespread among Muslims.	1	2	3	4	5	6	7	
h. Being a member of the Muslim community in Ireland is important to you.	1	2	3	4	5	6	7	
i. You feel a sense of pride in being a member of the Muslim community.	1	2	3	4	5	6	7	

Q17. Please indicate the extent to which you agree or disagree with the following religious statements:

	Strongly disagree							Strongly agree
a. My religious beliefs lie behind my whole approach to life	1	2	3	4	5	6	7	
b. I rarely read books and magazines about my faith.	1	2	3	4	5	6	7	
c. Religion is very important to me because it answers many questions about the meaning of life.	1	2	3	4	5	6	7	
d. It is <u>NOT</u> very important for me to spend periods of time in private to think and reflect on my religion.	1	2	3	4	5	6	7	
e. I spend time trying to enhance my understanding of my faith.	1	2	3	4	5	6	7	
f. Religious beliefs do <u>NOT</u> influence all my dealings in life.	1	2	3	4	5	6	7	
g. I enjoy spending time with others of my religious affiliation.	1	2	3	4	5	6	7	
h. I rarely join the activities of my religious organization.	1	2	3	4	5	6	7	
i. I keep well informed about my local religious group and have some influence on its decisions.	1	2	3	4	5	6	7	
j. I make financial contributions to my religious organization.	1	2	3	4	5	6	7	

Appendices

Q18. Please indicate the extent to which you agree or disagree with the following statements:

	Strongly disagree							Strongly agree	
	1	2	3	4	5	6	7		
a. I think I should honestly report cash earnings on my tax return	1	2	3	4	5	6	7		
b. I think it is acceptable to overstate tax deductions on my tax return	1	2	3	4	5	6	7		
c. I think working for cash- in-hand payments without paying taxes is a trivial offence	1	2	3	4	5	6	7		
d. The people closest to me (e.g., family and/or friends, etc.) think they should honestly report cash earnings on their tax return	1	2	3	4	5	6	7		
e. The people closest to me (e.g., family and/or friends, etc.) think that it is acceptable to overstate tax deductions on their tax return	1	2	3	4	5	6	7		
f. The people closest to me (e.g., family and/or friends, etc.) think that working for cash payments without paying tax is a trivial offense	1	2	3	4	5	6	7		
g. Most people in Ireland think they should honestly report cash earnings on their tax returns	1	2	3	4	5	6	7		
h. Most people in Ireland think it is acceptable to overstate tax deductions on their tax returns	1	2	3	4	5	6	7		
i. Most people in Ireland think working for cash payments without paying tax is a trivial offense	1	2	3	4	5	6	7		

Q19. In your opinion, what percentage of Irish taxpayers do you think deliberately pay less taxes than they legally owe?

Less than 20%	[20% - 40%]	[40% - 60%]	[60% - 80%]	More than 80%
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Q20. In your opinion, what percentage of Irish taxpayers unknowingly through lack of care pay less taxes than they legally owe?

Less than 20%	[20% - 40%]	[40% - 60%]	[60% - 80%]	More than 80%
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Comments and Suggestions

If you have any comments or suggestions, please enter them in the space provided below:

Thank you for completing the survey. Your cooperation is greatly appreciated.

Appendix C: Normality Test

Table C: The Results of Normality test of Skewness and Kurtosis for each Scenario and scale item in survey

Survey Scale Item	Scenario 1		Scenario 2		Scenario 3	
	Skewness	Kurtosis	Skewness	Kurtosis	Skewness	Kurtosis
ER	-.400	-1.019	.098	-1.204	-.644	-.803
EE	-.320	-.645	.124	-.961	-.732	-.329
INT_a	-.115	-1.305	.353	-1.377	-.744	-.607
INT_b	-.268	-1.473	.181	-1.618	-.672	-.806
PN_a	-.381	-1.322	.367	-1.398	-.783	-.617
PN_b	-.257	-1.222	.205	-1.409	-.693	-.605
PN_c	-.068	-1.405	.476	-1.226	-.529	-1.096
POE_d	.079	-.827	.470	-.875	-.021	-.872
POE_e	-.102	-1.084	.298	-1.021	-.176	-.944
SUN_f	-.155	-1.109	.245	-1.345	-.499	-1.080
SUN_g	-.039	-1.132	.515	-.989	-.249	-1.097
IUN_h	.032	-1.210	.559	-.781	-.068	-.823
IUN_i	.130	-1.047	.537	-.628	-.083	-.818
MC	-.497	-.699	.162	-1.231	-.545	-.565
DN	.128	-.937	.502	-1.123	-.171	-.865
RT_a	-1.106	.564	General social norms scales were tested for Skewness and Kurtosis once because it is not related to the scenarios			
OE_a	-.604	-.668				
CH_a	.200	-1.055				
RT_b	-.569	-.572				
OE_b	-.437	-.640				
CH_b	.196	-.802				
RT_c	-.219	-.595				
OE_c	-.110	-.424				
CH_c	.156	-.514				
DNG₁	-.074	-.357				
DNG₂	-.330	-.241	All the values were within the cut-offs -3 and +3			

Appendix D: Linearity Test

Table D1: Linearity test for scenario 1

PATH	R-Square	F value	Sig.	Comment
DNG → INT	INT	0.041	19.301	0.000
IUN → INT		0.232	100.915	0.000
OE → INT		0.111	44.482	0.000
SUN → INT		0.118	59.356	0.000
RT → INT		0.411	136.403	0.000
POE → INT		0.080	49.810	0.000
PN → INT		0.079	231.664	0.000
MC → INT		0.583	36.185	0.000
DN → INT		0.069	13.809	0.002
ER → INT		0.016	8.187	0.004
EE → INT		0.024	166.230	0.000
DNG → EE	EE	0.294	23.673	0.000
IUN → EE		0.035	115.255	0.000
OE → EE		0.156	39.255	0.000
SUN → EE		0.057	50.888	0.000
RT → EE		0.067	187.810	0.000
POE → EE		0.263	50.276	0.000
PN → EE		0.025	291.073	0.000
MC → EE		0.079	29.208	0.000
DN → EE		0.329	3.782	0.052*
ER → EE		0.044	14.434	0.000
DNG → ER	ER	0.004	2.623	0.106
IUN → ER		0.036	23.660	0.000
OE → ER		0.027	17.441	0.000
SUN → ER		0.012	7.977	0.005
RT → ER		0.048	32.112	0.000
POE → ER		0.021	13.956	0.000
PN → ER		0.048	32.236	0.000
MC → ER		0.026	16.933	0.000
DN → ER		0.005	3.079	0.080

*: significant at 90% level of confidence; **: significant at 95% level of confidence; ***: significant at 99% level of confidence.

Only one issue with linearity between DNG and ER and it will be considered as limitation (the path was not significant in SEM)

Table D2: Linearity test for scenario 2

PATH	R-Square	F value	Sig.	Comment
DNG → INT	INT	0.045	29.662	0.000
IUN → INT		0.190	148.230	0.000
OE → INT		0.034	22.498	0.000
SUN → INT		0.209	167.384	0.000
RT → INT		0.082	56.481	0.000
PM → INT		0.217	175.057	0.000
PN → INT		0.263	226.083	0.000
DN → INT		0.031	19.967	0.000
ER → INT		0.060	40.534	0.000
EE → INT		0.197	155.221	0.000
DNG → EE	EE	0.021	13.749	0.000
IUN → EE		0.182	140.689	0.000
OE → EE		0.042	28.075	0.000
SUN → EE		0.229	188.038	0.000
RT → EE		0.175	134.921	0.000
PM → EE		0.179	137.808	0.000
PN → EE		0.342	329.119	0.000
DN → EE		0.008	5.104	0.024 ^{**}
ER → EE		0.051	34.052	0.000
DNG → ER	ER	0.005	3.423	0.065*
IUN → ER		0.095	66.724	0.000
OE → ER		0.025	16.541	0.000
SUN → ER		0.096	67.109	0.000
RT → ER		0.058	38.892	0.000
PM → ER		0.103	72.83	0.000
PN → ER		0.145	106.932	0.000
DN → ER		0.010	6.710	0.010

*: significant at 90% level of confidence; **: significant at 95% level of confidence; ***: significant at 99% level of confidence.

Table D3: Linearity test for scenario 3

PATH	R-Square	F value	Sig.	Comment
DNG → INT	INT	0.046	30.448	0.000
IUN → INT		0.085	58.663	0.000
OE → INT		0.155	115.929	0.000
SUN → INT		0.208	166.604	0.000
RT → INT		0.159	120.062	0.000
PM → INT		0.104	73.360	0.000
PN → INT		0.426	470.861	0.000
DN → INT		0.018	11.883	0.001
ER → INT		0.052	34.769	0.000
EE → INT		0.251	212.134	0.000
DNG → EE	EE	0.046	30.791	0.000
IUN → EE		0.046	30.475	0.000
OE → EE		0.077	52.893	0.000
SUN → EE		0.085	59.051	0.000
RT → EE		0.070	47.866	0.000
PM → EE		0.039	25.411	0.000
PN → EE		0.191	149.815	0.000
DN → EE		0.021	13.547	0.000
ER → EE		0.010	6.284	0.012*
DNG → ER	ER	0.020	12.865	0.000
IUN → ER		0.010	6.193	0.013*
OE → ER		0.053	35.698	0.000
SUN → ER		0.084	58.350	0.000
RT → ER		0.078	53.580	0.000
PM → ER		0.034	22.311	0.000
PN → ER		0.140	103.561	0.000
DN → ER		0.000	0.081	0.776

*: significant at 90% level of confidence; **: significant at 95% level of confidence; ***: significant at 99% level of confidence.

Only one issue with linearity between DN and ER and it will be considered as limitation (the path was not significant in SEM)

Appendix E: Multicollinearity Test

Table E: Multicollinearity Test for Scenario 1, 2, and 3.

Variable		Scenario 1	Scenario 2	Scenario 3	Outcomes
		VIF	VIF	VIF	
ER	DNG	1.194	1.169	1.207	No Multicollinearity issue
	IUN	2.336	2.810	1.488	No Multicollinearity issue
	OE	1.414	1.416	1.497	No Multicollinearity issue
	SUN	2.154	2.917	2.672	No Multicollinearity issue
	RT	2.876	2.158	2.081	No Multicollinearity issue
	POE	1.615	2.683	1.445	No Multicollinearity issue
	PN	3.232	3.820	2.488	No Multicollinearity issue
	MC	1.269	/	/	No Multicollinearity issue
	DN	1.085	1.077	1.074	No Multicollinearity issue
EE	DNG	1.194	1.169	1.207	No Multicollinearity issue
	IUN	2.336	2.810	1.488	No Multicollinearity issue
	OE	1.414	1.416	1.497	No Multicollinearity issue
	SUN	2.154	2.917	2.672	No Multicollinearity issue
	RT	2.876	2.158	2.081	No Multicollinearity issue
	POE	1.615	2.683	1.445	No Multicollinearity issue
	PN	3.232	3.820	2.488	No Multicollinearity issue
	MC	1.269	/	/	No Multicollinearity issue
	DN	1.085	1.077	1.074	No Multicollinearity issue
INT	DNG	1.195	1.173	1.216	No Multicollinearity issue
	IUN	2.343	2.812	1.510	No Multicollinearity issue
	OE	1.420	1.422	1.509	No Multicollinearity issue
	SUN	2.220	2.924	2.681	No Multicollinearity issue
	RT	2.290	2.172	2.083	No Multicollinearity issue
	POE	1.616	2.669	1.447	No Multicollinearity issue
	PN	3.662	4.246	2.861	No Multicollinearity issue
	MC	1.279	/	/	No Multicollinearity issue
	DN	1.086	1.078	1.087	No Multicollinearity issue
	EE	1.079	1.187	1.206	No Multicollinearity issue
	ER	1.515	1.543	1.281	No Multicollinearity issue

All the values were less than the cutoff 10.

Appendix F: The Results of Exploratory Factor Analysis for Scenario 2

The same steps followed in the first scenario (section 5.6.3.4) were followed for the second scenario. It will start by conducting EFA on SC; the second EFA will be on SC and SNG together since the SNG items are the same for all scenario. The third EFA will be in all of SC, SNG, and MI. Finally, EFA is conducted on all items of the survey.

The result of first EFA revealed the same exact result as the EFA on SC for the first scenario. The three factors extracted are PN, SUN, and IUN which they show no validity nor reliability issues. The result is demonstrated in the following table

Table F1: The results of EFA on SC for all Countries Dataset Scenario 2

N = 635 Scale items	Principal Axis Factoring		
	PN	SUN	INU
Personal norms a	0.953		
Personal norms c	0.819		
Personal norms b	0.786		
Subjective norms f		0.909	
Subjective norms g		0.851	
Injunctive norms h			0.862
Injunctive norms i			0.657
Cronbach's Alpha STD	0.907	0.888	0.759
Adequacy			
KMO	0.845		
Communalities	0.847	0.820	0.671
	0.699	0.789	0.586
	0.761		
Total Variance Explained	73.917% Non-redundant Residuals 0%		
Convergent Validity			
Loading > 0.3	✓	✓	✓
Discriminant Validity			
No cross loading	✓	✓	✓
Factor correlation matrix	✓	✓	✓

Again, the result of the second EFA on SC and SNG demonstrates almost the exact same result as the first scenario. Seven factors were extracted that are free of reliability and validity concerns. Table F2 shows the results of this EFA.

Table F2: The results of EFA on SC and SNG for all Countries Dataset Scenario 2

N = 635 Scale items	Principal Axis Factoring						
	PN	CH	SUN	OE	RT	IUN	DNG
Personal norms a	0.859						
Personal norms b	0.833						
Personal norms c	0.765						
Cash in Hand f		0.772					
Cash in Hand c		0.734					
Cash in Hand i		0.532					
Subjective norms f			0.955				
Subjective norms g			0.747				
Overestimate expense e				0.793			
Overestimate expense b				0.667			
Overestimate expense h				0.450			
Reporting all taxes a					0.877		
Reporting all taxes d					0.584		
Reporting all taxes g					0.363		
Injunctive norms i						0.713	
Injunctive norms h						0.691	
Descriptive norms G1							0.722
Descriptive norms G2							0.684
Cronbach's Alpha STD	0.907	0.711	0.888	0.668	0.630	0.759	0.642
Adequacy							
KMO	0.809						
Communalities	0.821	0.585	0.893	0.554	0.721	0.646	0.577
	0.742	0.525	0.734	0.512	0.449	0.545	0.412
	0.742	0.337		0.337	0.263		
Total Variance Explained	57.739%				Non-redundant Residuals		3%
Convergent Validity							
Loading > 0.3	✓	✓	✓	✓	✓	✓	✓
Discriminant Validity							
No cross loading	✓	✓	✓	✓	✓	✓	✓
Factor correlation matrix	✓	✓	✓	✓	✓	✓	✓

The third EFA on all of SC, SNG, and MI revealed 9 distinct factors which were labelled as follows: PN, POE, OE, CH, IUN, SUN, RT, DNG, MC. The only difference between this result and the result of the same EFA for the first scenario is that MC made a distinct factor with only just one measurement item. It is recommended to avoid considering any factor which has a single measurement item because it counteracts the purpose of factor analysis which is to statistically

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reproduce the data by as less factors as possible (Reio and Shuck, 2014). MC will, therefore, be brought to the model at the final stage when the hypotheses and paths are tested. Also, any factor such as DN, MC, ER, and EE, that were expected to have just one measurement item because only one measurement items was effectively devoted to measure the concept, will be eliminated from this part of the analysis and it will be brought back to the analysis at the SEM stage (Hair et al., 2010).

Table F3: The results of EFA on SC, SNG and MI for all Countries Dataset Scenario 2

N = 635 Scale items	Principal Axis Factoring								
	PN	POE	SUN	CH	IUN	RT	OE	DNG	MC
Personal norms a	.916								
Personal norms b	.853								
Personal norms c	.791								
Probability of effect d		.867							
Probability of effect e		.761							
Subjective norms f			.940						
Subjective norms g			.790						
Cash in Hand c				.757					
Cash in Hand f				.746					
Cash in Hand i				.540					
Injunctive norms h					.913				
Injunctive norms i					.578				
Reporting all Taxes a						.829			
Reporting all Taxes d						.700			
Overestimate expense e							.757		
Overestimate expense b							.685		
Descriptive norms G2								.753	
Descriptive norms G1								.632	
Magnitude of Consequence									.788
Cronbach's Alpha STD	0.907	0.804	0.888	0.711	0.759	0.723	0.681	0.642	✓
Adequacy									
KMO	0.838								
Communalities	.843	.711	.858	.560	.741	.633	.534	.528	.721
	.730	.656	.764	.593	.579	.588	.546	.486	
	.761		.319						
Total Variance Explained	63.961%				Non-redundant Residuals				0%
Convergent Validity	✓	✓	✓	✓	✓	✓	✓	✓	✓
Loading > 0.3									
Discriminant Validity									
No cross loading	✓	✓	✓	✓	✓	✓	✓	✓	✓
Factor correlation mat	✓	✓	✓	✓	✓	✓	✓	✓	✓

Finally, the results of the last EFA on all scenario 2's items, exhibits 10 factors which are: PN, POE+MC, INT, IUN, RT, SUN, CH, OE, DNG, DN. Those factors demonstrate no validity nor

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reliability concerns. The DN will be dropped off at this stage for the reason that was explained earlier. Besides, the rationale for including it in the first place, is to examine if this measurement item concerning this type of social norms correlates with the other items and whether it is part of different social norms which was not expected by theory (as it was found that MC is part of the same factor with POE measurement items). The result of the pattern matrix along with all the reliability and validity tests are presented in the below table.

Table F4: The results of EFA on all Measurement Items for all Countries Dataset Scenario 2

N = 635 Scale items	Principal Axis Factoring									
	PN	POE+MC	INT	CH	SUN	RT	IUN	OE	DNG	DN
Personal norms a	0.938									
Personal norms c	0.812									
Personal norms b	0.798									
Probability of effect d		0.901								
Probability of effect e		0.807								
Magnitude of Consequ		0.430								
Intentions Quantitative			0.913							
Intentions Qualitative			0.809							
Cash in hand f				0.774						
Cash in Hand c				0.747						
Cash in Hand i				0.517						
Subjective norms f					0.944					
Subjective norms g					0.776					
Reporting all Taxes a						0.767				
Reporting all Taxes d						0.756				
Injunctive norms h							0.925			
Injunctive norms i							0.500			
Overestimate expense e								0.779		
Overestimate expense b								0.663		
Descriptive norms G2									0.764	
Descriptive norms G1									0.626	
Descriptive norms S										0.529
Cronbach's Alpha STD	0.907	0.778	0.841	0.711	0.888	0.723	0.759	0.681	0.642	✓
Adequacy	0.849									
KMO	0.849									
Communalities	0.850	0.690	0.779	0.609	0.867	0.583	0.789	0.575	0.547	0.270
	0.768	0.665	0.773	0.549	0.755	0.645	0.555	0.521	0.474	
	0.726	0.439			0.318					
Total Variance Explained	62.495%									
Convergent Validity	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Loading > 0.3										
Discriminant Validity	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
No cross loading										
Factor correlation matrix	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Appendix G: The Results of Exploratory Factor Analysis for Scenario 3

The results of the 4 different EFA on scenario 3's measurement scales confirm the results of the previous EFA on the both scenarios 1 and 2. The result of EFA on SC shows a similar pattern matrix as scenarios 1 and 2. Three factors were extracted: PN, SUN, and IUN with no validity nor reliability issues. The table G1 below shows the results

Table G1: The results of EFA on SC for all Countries Dataset Scenario 3

N = 636 Scale items	Principal Axis Factoring		
	PN	SUN	IUN
Personal norms a	0.959		
Personal norms b	0.813		
Personal norms c	0.665		
Subjective norms g		0.870	
Subjective norms f		0.869	
Injunctive norms i			0.824
Injunctive norms h			0.757
Cronbach's Alpha STD	0.869	0.863	0.763
Adequacy			
KMO	0.769		
Communalities	0.899 0.621 0.598	0.761 0.771	0.756 0.530
Total Variance Explained	70.512% Non-redundant Residuals 0%		
Convergent Validity Loading > 0.3	✓	✓	✓
Discriminant Validity			
No cross loading	✓	✓	✓
Factor correlation matrix	✓	✓	✓

The results of EFA on SC and SNG revealed 7 social norms' factors. Those factors were labelled as PN, SUN, IUN, RT, OE, CH, and DNG. The results of validity and reliability tests are presented in the table G2; there are no concerns about the validity and reliability of those factors.

Table G2: The results of EFA on SNS and SNG for all Countries Dataset Scenario 3

N = 636 Scale items	Principal Axis Factoring						
	PN	SUN	CH	OE	IUN	RT	DNG
Personal norms a	0.950						
Personal norms b	0.794						
Personal norms c	0.668						
Subjective norms f		0.875					
Subjective norms g		0.814					
Cash in Hand c			0.776				
Cash in Hand f			0.747				
Cash in Hand i			0.528				
Overestimate expense e				0.832			
Overestimate expense b				0.608			
Overestimate expense h				0.411			
Injunctive norms h					0.844		
Injunctive norms i					0.689		
Reporting all taxes d						0.877	
Reporting all taxes a						0.598	
Reporting all taxes g						0.345	
Descriptive norms G1							0.747
Descriptive norms G2							0.678
Cronbach's Alpha STD	0.869	0.863	0.716	0.669	0.763	0.619	0.655
Adequacy							
KMO	0.775						
Communalities	0.885	0.789	0.538	0.618	0.679	0.515	0.594
	0.627	0.724	0.605	0.484	0.626	0.680	0.409
	0.626		0.334	0.316			0.249
Total Variance Explained	57.207%				Non-redundant Residuals 3%		
Convergent Validity Loading > 0.3		✓	✓	✓	✓	✓	✓
Discriminant Validity		✓	✓	✓	✓	✓	✓
No cross loading	✓	✓	✓	✓	✓	✓	✓
Factor correlation matrix	✓	✓	✓	✓	✓	✓	✓

Once more, the result of EFA on SC, SNG, and MI showed a clean and persistence pattern matrix. No validity nor reliability concerns were found. The adequacy measurements proof the appropriateness of the data to the pattern matrix. The full results are presented in the table G3.

Table G3: The results of EFA on SC and SNG for all Countries Dataset Scenario 3

N = 636 Scale items	Principal Axis Factoring							
	PN	POE+MC	SUN	CH	OE	IUN	RT	DNG
Personal norms a	0.939							
Personal norms b	0.790							
Personal norms c	0.666							
Probability of effect e		0.883						
Probability of effect d		0.645						
Magnitude of Consequences		0.576						
Subjective norms f			0.875					
Subjective norms g			0.792					
Cash in hand f				0.778				
Cash in Hand c				0.743				
Cash in Hand i					0.535			
Overestimate expense e					0.828			
Overestimate expense b					0.608			
Overestimate expense h					0.403			
Injunctive norms h						0.830		
Injunctive norms i						0.743		
Reporting all Taxes a							0.824	
Reporting all Taxes d							0.676	
Reporting all Taxes g							0.338	
Descriptive norms G1								0.736
Descriptive norms G2								0.693
Cronbach's Alpha STD	.869	.758	.863	.716	.669	.763	.619	.655
Adequacy								
KMO	0.796							
Communalities	0.886	0.700	0.797	0.611	0.620	0.645	0.614	0.580
	0.628	0.496	0.709	0.532	0.485	0.667	0.578	0.428
	0.632	0.426		0.337	0.313		0.279	
Total Variance Explained	56.970%				Non-redundant Residuals			
Convergent Validity	✓	✓	✓	✓	✓	✓	✓	✓
Loading > 0.3								
Discriminant Validity	✓	✓	✓	✓	✓	✓	✓	✓
No cross loading	✓	✓	✓	✓	✓	✓	✓	✓
Factor correlation matrix	✓	✓	✓	✓	✓	✓	✓	✓

Finally, the outcomes of the last EFA on all items related to scenario 3 show identical results as EFA for scenarios 1 and 2. Nine factors were extracted: PN, POE+MC, SUN, CH, OE, IUN, RT,

Appendices

DNG, and INT. All the required tests were performed, and the factors showed no reliability nor validity issues, and the adequacy indicators were very tolerable.

Table G4: The Results of all Measurement Items for all Countries Dataset Scenario 3

N = 636 Scale items	Principal Axis Factoring								
	PN	POE+MC	SUN	CH	OE	IUN	RT	DNG	INT
Personal norms a	0.917								
Personal norms c	0.764								
Personal norms b	0.705								
Probability of effect e		0.878							
Probability of effect d		0.653							
Magnitude of Consequences		0.580							
Subjective norms f			0.901						
Subjective norms g			0.773						
Cash in hand f				0.781					
Cash in Hand c				0.740					
Cash in Hand i				0.532					
Overestimate expense e					0.835				
Overestimate expense b					0.642				
Overestimate expense h					0.386				
Injunctive norms h						0.821			
Injunctive norms i						0.760			
Reporting all Taxes a							0.825		
Reporting all Taxes d							0.666		
Reporting all Taxes g							0.355		
Descriptive norms G1								0.729	
Descriptive norms G2								0.698	
Intentions ‘Quantitative.’									0.678
Intentions ‘Qualitative.’									0.656
Cronbach's Alpha STD	0.869	0.758	0.863	0.716	0.669	0.763	0.619	0.655	0.772
Adequacy: KMO	0.825								
Communalities	0.850	0.694	0.829	0.612	0.616	0.640	0.621	0.576	0.547
	0.663	0.508	0.696	0.527	0.505	0.697	0.583	0.434	0.726
	0.637	0.425		0.343	0.307		0.290		
Total Variance Explained	57.929%			Non-redundant Residuals			1%		
Convergent Validity	✓	✓	✓	✓	✓	✓	✓	✓	✓
Loading > 0.3									
Discriminant Validity	✓	✓	✓	✓	✓	✓	✓	✓	✓
No cross loading	✓	✓	✓	✓	✓	✓	✓	✓	✓
Factor correlation matrix	✓	✓	✓	✓	✓	✓	✓	✓	✓

Appendix H: The Results of Confirmatory Factor Analysis for Scenario 2

The results of the CFA on scenario 2 can be summarised as follows:

The model fits achieved a very good fit, the indicators as χ^2 , GFI, SRMS, CFI, RMSEA, and PCLOSE are all desirable and well above the thresholds. The loadings of the indicators on the latent variables were sufficient to not raise any concerns.

Regarding the validity and reliability tests, the numbers showed no concerns except the AVE of overestimated tax expenses OE variable, which was less than the threshold of 0.5 (0.487). This could be interpreted as potential convergent validity issue. However, the CR was above the threshold and Maximal reliability ‘H’ as well, and according to Malhotra (2008) the AVE is a more conservative measure than CR, and in case the CR showed a value above 0.7 and the AVE was close to the threshold 0.5, it can be concluded safely that there are no validity nor reliability concerns.

Again, the invariance test of difference in measurement model among the High and low religious groups reverted the same conclusion as scenario 1, that the groups are configural and metric invariant in the model.

Finally, the dataset is suffering from a common method bias as it was in the scenario 1, so the CLF will be retained for further analysis. The method that was used to check for common method bias was adopted from Richardson et al. (2009) and according to the literature, retaining the CLF will account for the common shared variance in the model.

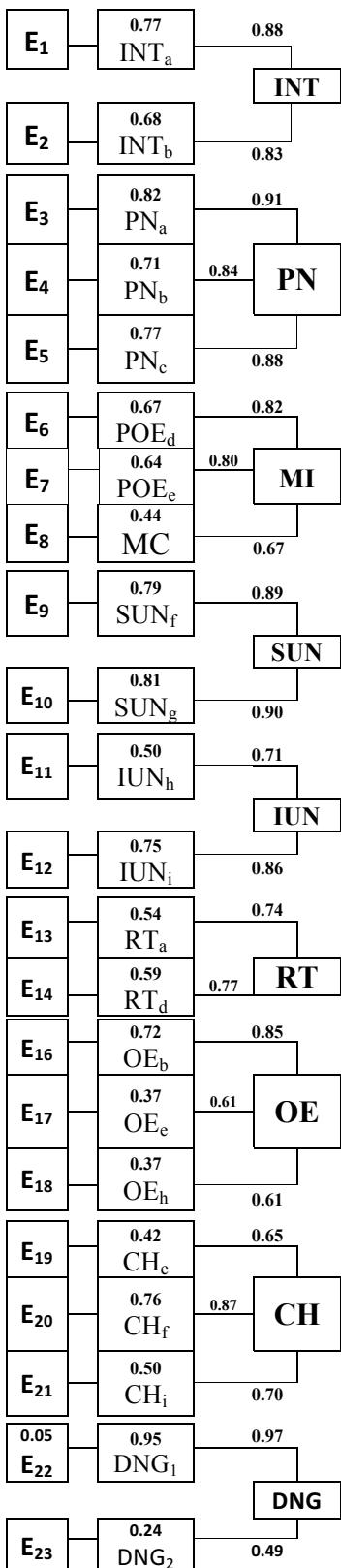


Figure H: The Results of CFA on Scenario 2 (N=635)														
(1) Model fit														
		Absolute		Relative		Parsimonious								
Test	Value	Test	Value	Test	Value	Test	Value	Test	Value	Test	Value			
X ²	2.498	NFI	0.935	PNFI	0.668									
RMR	0.125	RFI	0.908	PCFI	0.685									
GFI	0.944	IFI	0.960	CMIN	412.184									
AGFI	0.914	TLI	0.943	DF	165									
PGFI	0.616	CFI	0.959	RMSEA	0.049									
SRMR	0.0358			PCLOSE	0.643									
(2) Validity & Reliability														
	CR	AVE	MSV	H	IUN	PN	INT	POE	CH	RT	SUN	OE	DNG	
IUN	.766	.623	.420	.798	.789									
PN	.908	.766	.490	.935	.648	.875								
INT	.842	.728	.358	.952	.463	.598	.853							
POE	.806	.583	.393	.961	.625	.627	.490	.764						
CH	.788	.557	.030	.967	.052	.155	.125	.007	.747					
RT	.724	.568	.274	.970	.318	.523	.244	.242	.095	.754				
SUN	.888	.798	.490	.976	.615	.700	.523	.611	.111	.435	.894			
OE	.735	.487	.193	.978	.105	.277	.204	.122	.154	.439	.168	.698		
DNG	.723	.591	.078	.984	.176	.257	.241	.160	.174	.279	.162	.276	.769	
(3) Invariance test														
(A) Configural Invariance test														
Test	Value	Test	Value	Test	Value	Test	Value	Test	Value	Test	Value			
X ²	1.645	SRMR	0.0505	RMSEA	0.032									
GFI	0.900	CFI	0.949	PCLOSE	1.000									
(B) Metric Invariance test														
No Constrained						Fully Constrained								
Chi-square	815.818			Chi-square	841.67									
DF	496			DF	519									
P-Value	0.308			The groups are NOT different at the model level ☺										
(4) Common Method Bias														
No Constrained						Fully Constrained								
Chi-square	290.468			Chi-square	452.164									
DF	144			DF	170									
Chi-square difference	161.696			DF difference	26									
P-Value	0.000			The groups are different at the model level										

Appendix I: The Results of Confirmatory Factor Analysis for Scenario 3

The results of the CFA on scenario 3 can be summarised as follows:

The model fit achieved a very good fit, the indicators as χ^2 , SRMS, and RMSEA were supporting the good fit of the measurement model to the dataset. For instance, GFI which is the good fit index shows a value above the threshold of 0.9 (GFI was 0.944). The same for the CFI which is the comparative fit index demonstrated as well a value of 0.956 which is above the 0.9 cut-off point.

The reliability and validity tests did not revert any concerns and all the values of CR, AVE, and H were within the range of admissible values except the AVE of overestimated tax expenses variable OE which was slightly below the 0.5 cut-off value (the AVE was 0.482). Given that the rest of the reliability and validity measures such as CR and H for this variable were above the thresholds and the AVE was close enough to the 0.5 cut-offs, it can be concluded that there is no sufficient evidence for a convergent validity concern.

The invariance test (Configural and metric test) showed that the groups²⁷⁸ are invariant among themselves which proves that the constructs are capturing the same concept across the groups.

Finally, the dataset failed the common method bias test and showed some concerns. Those concerns were addressed by retaining the CLF to account for the common variance shared.

²⁷⁸ High and low religious groups.

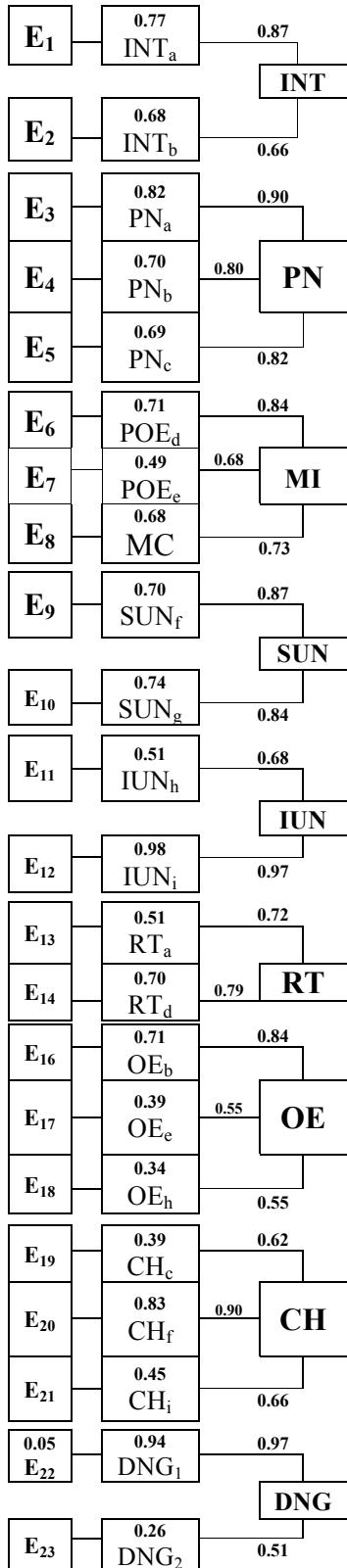


Figure I: The Results of CFA on Scenario 3 (N=636)															
(1) Model fit															
		Absolute		Relative		Parsimonious									
Test	Value	Test	Value	Test	Value	Test	Value	Test	Value	Test	Value				
X ²	2.417	NFI	0.929	PNFI	0.655										
RMR	0.104	RFI	0.899	PCFI	0.675										
GFI	0.944	IFI	0.957	CMIN	394.020										
AGFI	0.913	TLI	0.938	DF	163										
PGFI	0.608	CFI	0.956	RMSEA	0.047										
SRMR	0.0356			PCLOSE	0.771										
(2) Validity & Reliability															
	CR	AVE	MSV	H	IUN	PN	INT	POE	CH	RT	SUN	OE	DNG		
IUN	.799	.674	.223	.949	.821										
PN	.883	.715	.555	.964	.457	.846									
INT	.786	.651	.555	.970	.299	.745	.807								
POE	.813	.593	.220	.974	.333	.469	.337	.770							
CH	.781	.551	.043	.978	.021	.140	.208	.045	.742						
RT	.726	.570	.281	.979	.239	.479	.391	.270	.099	.755					
SUN	.863	.759	.397	.981	.472	.630	.489	.456	.116	.530	.871				
OE	.730	.482	.217	.983	.160	.428	.466	.238	.145	.441	.301	.694			
DNG	.731	.599	.073	.987	.175	.261	.239	.153	.161	.271	.182	.264	.774		
(3) Invariance test															
(A) Configural Invariance test															
Test	Value	Test	Value	Test	Value	Test	Value	Test	Value	Test	Value				
X ²	1.953	SRMR	0.0573	RMSEA	0.039										
GFI	0.876	CFI	0.912	PCLOSE	1.000										
(B) Metric Invariance test															
No Constrained						Fully Constrained									
Chi-square	1009.497		Chi-square	1031.344											
DF	517		DF	541											
P-Value	0.128		The groups are <u>NOT</u> different at the model level ☺												
(4) Common Method Bias															
No Constrained						Fully Constrained									
Chi-square	217.863		Chi-square	394.020											
DF	142		DF	163											
Chi-square difference	176.157		DF difference	21											
P-Value	0.000		The groups are different at the model level												

Appendix J: The Results of SEM Analysis for the Control Variables

Table J: The Results of SEM analysis for controls variables on three models

Different models	Scenario 1	Scenario 2	Scenario 3
Rest's model 'EDM model.'	<ul style="list-style-type: none"> The educational level had a positive impact on the ethical evaluation. Residency period had a negative impact on ethical intention. Gender had an impact on ethical intention, in such female participants showed a higher intention to comply. 	<ul style="list-style-type: none"> Gender had an impact on ethical recognition, in such male participants recognised better the ethicality of the situation. Marital status had an impact on ethical recognition, in such married participants recognised better the ethicality of the situation. Residency period had a negative impact on the ethical evaluation. Age had a positive impact on ethical intention. Residency period had a negative impact on ethical intention. 	<ul style="list-style-type: none"> Residency period had a negative impact on the ethical evaluation. Residency period had a negative impact on ethical intention. Marital status had an impact on ethical intention, in such single participants showed a higher intention to comply.
Jones' model 'Issue-contingent model.'	<ul style="list-style-type: none"> The educational level had a positive impact on the ethical evaluation. Residency period had a negative impact on ethical intention. 	<ul style="list-style-type: none"> Gender had an impact on ethical recognition, in such male participants recognised better the ethicality of the situation. Marital status had an impact on ethical recognition, in such married participants recognised better the ethicality of the situation. 	<ul style="list-style-type: none"> Residency period had a negative impact on the ethical evaluation. Residency period had a negative impact on ethical intention.
The research synthesis model	<ul style="list-style-type: none"> Residency period had a positive impact on the ethical evaluation. Residency period had a negative impact on ethical intention. 	<ul style="list-style-type: none"> Marital status had an impact on ethical recognition, in such married participants recognised better the ethicality of the situation. 	<ul style="list-style-type: none"> Marital status had an impact on ethical intention, in such single participants showed a higher intention to comply. Residency period had a negative impact on ethical intention.

