

**THE WAY TO TAX COMPLIANCE FROM TAX EVASION
IN PAKISTAN: A TEST OF THE MEDIATING MODEL OF
INDIVIDUAL NON-FILERS BY UTILIZING THE THEORY
OF PLANNED BEHAVIOUR**



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April 2018

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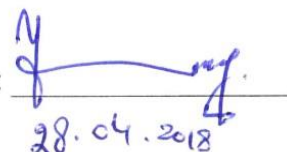
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No Part of this thesis has been submitted anywhere else for any other degree. This thesis is submitted to the Faculty of Business and Management Sciences, The Superior College, Lahore in partial fulfillment of the requirements for the degree of Doctor of Philosophy in field of Taxation (Finance) in Faculty of Business and Management Sciences at The Superior College, Lahore.

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DEDICATION

TO MY FATHER

My Ideal, My Mentor

&

TO MY MOTHER

My Heaven, My Whole Universe

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By the blessings of Almighty, the most merciful, the most beneficent, I am able today to submit my Ph.D. thesis. The status of a fact never depends on its approval and acceptance. If a person accepts the fact in its real form, then it shows his inclination to justice and wisdom. I am thankful to my Creator, Who made us aware of the facts and filled our hearts with a love of justice and humanity. I am thankful to God who granted me the wisdom to recognize the leaders who conveyed the message of justice and humanity until they were martyred by devils and the ignorant. I am grateful to God for keeping these martyrs alive for our help through their prayers. May God keep my heart full of love for these great personalities and keep my steps moving forward in the way of justice and humanity.

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Muhammad Akram

ABSTRACT

In developing countries, tax revenues are essential for financing public goods but they are afflicted by an extensive shadow economy and extensive tax evasion. Among taxes, personal income taxation is one of the most commonly used and oldest instruments of fiscal policy. In developing countries, a substantial part of their tax gap is due to non-filers and potential taxpayers in the informal sector who not only evade taxes but also fail to even register as taxpayers. The problem of tax return non-filing in Pakistan results in low tax revenues, which fuels substantial budget deficits, increased foreign and local debts, ever increasing debt servicing, inflation and, ultimately, economic growth is affected. Efforts to enhance tax compliance can be a way to broaden the tax base so that burgeoning concerns regarding tax evasion can be addressed. Therefore, the main objective of this study is to propose and test a conceptual model of mediating mechanism between tax compliance determinants and puzzle of tax compliance behaviour of non-filers in Pakistan. Despite the quality of extensive studies on tax compliance determinants and compliance behaviour, little attention has been paid to understanding the mediating mechanism which is termed the 'black box'.

In order to unlock this black box, I have utilized the theoretical lenses of theory of moral suasion, deterrence theory and the theory of planned behaviour (TPB). According to the theory of moral suasion, an appeal to influence or change certain behaviour is made by institutions or individuals to others. In other words, it is an appeal to others for altruistic behaviour. Based on this notion, it is proposed in the conceptual model that moral suasion enhances attitude and tax morale, which results in improvement in tax compliance behaviour leading to more tax revenues collection to finance public goods.

Deterrence is a theory from behavioural psychology for preventing or controlling actions or behaviour through fear of punishment or retribution. Deterrence theory asserts enforcement of laws through the use of hard measures (penalty and punishment). Based on the goal of deterrence theory, it is proposed that there might be non-filers who do not respond to moral suasion; for such persons, the use of deterrence becomes inevitable. The

intention behind the use of moral suasion and deterrence theories is the utilization of the carrot and stick approach by considering the dynamics of human behaviour. The optimal use of both policy instruments can change noncompliant behaviour of non-filers into compliant behaviour. According to TPB, human behaviour is influenced by beliefs. The TPB suggests that attitude, subjective norms and perceived behavioural control change an individual's behavioural intentions and behaviour. Building on the argument of TPB, it is proposed that the behaviour of individual non-filers should be examined under the lens of TPB and that the impact of belief would change human compliance behaviour leading to a broadening of the tax base.

The target population consisted of novel data with the unique idea of using first-hand data mining of individual non-filer persons. Data were collected using the survey method. A total of 1400 questionnaires were circulated, out of which 1359 were returned. After screening, 720 questionnaires were found eligible for data analysis. On the basis of conceptual model and literature, 33 hypotheses were developed and tested by employing multiple regression analysis, check of mediation, reliability analysis and principal component analysis.

The results indicate that subjective norms, deterrence, moral persuasion, tax awareness, fairness and tax morale influence attitude towards behaviour (mediating variable) positively and significantly. In addition, self-corruption negatively and significantly influences attitude towards behaviour. On the other hand, no significant impact of tax complexity on attitude towards compliance is found. Furthermore, attitude towards behaviour has positive and significant impact on intention to comply (dependent variable and predictor of tax compliance behaviour). Likewise, subjective norms, deterrence, moral persuasion, tax awareness and fairness influence tax morale (mediating variable) positively and significantly. In addition, a negative and significant impact of tax complexity and self-corruption on attitude towards behaviour is found. Moreover, tax morale has positive and significant impact on tax compliance behaviour.

Multiple regression analysis revealed that attitude towards behaviour partially mediates the relationship between subjective norms, moral persuasion, tax awareness, fairness and tax morale with tax compliance behaviour. In addition, attitude towards behaviour fully mediates the relationship between deterrence and self-corruption with tax compliance behaviour, whereas no mediation has been found between tax complexity and tax compliance behaviour. Tax morale partially mediates the relationship between subjective norms, deterrence, moral persuasion, tax awareness and fairness with tax compliance behaviour. In addition, tax morale fully mediates the relationship between tax complexity and self-corruption with tax compliance behaviour. Moreover, isolated positive and significant effects of perceived behavioural control on tax compliance behaviour were found. The findings of this study are largely supported by the literature with a few interesting exceptions.

Along with practical policy implications, this study provides a sound theoretical contribution to tax literature with respect to relationship between tax determinants and tax compliance behaviour in the context of individual non-filers in Pakistan. This study uses the lenses of TPB, moral suasion and deterrence theories with attitudinal and tax morale mediating model of determinants and tax compliance behaviour relationships along with the carrot and stick approach. By using the said approach, the study attempts not only to unlock the 'black box' of determinants and compliance behaviour, but could also serve as one way for optimum tax compliance level among individual non-filers in Pakistan. The study also provides insights to tax authorities, educational policy makers and tax professionals for understanding tax (non)compliance as a behavioural phenomenon in Pakistan, particularly admitting attitudinal engagement in tax compliance determinants and tax compliance behaviour of individual non-filers, which might help them to devise a supportive tax compliance system.

TABLE OF CONTENTS

AUTHOR’S DECLARATION	ii
PLAGIARISM UNDERTAKING	iii
CERTIFICATE OF APPROVAL	iv
DEDICATION	v
ACKNOWLEDGEMENTS	vi
ABSTRACT	viii
TABLE OF CONTENTS	xi
LIST OF TABLES	xiv
LIST OF FIGURES	xv
LIST OF ACRONYMS	xvi
CHAPTER 1: INTRODUCTION	1
1.1 Background of the thesis	1
1.1.1 The issue of tax compliance	1
1.1.2 Linking tax morale and tax compliance	4
1.1.3 Motivation for study	6
1.2 Overview of income tax system of Pakistan and compliance environment	12
1.3 Scope of the thesis	17
1.4 Problem statement	20
1.5 Objectives of the study	22
1.6 Research questions	23
1.7 Summary of proposed conceptual model	24
1.8 Development of hypotheses	31
1.9 Overview of research paradigm	33
1.10 Summary of research methodology	34
1.11 Rationale and significance	34
1.12 Delimitations	36
1.13 Definitions of variables	36
1.14 Organization of remaining chapters	38
CHAPTER 2: LITERATURE REVIEW	39
2.1 Theories on human behaviour	40
2.1.1 Social cognitive theory	40
2.1.2 Transtheoretical (stages of change) model	41
2.1.3 Theory of reasoned action	41
2.1.4 Theory of planned behaviour	43
2.1.5 Deterrence theory	45
2.1.6 Theory of moral suasion	48
2.2 Application of theories in this thesis	50
2.2.1 Theory of planned behaviour and tax compliance	50
2.2.2 Deterrence theory and tax compliance	50
2.2.3 Theory of moral suasion and tax compliance	50
2.3 Review of literature and hypotheses development	51
2.3.1 Tax compliance	51
2.3.2 Tax morale	55
2.3.3. Tax fairness	66
2.3.4 Deterrence	76
2.3.5 Moral persuasion	83
2.3.6 Tax complexity	86
2.3.7 Self-corruption	91
2.3.8 Tax awareness	94
2.3.9 Attitude towards compliance	98
2.3.10 Subjective norms and compliance behaviour	100
2.3.11 Perceived behavioural control and compliance behaviour	101

2.4	Conceptual framework	102
2.4.1	The proposed conceptual framework and hypotheses	103
2.4.2	Hypotheses development	109
2.5	Chapter summary	111
CHAPTER 3: METHODOLOGY		112
3.1	Research approach	112
3.1.1	Deciding the research paradigm	115
3.1.2	Employed methods	116
3.2	Design of questionnaire and pilot study	118
3.2.1	Measures of survey	118
3.2.2	The questionnaire	120
3.2.3	Instrument validity and reliability	121
3.2.4	Pilot testing	123
3.3	Data sampling	125
3.3.1	Target population	125
3.3.2	Sampling frame	126
3.3.3	Sampling technique	128
3.3.4	Sample size	131
3.3.5	Data collection procedure	133
3.3.6	Validating the sample: non-response bias	134
3.4	Ethical considerations	135
3.5	Data analysis	136
3.6	Chapter summary	137
CHAPTER 4: ANALYSIS AND RESULTS		138
4.1	Descriptive statistics	138
4.1.1	Screening questions for the identification of non-filers	138
4.1.2	Demographic profile of respondents	142
4.1.3	Efficiency and vigilance of tax department	145
4.1.4	Descriptive summary	146
4.1.5	Measures of distribution and data normality	146
4.1.6	Multicollinearity	147
4.1.7	Correlation	147
4.1.8	Reliability and internal consistency analysis	148
4.1.9	Factor analysis	148
	4.1.9.1 KMO measure of sampling adequacy test and Bartlett's test of sphericity	149
	4.1.9.2 Eigenvalues	150
4.1.10	Factor loadings	151
4.2	Analysis	153
4.2.1	Regression analysis	153
4.2.2	Mediation analysis	154
CHAPTER 5: DISCUSSION		162
5.1	Tax morale, attitude towards compliance and intention to comply	163
5.2	Tax fairness and intention to comply with mediating role of attitude and tax morale	165
5.3	Deterrence and intention to comply with mediating role of attitude and tax morale	167
5.4	Moral persuasion and intention to comply with mediating role of attitude and tax morale	170
5.5	Tax complexity and intention to comply with mediating role of attitude and tax morale	172
5.6	Self-corruption and intention to comply with mediating role of attitude and tax morale	175
5.7	Tax awareness and intention to comply with mediating role of attitude and tax morale	177

morale	
5.8 Subjective norms and intention to comply with mediating role of attitude and tax morale	179
5.9 Perceived behavioural control and intention to comply	181
5.10 Chapter summary	183
CHAPTER 6: CONCLUSIONS AND POLICY IMPLICATIONS	184
6.1 Research summary	184
6.2 Contribution of this study	187
6.3 Practical implications of the study	191
6.4 Limitations of the study	195
6.5 Future research ambition	197
6.6 Concluding remarks	199
REFERENCES	201
Appendix A	256
Survey measures	257
Appendix B	260
Cover letter	261
Appendix C	262
Questionnaire – English version	263
Appendix D	267
Questionnaire – Urdu version	268
Appendix E	273
Correlation matrix	274
Appendix F	282
Descriptive Statistics of Survey Items	283
Appendix G	285
Diagnostic Statistics – Skewness and Kurtosis	286
Appendix H	288
Diagnostic Statistics – Collinearity	289
Appendix I	291
PP-plot	292
Appendix J	295
QQ-plot	296

LIST OF TABLES

Table 1	Paying Tax Ranking	9
Table 2	Economic Deterrence Approach vs. Behavioural Approach	11
Table 3	Conceptual and Operations Definitions of Variables	37
Table 4	Required Sample Size, Given a Finite Population	132
Table 5	Detail of Survey Forms Distributed	134
Table 6	Screening Questions for Identification of Non-filers	138
Table 7	Demographic Profile of Respondents	142
Table 8	Contact of Tax Authorities with Respondents	145
Table 9	Reliability of Measurement	148
Table 10	KMO and Bartlett's Test	150
Table 11	Eigenvalues and Total Variance Explained	151
Table 12	Components Matrix	151
Table 13	Mediation Analysis, Condition I: Direct Effect of Independent Variables on Intention to Comply	154
Table 14	Mediation Analysis, Condition II: Effect of Independent Variables on Mediators	155
Table 15	Mediation Analysis, Condition III: Effect of Mediators on Dependent Variable (Intention to Comply)	155
Table 16	Multiple Regression Analysis for Mediation-I	156
Table 17	Multiple Regression Analysis for Mediation-II	157
Table 18	Multiple Regression Analysis	158
Table 19	Sobel Test	158
Table 20	Aroian Test	159
Table 21	Goodman Test	160
Table 22	Summary of Results of the Hypotheses	161

LIST OF FIGURES

Figure 1	Theory of Reasoned Action	42
Figure 2	Theory of Planned Behaviour	44
Figure 3	Conceptual Framework	108

LIST OF ACRONYMS

CPI	Corruption Perception Index
ESP	Economic Survey of Pakistan
FBR	Federal Board of Revenue
IRS	Internal Revenue Service
KMO	Kaiser-Meyer-Olkin
OECD	Organisation for Economic Co-operation and Development
PBC	Perceived Behavioural Control
PCA	Principal Component Analysis
PKR	Pakistani Rupee
PML-N	Pakistan Muslim League Nawaz
PPP	Pakistan People Party
SAS	Self-Assessment System
SME	Small and Medium Enterprise
SMEDA	Small and Medium Enterprise Development Authority
SMS	Short Message Service
TI	Transparency International
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
VIF	Variance Inflation Factor

CHAPTER 1: INTRODUCTION

1.1 Background of the thesis

Taxation has received significant theoretical and intellectual considerations in the academic literature and is recognized as a very volatile governance subject both in developed and developing nations (Samuel, 2011). According to James and Nobes (1992), tax is a “compulsory levy by a public authority for which nothing is received directly in return”. Nightingale (2001) defined tax as a “compulsory contribution, imposed by government, and while taxpayers may receive nothing identifiable in return for their contribution, they nevertheless have the benefit of living in a relatively educated, healthy and safe society”. In other words, governments impose tax against the wealth, property, profits, income and consumption of corporations and individuals in order to provide well-being, security and basic amenities. In addition, Nightingale (2001) documented six reasons for taxation, which were: (a) promotion of economic and social welfare; (b) redistribution of wealth and income; (c) provisions of public goods; (d) the regulations; (e) harmonization; and (f) economic stability.

1.1.1 The issue of tax compliance

Tax compliance has been a serious problem in every era; for example, evidence of problems with taxation was found in Ancient Egypt (Webber & Wildavsky, 1986). In Ancient Egypt, tax collectors (called scribes) were appointed by the pharaohs. The pharaohs paid high salaries to scribes to keep them away from corruption; special scribes were appointed to monitor the field working of scribes. In this way, tax compliance was made possible at that time (Samuel, 2011; Torgler, 2003c).

Around 200 BC, a ‘tax amnesty’ was proposed, which was noted on the famous Rosetta Stone, in which tax rebels were remitted their tax debts and released

from prison. A tax amnesty proved to be a successful tool to check civil disorder (Adams, 1993). These amnesty programmes are still under consideration all around the world for the purpose of successful tax compliance.

Pharaohs also had to determine in what manner taxpayers should be treated. In this regard, Adams (1993) quoted an example from the tomb of Khiti in which scribes roughly treated the taxpayers. The scribes were taught to remit two-thirds of tax arrears of a poor farmer, to put everyone in good humour, or to not check the case of a person who does not have enough means to pay tax. In this way, the noncompliance behaviour of people was changed and the level of tax morale increased.

Tanzi and Shome (1994) reported that compliance with tax laws was an issue over 2500 years ago. Despite this prolonged presence, the issue of compliance received minimal attention and created little interest until the past few decades. For instance, attention towards taxpayer compliance has increased since the 1970s, whereas textbooks on taxation published up to 1966 failed to broach the subject of taxpayer compliance. Several hypotheses have been put forward by researchers of the cause of this dramatic reversal.

This thesis is intended to bring a novel contribution to the compliance literature, concentrating on tax morale together with elements of Theory of Planned Behaviour (TPB) in the context of non-filers in developing country. Why do individuals pay tax? Why is tax morale important? How can the tax morale of individuals be enhanced? These questions have attained ample attention from researchers in the last few years in the tax compliance literature. In this regard, Torgler (2003c) supposed that individuals do not like to pay tax. One way to compel individuals to pay tax, according to the economics-of-crime approach, is to follow a

deterrence policy (expected utility maximization calculus). Allingham and Sandmo's (1972), Becker's (1968) and Gibbs's (1968) models – benchmark deterrence model for over 40 years – claimed that self-interested taxpayers decide how to report earned income to the tax authority by way of trading off the cost of evasion (chances of being punished) against the advantages of evasion (lower tax payments). In this model, tax rate, probability of being caught, and the sanctions imposed on being detected are the key factors that influence tax evasion.

In Allingham and Sandmo's (1972) framework, hazards of audit and penalties compel people to pay their taxes accurately and on time. This model forced tax authorities to implement a hard nature strategy (deterrence) to create a compliance environment in the country so that individuals consider the filing of tax returns as their moral duty. This model was criticized by several researchers (e.g., Frey & Feld, 2002; Alm *et al.*, 1992b; Graetz & Wilde, 1985). The two main criticisms were: (a) too little predictive power of tax evasion; and (b) a big gap between effectively reported degree of risk aversion and estimated amount of risk aversion.

Another way to compel individuals to pay tax is to predict their compliance behaviour through inductively examining their beliefs and attitudes as stated by behavioural models. These models are a mixture of social psychological and economic deterrence approaches and are another better option to explain tax compliance (Hasseldine & Bebbington, 1991).

Pyle (1991) reported that not all individuals are amoral utility maximizers; most individuals behave honestly. Many researchers had argued that this tax compliance puzzle can be resolved through analysing the level of tax morale, moral obligation or intrinsic motivation to pay tax of individuals through a behavioural

approach because individuals with a high level of tax morale had a high level of tax compliance (e.g., Frey, 1997, 2003; Feld & Tyran, 2002; Frey & Feld, 2002; Alm *et al.*, 1992a, 1999; Pommerehne *et al.*, 1994; Roth *et al.*, 1989; Lewis, 1982; Schwartz & Orleans, 1967).

1.1.2 Linking tax morale and tax compliance

Luttmer and Singhal (2014) claimed that tax morale was usually considered a unidimensional concept. They proposed that it can be a set of underlying motivations. The identification of its drivers, through which it is operated, is crucial both for designing appropriate policy and for understanding preferences of individuals. In this regard, Luttmer and Singhal (2014) identified five drivers which mechanized the degree of tax morale for compliance. The five drivers of tax morale were: (a) intrinsic motivation; (b) reciprocity (relationship of individuals to the state or fair tax system perception); (c) social influence and peer effects (behaviours or views of other individuals); (d) long-run cultural factors; and (e) deviations from utility maximization and information imperfections. Frey (2003) and Torgler (2002) reported three important factors in understanding tax morale, which were: relationship between government and taxpayer, fairness, and moral rules and sentiments. In this regard, many policies focusing on nonpecuniary motivations (i.e. shaming or faming) were pursued by tax authorities around the world in order to create a voluntary compliance culture in the countries. For example, the United States announced the names of high tax evaders on a social state website to shame those not paying tax (Luttmer & Singhal, 2014). India established 'singing eunuchs' to shame shopkeepers (BBC News, 2006). As an alternative to shaming evaders, many developed countries organized programmes to recognize the name of high taxpayers, such as the recent use of print advertising and a television campaign by Italy to deal with European debt

crises and reduce widespread tax evasion (Povoledo, 2011). The main purpose of all these strategies that were adopted by the tax authorities of different countries was to create a compliance environment in the country so that individuals felt that the filling of a tax return was their moral duty.

Tax morale is a social phenomenon and tough to explicate. It refers to a moral obligation to pay tax (Bobek & Hatfield, 2003), intrinsic motivation to pay tax (Frey, 1997), commitment to citizenship responsibilities and respect for law (Graetz & Wilde, 1985), and the belief of an individual to contribute to society through payment of taxes (Cummings *et al.*, 2009). Individuals having a high level of tax morale are very important for a tax authority to encourage further tax compliance and consequently improve the tax system. Torgler (2003c) stated that tax compliance will remain a debatable area because tax noncompliance is gradually increasing all over the world due to ignorance of tax morale.

Luttmer and Singhal (2014) reported that every citizen of a country is conscientious about their payment of taxes in order to enable their own nation and fellow beings to flourish. The willingness to pay tax can be promoted among citizens by the activity of tax administrators or government lawmakers by providing them with the necessary nonpecuniary motivations that increase citizens' level of tax morale and further increase the level of tax compliance. Thus, first, this study on tax morale is undertaken to provide an understanding of the impact of tax morale on tax compliance behaviour in the context of tax non-filers in a developing country using TPB. Second, this study attempts to identify the nonpecuniary motivational factors which are essential in understanding tax morale and hence will help to explain tax compliance behaviour. Last, this study attempts to analyse the factors affecting attitude towards compliance that encourages an individual's tax compliance behaviour.

1.1.3 Motivation for study

It is worth conducting this study for several reasons:

Firstly, Pakistan is a developing country and its tax system is regulated by the Federal Board of Revenue (FBR). Bukhari and Haq (2016) reported that, according to the Economic Survey of Pakistan (ESP), our population was 195.4 million by the end of year 2015. Out of the total population, 117.48 million lived in rural areas while 77.93 million lived in urban areas. Of the population, 4.2% were above the age of 65 years whereas 35.4% were children under 15 years of age. The earnings of 30 million of the population were below the poverty line. Our labour force was around 61 million. The ESP reported that about 50 million people are connected with different type of taxes, out of which only 1.1 million taxpayers filed their income tax return by the end of year 2015, 1,443,414 in 2011 and 2.1 million in 2006–07. In addition, Waris (2013) reported that approximately less than 1% of the 180 million residents of Pakistan file their tax return.

Furthermore, while discussing current scenarios, the population of Pakistan in 2017 was about 200 million. Jang (2017a) reported that for the tax year 2016, 1,170,053 annual income tax returns were submitted of which 1,091,564 were individual filers. Taxpayer to population ratio is only 0.55%; a very serious and alarming situation. In addition, 6.5 million suspected wealthy non-filers were identified and will be contacted (Jang, 2017b). According to these statistics, the admitted figure of non-filers is six times that of individual filers. Again, this is a very serious matter in tax administration.

These figures give a clear insight that the number of income tax filers decreased every year and a large number of people are tax non-filers. Therefore, it

is necessary to identify what had gone wrong. Where had filers of income tax returns vanished? What were the reasons why people did not register with the FBR? Why did people not feel that the payment of tax was a moral obligation? Thus, it would be justifiable to identify the factors affecting the level of tax morale and increasing intention to comply.

Secondly, tax revenue is lifeblood for economic development. As per above discussed figures collectively, a large number of people in Pakistan are tax non-filers and they are not paying the actual amount of income tax due. If they paid their amount of tax voluntarily then tax earnings would be much larger than before and relevant authorities would be able to employ those earnings for development purposes.

A large number of studies identified the determinants of tax morale and voluntary tax compliance behaviour around the world but most of the research targeted individuals who were registered at tax offices in their respective countries (Alm, 2012; Andreoni *et al.*, 1998; Erard, 1993; Feld & Larsen, 2012; Frey & Feld, 2002; Halla, 2010; Niemiowski *et al.*, 2001), and some of the research targeted individuals who earned much but did not register at tax offices in their respective countries irrespective of the size and nature of the businesses and occupations of the individuals (Filippin *et al.*, 2013; Gangl *et al.*, 2015; Samuel, 2011; Webley *et al.*, 1991). This study is worthwhile because it aims to ascertain the determinants of tax morale and compliance behaviour of income tax non-filers who are individuals in Pakistan. To the best of scholar's knowledge, there are ample studies on the determinants of tax morale and attitude towards compliance of individuals and business owners, but no empirical evidence exists on the relationship between tax morale and compliance behaviour along with the

elements of TPB in regard to income tax non-filers who are individuals in Pakistan.

The important characteristics of SMEs in Pakistan are: they constitute approximately 90% of all enterprises; have a nearly 40% share in annual gross domestic product; employ 80% of labour force; and produce approximately 25% of manufacturing export proceeds (SMEDA, 2017). In this thesis, individual entrepreneurs of SMEs were targeted because of the dominant share of SMEs in Pakistan. Therefore, it is necessary to identify first how the intention to comply of income tax non-filing individual entrepreneurs of SMEs in Pakistan can be increased. What policies should be implemented by the relevant authorities, associated with the factors investigated in this thesis, to compel the income tax non-filing individual entrepreneurs of SMEs in Pakistan to voluntarily register with FBR and voluntarily file their income tax return?

The next motivation is inspired by Gangl's (2015) study on filers and non-filers in Pakistan. Erard and Ho (2001) indicated that a substantial part of tax gap is the outcome of non-filers and potential taxpayers in the informal sector who do not register and evade tax. Gangl *et al.* (2015) conducted study on tax filing issue in Pakistan. The study tried to examine the impact of perceived tax system legitimacy, knowledge of taxpayer's rights and perceived corruption in tax administration on tax filing but the study could not propose an integrated tax compliance model for non-filers. The authors took mixed sample of filers (88.50%) and non-filers (11.50%) and treated them at equal status by putting same procedure and questions to both segments through interviews and survey; even though they might be different in attitude, which the authors admitted later on while discussing limitations. In addition, Gangl *et al.* (2015) stated that tax non-

filing seems to be the norm in Pakistan and accessing data from wealthy non-filers is extremely difficult. Moreover, Gangl *et al.* (2015) emphasized the need for research work in the case of a developing country for non-filers to conform and to expand existing rare literature on tax non-filing. This study also aims at to fill the gaps identified in the study of Gangl *et al.*, (2015).

The fourth motivation is based on the author’s own area of interest. The researcher has taught the subject of taxation at undergraduate level for the past 12 years. During this period, the author keenly observed tax enforcement and tax filing system. Moreover, the constant low tax base and related tax problems fuelled the author’s work.

Tax paying ranking of Pakistan is also not satisfactory. According to the World Bank Group (2016), Pakistan is ranked 172 out of 189 countries in the paying tax index. Table 1 shows the paying tax ranking of Pakistan and a comparison with other South Asian countries. It was also the motivational factor for the researcher that Pakistan should find place at a better position.

Table 1 Paying Tax Ranking

South-Asian Countries	Rank	Payments (number per year)	Time (hours per year)	Total Tax and Contribution Rate (% of profit)	Post Filing Index (0-100)
Afghanistan	176	19	275	71.4	0
Bangladesh	152	33	435	33.4	44.36
Bhutan	17	18	85	35.3	95.5
India	119	13	214	55.3	49.31
Maldives	118	17	390.5	30.2	46.1
Nepal	146	34	339	29.6	33.35
Pakistan	172	47	311.5	33.8	10.49
Sri Lanka	158	47	168	55.2	49.31

Source: World Bank Group (2016)

Finally, tax authorities around the world have been implementing different policies to create a voluntary tax compliance environment in their respective countries. Academic research suggested two basic approaches in reviewing the problem of compliance: behavioural approach and economic deterrence approach (James & Alley, 2002). Neither approach is superior to the other. These approaches are contextually efficient and effective.

Social scientists have traditionally believed on different internationalization and socialization mechanisms for normative conformity. They tended to rely on the main cause of observed deviation rates i.e. failure of those processes (Habermas, 1984; Bourdieu, 1980; Schutz, 1964; Parsons, 1951).

The believers of economic deterrence acknowledged that rational individuals make analysis of costs and benefits associated with compliance or noncompliance decision. They are expected to comply with the norms when compliance utility is higher than that of non-compliance utility and hence they make the rational choice. Therefore, probability, severity of sanctions and punishments in case of deviants are the key elements to explain the levels of norm conformity (Posner, 1998; Katz, 1998; Baird *et al.*, 1994; Becker, 1968).

Max Weber, classical thinker as an economist and sociologist, was aware of dual nature of compliance. On one side, he believes that individuals act according to their norms when it is in their benefit, and try to avoid compliance if it is not. On the other side, Max Weber acknowledged that norms are not followed in a purely instrumental fashion. He often noted that normative reasons are independent from self-interest and have their own logic.

Noguera *et al.* (2014) proposed an agent based model for the simulation of tax compliance and tax evasion by considering rational choices models and social influence mechanisms. The authors combined rational choice and social influence mechanism to produce aggregate results for tax evasion behaviour. The authors faced multiple problems while explaining observed levels of compliance and estimated tax evasion under rational choice of tax compliance model. Furthermore, the study emphasized on adoption of a systemic taxonomy for social influence mechanisms after proposing behavioural model for tax compliance behaviour. The author's own interest was to contribute to tax knowledge through behavioural approach thought-provoking by examining the impact of determinants on the income tax compliance behaviour of income tax non-filing individual in Pakistan. The difference between economic deterrence approach and behavioural approach is summarized in Table 2, adapted from James and Alley (2002) and Saad (2011).

Table 2 Economic Deterrence Approach vs. Behavioural Approach

	Economic Deterrence Approach	Behavioural Approach
Concept	Tax Gap – Amount of tax imposed less actual amount of tax received (James & Alley, 2002)	Voluntary compliance based on the individual's behaviour in accordance with the letter of tax law and the spirit (James & Alley, 2002)
Definition	Narrow (Mazur & Plumley, 2007)	Wide
Exemplified by	Maximize personal income Trade off: a. Risk of detection and severity of penalties b. Expected benefits of evading	Individuals are not always utility maximizers and independent. They interact in relation to different roles, norms, beliefs, and attitudes
Tax Compliance	Economic rationality	Behavioural cooperation
Taxpayer as	Selfish calculator of gains/losses	Good citizen
Key Issues	Efficiency in resource allocation	Tax morale, fairness, equity, and incidence

Source: Adapted from Saad (2011); James and Alley (2002)

1.2 Overview of income tax system of Pakistan and compliance environment

The following are the constituents of Income Tax Law in Pakistan:

- a. Income Tax Ordinance 2001 (updated)
- b. Rules framed by FBR
- c. Notifications, circulars and orders
- d. Income Tax Case Law
- e. Finance Act or Ordinances

After the independence from British rule, the Pakistan Government adopted Income Tax Act 1922 as amended up to that date and the law was extended to whole Pakistan except special areas. Moreover, the Pakistan Government has constituted a “Taxation Inquiry Committee” in June 1958 consisted on tax department officers and representatives from trade and industry. The committee presented its recommendations to Pakistan Government. In 1959, some recommendations of the Committee were incorporated in the law. In 1965, “self-assessment scheme” was introduced (Mughal, 2016a, 2017).

The Income Tax Ordinance, 1979 was the first income tax law of Pakistan promulgated by Government of Pakistan through Finance Ordinance on 28th June, 1979 and became effective on 1st July, 1979. Income Tax Ordinance 1979 replaced Income Tax Act 1922 continued for 57 years. This law remained effective in the country for 22 years and was found to be ineffectual for a modern taxation system; thus, it was replaced with the Income Tax Ordinance, 2001, which came into force on 1st July, 2002. Income Tax Ordinance 2001 is the basic constituent of income tax law in Pakistan and the whole taxation system is built on the basis of it (Mughal, 2016a,

2017). The whole procedures of payment and collection of tax, assessment, penalties, refunds and appeals have been provided in this law. It consists of 13 chapters. Income Tax Rules are framed by FBR for the guidance of its officers and taxpayers. Notifications, circulars and orders are issued by FBR and Federal Government to exempt any class of income, in whole or in part, reduce tax rates or to make any modifications in tax matters. Decisions of the courts are the component of tax laws in Pakistan. Every year changes in tax laws are brought through a Finance Act or Ordinance. Furthermore, the FBR administers the entire working of the tax department for the purpose of tax collection and is regarded as the highest administrative authority in Pakistan authorized by the Federal Government. The government receives diverse kinds of taxes from public and corporates in order to finance its development projects, defence requirement, and day-to-day expenses. These taxes include: income tax, sales tax, custom and excise duties.

Income Tax Ordinance 2001 does not define tax evasion but it elaborates it in an indirect manner. Section 2(66) clause 'd' states the types of person who are liable to file their annual income tax return. Moreover, non-filers are two types; the first is not liable to furnish an annual income tax return and the second is liable to furnish an annual income tax return. The second type falls under wilful default; that is, to not meet tax obligations by illegal means and hence it is evasion of tax (Elffers *et al.*, 1987). Intentional or unintentional failure to meet tax obligation is termed as noncompliance (Kinsey, 1984). Weigel *et al.* (1987) explained tax evasion as a deliberate act of noncompliance. In other words, wilful default to meet tax obligations is tax evasion or noncompliance.

Taxes are classified into direct and indirect tax on the basis of assessment. The tax imposed by state on the persons who are expected to bear the burden of

tax and is not supposed to shift tax burden on other person(s) is known as direct tax, e.g. personal income tax, wealth tax etc. In other words, incidence and impact of tax are on the one and same person (Moheeth, 2018; Mughal, 2016b). The tax imposed on person who shifts it on another person is termed as indirect tax. In other words, in indirect tax, the impact and incidence of tax are on different persons. Examples of indirect tax are sales tax; value added tax, custom duty, federal excise duty etc.

On the basis of rate of taxation, tax is generally classified as flat, progressive, regressive and head tax (Bruenig, 2014). Under flat tax, everyone pays an equal percentage of tax of their income irrespective of quantum of income. In progressive taxation, tax liability increase as the income increases. In regressive taxation, tax liability decreases as income increases. Whereas in head tax, everyone is liable to pay a fixed amount as tax irrespective of income level.

In Pakistan, flat rate of tax is used for assessment of companies. For individuals and association of persons, progressive taxation system is applied. The unit of analysis of this study is individuals' tax return non-filers in Pakistan, either they are employed (in public or private sector) or they are entrepreneurs of small or medium size business. As far as, individuals are concerned, progressive tax rates are used and flat tax rates are ever never has been used for individuals in Pakistan (Pakistan, 1978, 2000, 2018). Moreover, it further clarified that due to separate entity, the owner of SME has to furnish his or her own tax return in individual capacity along with return of business separately. This study is limited to the behavioural aspects of individual non-filers only and not to SME or company tax matters.

According to Inam and Khan (2008), income tax and sales tax had become the main source of tax revenues for the Government of Pakistan in the last decade. The share of sales tax in federal government tax revenue stood at 40.28% for the fiscal year 2015–16; it is continuously increasing (Mughal, 2016b). The annual increase in inflation-adjusted income tax revenue between 1990 and 2000 was 10.7% at a cost of less than 1% of revenue collected. Despite these encouraging figures, there is extensive alienation with the performance and functioning of the tax department of Pakistan. The fundamental factors of estrangement are rooted in the tax legislation of Pakistan, constitutional structure of country, political compromises, complex web of lobbying, and arose out of the revenue crunch. Some facts on alienation are: active tax filers were about 1.05 million in number; and the taxpayer to population percentage is 0.55% (Jang, 2017a) in Pakistan which is extremely low when compared with 82.5% in Canada, 53% in France, 13.6% in Argentina, and 2.2% in India. The Sustainable Development Policy Institute (2013) reported in its report “Draft Study: Reforming Tax System in Pakistan” that tax avoidance in Pakistan was very high. There were 180 million people out of which 3.4 million were tax registered; 1.7 million people were tax filers, and only 0.75 million people paid tax. The percentage of tax filers out of the total labour force was 3.4% in Pakistan which compared with 80% in Canada, 58% in France, 16.5% in Argentina, and 4.7% in India.

The Government of Pakistan announced amnesty schemes at different times in order to bring persons into the tax net. Cheema (2016) talked about eight amnesty schemes announced by the Government of Pakistan. The schemes are: the first amnesty scheme was introduced by General Ayub Khan in 1958. This scheme was the most successful scheme in the history of Pakistan that, out of 3.5 million traders, 71,289 persons were brought into the tax net and the tax rate was increased by up to

1% on banking transactions. The second amnesty scheme was introduced by General Yahya Khan in 1969. The purpose of the amnesty was to provide an opportunity to individuals to convert their black money into white money. This scheme was not as successful as the first one because only 19,600 persons were brought into tax net. The third amnesty scheme was introduced by Pakistan People Party (PPP) under the leadership of Zulfikar Ali Bhutto in 1976. This was the first democratic amnesty scheme but it remained unsuccessful. The fourth amnesty scheme was introduced by General Zia-Ul-Haq in 1986. This scheme was identical to the third scheme. The fifth amnesty scheme was introduced by Pakistan Muslim League Nawaz (PML-N) under the leadership of Nawaz Sharif in 1997. The main purpose of this scheme was to provide an opportunity to individuals to convert their black money into white money but it did not go according to plan. It generated Rs. 141 million tax revenues. The sixth amnesty scheme was introduced by General Pervaiz Musharaf in 2000. In this scheme, the declaration of overseas assets was also required. This was a successful amnesty scheme where 79,411 declarations were filed and it earned fair revenues. The seventh amnesty scheme was again introduced by PPP under the leadership of Asif Ali Zardari in 2008. In this scheme, the tax rate was reduced to 2%. It generated Rs. 2.8 million tax revenues. The eighth and the most recent tax amnesty scheme was again introduced by PML-N under the leadership of Nawaz Sharif and tabled by Ishaq Dar in 2016. This amnesty scheme was specifically for traders and the tax rate was fixed at 1% on their black money in order to convert their black money into white money. This scheme will continue until 2018.

The above discussion on eight amnesty schemes announced in Pakistan from 1958 to 2016 shows the momentous efforts of government to compel the people to pay taxes. These amnesty schemes, although they made considerable contributions in

many countries, proved unsuccessful in Pakistan to induce a large number of people to pay their taxes. Therefore, it is worth investigating the key problems of tax noncompliance behaviour.

The above delivers a clear indication of the ineffectiveness of the income tax system of Pakistan because of the high rates of deliberate or unintentional income tax noncompliance by income tax non-filer individuals. It is essential to explore the core reason(s) for the income tax noncompliance behaviour of income tax non-filer individuals and entrepreneurs of SMEs in Pakistan.

1.3 Scope of the thesis

This thesis primarily focuses on the mediating mechanism for compliance behaviour by assigning core mediating role to tax morale and attitude towards compliance. The scope of this thesis is divided into two aspects that are conceptual and contextual.

Conceptual scope. The conceptual scope of this thesis relates to individual persons as either employed or self-employed. Employed persons are people who work for ascertainable remuneration, whereas self-employed are individuals who run their own business (small or medium) but this does not include association of persons or companies as Pakistan tax laws consider these both separate persons or entities.

To explain the context, a definition of SMEs is essential. The tax literature is generally silent in differentiating micro, small and medium size businesses (Yucedogru, 2016) but some have explained the difference (see Freedman, 2003, 2009; Warren, 2003). The Organisation for Economic Co-operation and Development (OECD; 2004) defined a small business as:

...any for-profit commercial entity other than those that exceed a given (high) asset threshold. Small businesses include sole proprietor, partnership and corporate forms of organization. They also include individual return filers who have income from self-employment, even if self-employment income is not their primary source of income (p. 10).

This definition focused on individual owner-manager (entrepreneur) of a business (Hankinson *et al.*, 1997), who is responsible for all operational and managerial decisions including profit generation and taxation; hence, behaviour of individual entrepreneur is key for the success of business (Kamleitner *et al.*, 2012). Although, this definition has achieved much acceptance in the literature, it has also been criticized. Nonetheless, Slemrod (2004) stated that there is no universal definition acknowledged in the literature.

In Pakistani context, Small and Medium Enterprise Development Authority (SMEDA) defines SME as a business with employees up to 250, paid up capital up to Pakistani Rupees (PKR) 25 million and annual sales up to PKR 250 million. According to SMEDA definition of SME, it is not necessary for SME to be a corporate entity. For the purpose of this study, by applying the definition of SME given by SMEDA, individuals that own or run small or medium type of business but not company business. Tax laws in Pakistan treat company as separate persons from individual

The rationale of selecting entrepreneurs of SMEs also is based on a variety of reasons. SMEs contribute considerably to employment and the economy. The discourses and actions of the state are important because they influence society's perceptions of tax through SMEs (Murphy, 2003). SMEs have indirect taxes and

sales taxes collected from buyers at the time of sale of goods and services to their customers, and are required to submit these taxes to tax authorities on due dates generally on a monthly, quarterly, or yearly basis (Coolidge & Ilic, 2009; Pope, 2008; Pope & Abdul-Jabbar, 2008). The interactions between individual entrepreneurs of SMEs and tax authorities are greater than salary-earner or wage-earner owing to routine tax declarations liabilities and tax collection efforts (Rametse & Yong, 2009). In addition, Ahmed and Braithwaite (2005) found that individual entrepreneurs of SMEs face more sanctions from tax authorities as compared to others. Furthermore, the case of employed persons is different from self-employed persons. It is well established that self-employed persons evade more tax than employed persons (Erard & Ho, 2001; Gangl *et al.*, 2015) as employed persons' tax liability is automatically deducted at source by the employer. But it has been observed that employed persons with income less than taxable range remain out of reach of tax even though they have other sources of income. In such cases, it becomes very interesting as most do not file an annual tax return even though their total income from all sources falls within taxable limits. Hence it becomes very important to also examine the case of employed persons.

In light of the above discussion, it can be argued that information about determinants of attitude towards compliance, tax morale, and intentions to comply of individual entrepreneurs of SMEs can be beneficial for policymakers and tax authorities to understand their taxpaying behaviour and fill a gap in the current literature.

Contextual scope. The contextual scope of this thesis is selected as Pakistan, a rarely explored and promising area in tax literature. Pakistan differs

from other Asian countries due to different social structure, culture, and historical roots. Apart from cultural and social differences, the scarcity of tax morale and compliance research regarding Pakistan is also another motivation to select Pakistan as the geographical scope of this thesis.

1.4 Problem statement

Income tax noncompliance has been considered a serious issue all over the world especially in developing countries because governments fail to raise reasonable income tax revenues from the public under a noncompliance situation; governments aim to spend those income tax revenues on development projects to raise economic development and living standards of the public (Torgler, 2003c). In Pakistan, tax system has been bedevilled by the practice of tax noncompliance since 1947; hence, collection of Govt. revenues has been the key issue composed of administrative fees, corporate tax, property tax, sales tax, and income tax etc. are insufficient to meet fiscal expenditures (MartinezVazquez, 2006), e.g., In 2010, the fiscal deficit was 6.3% of total GDP (Economic Survey of Pakistan, 2010). The tax base is fragile in Pakistan, i.e., Waris (2013) reported that approximately less than 1% of 180 million residents of Pakistan file their tax return.

Ample research has identified the various reasons for tax noncompliance over the last 40 years (Alm, 2012; Andreoni et al., 1998; Jackson & Milliron, 1986; Loo et al., 2008; Richardson & Sawyer, 2001; Schauer & Bajor, 2007; Torgler, 2007). Allingham and Sandmo (1972) proposed an economic deterrence model to influence an individual's compliance behaviour through audit and fines (penalties for noncompliance), following a deterrence policy. This traditional model was unsuccessful in entirely explaining the compliance behaviour of taxpayers; hence, it

received much criticism from various researchers (Kirchler, 2007; Slemrod, 2007; Frey & Feld, 2002; Wallschutzky, 1993; Graetz & Wilde, 1985). Prior research hypothesized that deterrence has a significant impact on tax compliance behaviour (Torgler, 2003c). Ayers et al. (2017) asserted that audit certainty has no deterrence and enforcement effects. However, research has been indecisive in proving this relationship as previous research findings are still inconclusive regarding economic deterrence approach (Richardson & Sawyer, 2001).

Hence, better results can achieve through other approaches along with the inclusion of other social and economic variables. In this regard, other hybrid models were also introduced (e.g., fiscal psychology models and social psychology models) which include a wide range of social and economic variables with the inclusion of tax morale as a key for increasing tax compliance. While recognizing the importance of tax morale, Samuel (2011) and Torgler (2003c) reported that it was probable that a government would be able to spend more on development projects to raise the living standard of citizens when people filed their income tax returns on time with accurate amount of tax, and this would be possible when individuals had a high degree of tax morale.

Tax morale is a voluntary compliance which is inherent in people (Niesiobędzka, 2014); it is a noneconomic variable that includes moral and ethical values, sense of civic duty, and feeling of guilt (Kornhauser, 2007), and has a positive association with compliance (Alm & McClellan, 2012; Cummings et al., 2009; Halla, 2012; Kornhauser, 2007; Lisi, 2015; Luttmer & Singhal, 2014; Riahi-Belkaoui, 2004; Torgler, 2003c, 2007, 2008). Luttmer and Singhal (2014) claimed that individuals did not have the same level of tax morale, necessary non-pecuniary motivations or contributing factors that were required to increase the level of tax morale of

individuals. A large number of research studies identified various determinants of tax morale, which were: direct democratic rights (Torgler, 2005); progressive taxation (Doerrenberg & Peichl, 2013); compliance perceptions, the state and others, trust in officials, tax awareness, perceived tax burden, tax system, tax administration, and institutional quality such as religiosity, willingness to obey and corruption (Torgler, 2008); information imperfection, long run cultural factors, social norms, reciprocity, and intrinsic motivation (Luttmer & Singhal, 2014); social environment and tax enforcement (Filippin et al., 2013); quality of public services, trust in government, and democracy (Daude et al., 2012); and national and ethnic identities (Xin-Li, 2010) but a number of elements are still unexplored that interact with each other in complex ways to encourage tax compliance behaviour. Therefore, it is worth conducting a study on tax morale and compliance determinants together with the elements of TPB based on behavioural approach and income tax compliance behaviour of income tax non-filer individuals in Pakistan.

1.5 Objectives of the study

The general purpose of this thesis is to examine the relationship between tax compliance determinants, together with the elements of TPB, and the income tax compliance behaviour of individual income tax non-filers, either employed or self-employed in Pakistan.

The main objective of the study is:

- To examine the mediating relationship between tax compliance determinants and tax compliance behaviour of individual tax non-filers in Pakistan.

The following are the sub-objectives of the study:

- a. To propose a conceptual model based on behavioural approach for transforming noncompliance behaviour into tax compliance behaviour of tax evaders who never file annual income tax returns (non-filers).
- b. To examine mixed policy instruments deterrence (hard measure) and moral persuasion (soft measure) to achieve tax compliance.
- c. To examine mediating mechanism (black box) between tax determinants and tax compliance behaviour with the mediating impact of attitude towards compliance and tax morale.
- d. To facilitate government bodies to make administrative policy adjustments by understanding the behavioural aspects of tax non-filers and how this noncompliance behaviour can be switched to compliance behaviour.

1.6 Research questions

In order to direct the research and contribute to research gaps, a set of research questions is developed to investigate the tax compliance behaviour of tax evaders (non-filers).

1. Do tax compliance determinants have an effect on attitude towards compliance?
2. Does attitude towards tax compliance affect intention to comply?
3. Does attitude towards compliance mediate relationship between tax compliance determinants and intention to comply?
4. Do tax compliance determinants impact on tax morale?
5. Does tax morale affect intention to comply?
6. Does tax morale mediate relationship between tax compliance determinants and intention to comply?

1.7 Summary of proposed conceptual model

This thesis attempts to address the research gap by way of investigating the impact of tax morale together with the elements of TPB on income tax compliance behaviour of individual income tax non-filers, either employed or entrepreneurs of SMEs, in Pakistan. In addition, this thesis not only examines the impacts of tax morale and elements of TPB on tax compliance behaviour but also investigates the key factors that are rather more important for enhancing the level of tax morale and help to explain attitudes towards compliance, and for promoting tax compliance behaviour, which are: perceptual deterrence; moral persuasion; tax fairness; tax complexity; self-corruption; and tax awareness.

Tax morale and tax compliance. Torgler (2003c) recognized tax morale as a key for increasing voluntary tax compliance behaviour and reported that noncompliance or compliance behaviour is not merely a function of tax rates, opportunity and threat of being caught but also depends upon individual's willingness to evade or comply. OECD (2013) also highlighted the importance of tax morale as a core determinant in promoting a taxpayer's voluntary tax compliance behaviour and claimed it was a primary concern of revenue authorities. The Cologne School of Psychology conducted research on tax morale during the 1960s that tried to analyse the relationship between tax morale and tax noncompliance from social psychological perspective and found a significant relationship between tax morale and tax compliance (Torgler, 2003c; Samuel, 2011). Therefore, this thesis postulates that tax morale of individual entrepreneurs of SMEs has a significant positive impact on their tax compliance behaviour.

Perceptual deterrence, moral persuasion, attitude towards compliance, and tax compliance. Tax noncompliance is an unlawful behaviour encompassing an ethical decision where personal advantages come at expense of society as a whole or impersonal others (Kaplan *et al.*, 1997). Therefore, tax morality is considered a significant issue of the tax authority of all those countries where government spending depends upon amount of tax collected from taxpayers. Many tax authorities have limited amount of tax revenues to spend on either aggressive enforcement strategies or friendly persuasive strategies, or both at the same time in order to increase tax compliance as well as the level of tax morale of their citizens. Therefore, it is important to discover first the best strategy for efficient use of limited amount of tax revenue in increasing voluntary income tax compliance and tax morale among people (Chung & Trivedi, 2003).

Aggressive enforcement strategies include prosecuting alleged evaders and auditing chosen taxpayers. These enforcement measures are explained by deterrence theory. This theory is concerned with sanctions, threats and effects of sanctions (Cuccia, 1994), where increased imposition of severe penalties and increased possibility of being caught will discourage taxpayers' noncompliance behaviour (Pate & Hamilton, 1992). Jackson and Milliron (1986) reported that probability of detection has a strong impact on taxpayers' compliance behaviour but the chances of detection are perceived more by compliant taxpayers than noncompliant taxpayers.

Aggressive enforcement strategies have been used for many decades to increase compliance but implementation of friendly or moral persuasion strategies have recently generated research interest in order to increase level of tax morale in taxpayers. Parenthetically, Blumenthal *et al.* (2001) and McGraw and Scholtz (1991) found no significant impact of friendly persuasion on voluntary tax compliance and

suggested further investigation. Friendly persuasion refers to influences and appeals; for instance, normative appeals to the citizens in order to promote voluntary income tax compliance behaviour through informing citizens about personal consequences of noncompliance, whether legal, ethical, or social (Chung & Trivedi, 2003). Omoregie (2013) reported that moral suasion is the most dominating policy of central banks and higher monetary authorities and used to accomplish compliance objectives with monetary policy guidelines. However, it is now not often discussed or mentioned as a policy instrument mainly due to the fact of its infrequent application in most jurisdictions. Hence, this thesis proposes that both perceptual deterrence and perceived moral persuasion of individual entrepreneurs of SMEs have significant positive impact on their tax morale, attitude towards compliance, and tax compliance behaviour.

Tax fairness, tax morale, attitude towards compliance, and tax compliance. Another important factor that contributes to increasing tax morale and voluntary tax compliance is tax fairness perception (Alasfour *et al.*, 2016; Gilligan & Richardson, 2005; Jackson & Milliron, 1986; Khasawneh *et al.*, 2008). One of the most eminent characteristics of a good tax system is fairness (Tan & Chin-Fatt, 2000), which performs a predominant role in tax reporting behaviour (Damayanti *et al.*, 2015; Kim, 2002; Oberholzer & Stack, 2014; Abdul-Razak & Adafula, 2013). If someone found the tax system to be unfair and biased, then he/she would be more evasive and less compliant with tax law, resulting in the failure of a tax system (Richardson, 2005a). According to relative assumption about fairness of tax system and compliance, policymakers are concerned with the perceptions of public regarding fairness of tax system (Gberegbe *et al.*, 2015). Previous studies detected a significant negative relationship between tax fairness and tax evasion (Etzioni, 1986; Hite &

Roberts, 1992; Song & Yarbrough, 1978; Spicer & Becker 1980; Spicer & Lundstedt, 1976), and positive impact of tax equity and fairness on tax morale (Alasfour *et al.*, 2016). Following the above discussion, this thesis hypothesizes that tax fairness perception of individual entrepreneurs of SMEs has a significant positive impact on their tax morale, attitude towards compliance, and tax compliance behaviour.

Tax complexity, tax morale, attitude towards compliance, and tax compliance. Jackson and Milliron (1986) reported that the increasing complexity of tax laws influenced compliance variables in a very acute manner (as complications lead to noncompliant behaviour), while other studies found some inconclusive results and recommended further research on tax complexity in the near future due to increasing sophistication of tax laws. Dean *et al.* (1980) found an intimate relationship between income tax system quality and tax complexity and further impact of tax complexity on general ability of the system to produce revenues.

Richardson (2006a) observed tax complexity to be a major contributing factor of tax noncompliance, besides tax morale, fairness, income source, and education. These findings were similar to those of Cox and Eger (2006) who found procedural tax complexity as a determinant of tax noncompliance in US State of Kentucky. In Australia, McKerchar (2005) found that the growing tax complexity in tax laws make tax agents unhappy. Moreover, it was desired to have a simpler tax law, with less ad-hoc changes and regulatory material. Similarly, Kirchler *et al.* (2006) reported that the rate of tax compliance increased with the reduction of tax complexity. Consequently, this thesis assumes a significant negative impact of tax complexity perceived by individual entrepreneurs of SMEs on their tax morale, attitude towards compliance, and tax compliance.

Self-corruption, tax morale, attitude towards compliance, and tax compliance. The matter of corruption has been famous among, in particular, post-communists and, in general, political scientists (Holmes, 2006; Karklins, 2005; Kotkin & Sajo, 2002; Krastev, 2004; Miller *et al.*, 2001). The consequences and causes of corruption have been widely discussed and studied (Lambsdorff, 1999). At the very least, corruption carries significant political costs, erodes the state, retards institutional development, and hinders economic growth (Johnston, 1986; Heidenheimer *et al.*, 1989; Rose-Ackerman, 1999). Smith (1992) claimed that level of corruption, procedural fairness, efficiency of government expenditure, and culture of a country influenced taxpayer compliance behaviour.

Although, the perception of the public towards government corruption was not related to tax fairness, it diminished taxpayers' trust in government and led to a reduction in compliance behaviour of taxpayers. Johnson *et al.* (1998) and Friedman *et al.* (2000) both found that unofficial activities are due to regulatory tax burden and intense corruption. They also outlined that businesses managed underground activities to avoid cost linked with high level of corruption and onerous bureaucracy. Alasfour *et al.* (2016) found significant negative impact of government corruption on tax morale. In this thesis, corruption is termed as perceived corruption that refers to the inclination of an individual to tell a lie to a taxation officer regarding his/her income to pay less amount of tax by the use of bribe or networking to avoid official procedures of tax compliance or escape from any type of legal consequences if tax department caught him/her due to non-filing of income tax return. Hence, this thesis postulates that corruption perceived by individual entrepreneurs of SMEs has a significant negative impact on their tax morale, attitude towards compliance, and tax compliance.

Tax awareness, tax morale, attitude towards compliance, and tax compliance. Taxpayers try to reduce their taxes by hook or by crook. Tax authorities put their major interest in voluntary income tax compliance through detection of tax evasion, enforcement of tax rules, and halting fraudulent ways to avoid legal taxes. A developing literature highlights tax awareness as a key determinant of voluntary tax compliance to explain why some people are interested in paying their taxes while the rest of society is not (Alstadsæter & Jacob, 2013; Palil *et al.*, 2013). Professor Dr. Sommerfeld called the subject of taxation, education's orphan (Sommerfeld, 1966). It was said that the subject of taxation can be taught in unique perspectives by the higher institutes to the students rather to teach taxation subject as a common practice.

Eriksen and Fallan (1996) had a strong belief in the notion of teaching the subject of taxation through which people get some awareness and a reasonable understanding about tax laws, and become more willing to pay their taxes as well as respect the tax department. In this way, we can get a compliant society rather than an evasive one. Consequently, taxpayers will make themselves more tax liable and pay their taxes on time. In addition, Devano and Rahayu (2006) stated that tax awareness and compliance did not merely rely on technical issues of tax collection, detection, investigation, rates and other inspections but it was also based on the intentions of taxpayers, to which extent they wanted to be aware of tax laws and then comply with the laws. Thus, this thesis hypothesizes that tax awareness of individual entrepreneurs of SMEs has a positive impact on their tax morale, attitude towards compliance, and tax compliance.

Subjective norms towards compliance, tax morale, attitude towards compliance, and tax compliance. Behaviour of others has been recognized as an important determinant of compliance. More evasion occurs if taxpayers suspect that

their friends are evading tax (Geeroms & Wilmots, 1985; Westat-Inc, 1980). The impact of others' compliance behaviour (subjective norms) on an individual's compliance behaviour is different from the impact of social norms on an individual's compliance behaviour. Social norms require well-disciplined and worthy behaviour of individuals and a risk that deviation from socio-cultural norms will be detected somewhere. Society itself imposes some sanctions on the detected individuals who violate social norms. One is responsible for one's own actions and learns from the actions of others, including friends, family, and society members, and society does not impose any type of sanction on individuals that have noncompliance behaviour other than subjective norms. Compliance behaviour is affected by social norms and this compliance behaviour varies from region to region or country to country (Davis *et al.*, 2003; McAdams, 1997; Scott & Grasmick, 1981).

Social psychologists have provided a bitter truth that man is prone to evil, in this way, knowing cases about tax evaders deeply influences compliant taxpayers. As an illustration, Lerner (1998) stated that individuals have to believe the world is exclusively just. This maxim of life makes a responsible society that will punish the harm-doer. In the case of tax evasion, one must seek justice not only for oneself but for the whole of society (Spicer & Becker, 1980). An alternative explanation regarding tax evaders' deep influence on compliant taxpayers is that an honest taxpayer considers their own internalized morality was affected by observing the behaviour of others. In this regard, Cooter (1998) claimed that an individual favours conformity to behavioural standards. When an individual disobeys any social standard he or she sustains a cognitive cost of guilt whether or not other individuals deviated. However, if an individual who was violating the law was famous in the society then the observer of such behaviour might be changed. Kaplan and Reckers (1985)

evidenced that honest taxpayers may be likely to evade tax when they notice the noncompliance behaviour of an individual having high moral character. Following the above discussion, this thesis postulates that subjective norms towards compliance have a significant positive impact on the tax morale and tax compliance of individual tax non-filers in Pakistan.

1.8 Development of hypotheses

After reviewing extensive past literature, this thesis proposes 33 research hypotheses, which are:

H_{1a}: There is a positive relationship between subjective norms and attitude towards compliance.

H_{1b}: Attitude towards compliance mediates the relationship between subjective norms and intention to comply.

H_{1c}: There is a positive relationship between subjective norms and tax morale.

H_{1d}: Tax morale mediates the relationship between subjective norms and intention to comply.

H₂: There is a positive relationship between attitude towards compliance and intention to comply.

H₃: There is a positive relationship between tax morale and intention to comply.

H₄: There is a positive relationship between perceived behavioural control and intention to comply.

H_{5a}: There is a positive relationship between deterrence and attitude towards compliance.

H_{5b}: Attitude towards compliance mediates the relationship between deterrence and intention to comply.

H_{5c}: There is a positive relationship between deterrence and tax morale.

H_{5d}: Tax morale mediates the relationship between deterrence and intention to comply.

H_{6a}: There is a positive relationship between moral persuasion and attitude towards compliance.

H_{6b}: Attitude towards compliance mediates the relationship between moral persuasion and intention to comply.

H_{6c}: There is a positive relationship between moral persuasion and tax morale.

H_{6d}: Tax morale mediates the relationship between moral persuasion and intention to comply.

H_{7a}: There is a positive relationship between tax awareness and attitude towards compliance.

H_{7b}: Attitude towards compliance mediates the relationship between tax awareness and intention to comply.

H_{7c}: There is a positive relationship between tax awareness and tax morale.

H_{7d}: Tax morale mediates the relationship between tax awareness and intention to comply.

H_{8a}: There is a negative relationship between tax complexity and attitude towards compliance.

H_{8b}: Attitude towards compliance mediates the relationship between tax complexity and intention to comply.

H_{8c}: There is a negative relationship between tax complexity and tax morale.

H_{8d}: Tax morale mediates the relationship between tax complexity and intention to comply.

H_{9a}: There is a positive relationship between tax fairness and attitude towards compliance.

H_{9b}: Attitude towards compliance mediates the relationship between tax fairness and intention to comply.

H_{9c}: There is a positive relationship between tax fairness and tax morale.

H_{9d}: Tax morale mediates the relationship between tax fairness and intention to comply.

H_{10a}: There is a negative relationship between self-corruption and attitude towards compliance.

H_{10b}: Attitude towards compliance mediates the relationship between self-corruption and intention to comply.

H_{10c}: There is a negative relationship between self-perceived corruption and tax morale.

H_{10d}: Tax morale mediates the relationship between self-perceived corruption and intention to comply.

H_{11a}: There is a positive relationship between tax morale and attitude towards compliance.

H_{11b}: Attitude towards compliance mediates the relationship between tax morale and intention to comply.

1.9 Overview of research paradigm

There are three broad research paradigms, which are: positivism, constructivism and pragmatism. Auguste Comte (1798–1857), a French philosopher, made an effort to blend empiricism and rationalism in a doctrine called positivism (Bhattacharjee, 2012). Positivist paradigm is empirical in nature in which relationship between factors are investigated. The researcher's approach is generalized, deterministic and empirical, and deals with hypotheses objectively. "The approach has the elements of being reductionist, logical, an emphasis on empirical data collection, cause-and-effect oriented and deterministic based on priori theories" (Creswell, 2007). On the other hand, constructivism paradigm is subjective in nature in which in-depth understanding of relationship between factors is provided or results from empirical study are enriched. It deals with hypotheses subjectively and researcher's approach is qualitative.

In this thesis, the positivist paradigm is adopted to meet the purposes of the thesis. The data are collected from relevant respondents through a structured questionnaire by asking them closed-ended questions to draw empirical inferences.

1.10 Summary of research methodology

In this thesis, a structured questionnaire is used to collect primary data from respondents by employing a seven-point Likert scale; the questionnaire is administered using snowball or chain-referral sampling technique for achieving high response rate. The population for this study is all the individuals tax non-filers in Pakistan either they are employed or self-employed who are eligible to file tax return but they do not file. Demographic and filter questions are also included in the questionnaire along with questions regarding dependent, independent, and mediating variables. The questionnaire was developed in the English language and then translated into Urdu for more accurate responses. Multivariate data analysis is used using IBM SPSS v.22 for analysing the data under multivariate data analysis framework.

1.11 Rationale and significance

Selection of variables was made through exploration of reasons of tax non-filing of return from the stakeholders. The researcher conducted 10 informal interviews with potential respondents and 3 formal interviews with tax consultants for the purpose of selection of variables for the study. Questions for interview were prepared by keeping in mind the objectives of the study. Informal interviews were made with the intention of mining actual facts of tax non-filing in a natural setting. The researcher further conducted content analysis to identify main factors of consideration. On the basis of these factors, review of the related literature was done to identify the gap, building a theoretical foundation and proposed conceptual framework.

Apart from the significance of tax morale in compliance decision, extensive empirical research has been conducted on this topic all over the world (Luttmer &

Singhal, 2014; Daude *et al.*, 2012; Halla, 2012; Frey & Torgler, 2007; Torgler, 2004, 2003c) but limited empirical research is available on this issue in Pakistan (see, Cyan *et al.*, 2016; Gangl *et al.*, 2015; Awan & Hannan, 2014). Awan and Hannan (2014), in their study in Pakistan, only attempted to explore the causes of tax evasion in Pakistan according to the tax collector and taxpayers' point of view, and identified six main causes of tax evasion. They neither addressed the determinants of tax morale nor compliance behaviour at all. Gangl *et al.* (2015) targeted both Pakistani residents' tax filers and tax non-filers and analysed the influence of perceived service orientation, knowledge of taxpayer's rights and perceived corruption by tax administration on their tax filing behaviour. A more recent study by Cyan *et al.* (2016) analysed the determinants of tax morale. They focused on trust in government, social norms, demographic, and tax rate structure to explain tax morale. Their finding may be relevant despite the fact all determinants were not studied that are now under consideration of this thesis along with elements of TPB. The interrelationships between tax morale, perceptual deterrence, moral persuasion, tax fairness, tax complexity, tax awareness and perceived corruption, specifically in the context of Pakistan, together with the elements of TPB, are still incomplete. Therefore, this thesis is supposed to bridge this gap.

Hence, the results from this thesis are likely to deliver an update on tax morale, determinants of tax morale, determinants of attitude towards compliance behaviour, and tax compliance behaviour in Pakistan, and contribute to the present tax morale, tax compliance, and TPB literature. Many past studies have identified that tax morale literature is limited (Pope & McKerchar, 2011; Kirchler, 2007). In addition, previous research has focused on the tax morale of individuals particularly tax filers; hence, tax morale research on owners of SMEs is limited (Yucedogru, 2016; Alm & McClellan,

2012). This information may also be helpful for tax authorities to improve the income tax system, particularly determinants of compliance; for example, individuals' failure to comply with tax law because of complexity of tax system. This information will assist tax authorities only to make tax system simpler and easier while maintaining positive perceptions regarding other determinants. If attitude towards compliance has an important role, then strategies such as consistent public campaign and incorporating tax education in curriculum through on-going seminars and mass media may be helpful.

1.12 Delimitations

The general purpose of this thesis is to observe the impact of tax morale and its determinants together with the elements of TPB on income tax compliance behaviour of income tax non-filer individual entrepreneurs of SMEs in Pakistan. The delimitations of this thesis are:

- a) Those variables which are incorporated in the research model, which are attitude towards compliance, subjective norms towards compliance, tax morale, perceived deterrence, moral persuasion, tax fairness, tax complexity, perceived corruption, and tax awareness;
- b) Individual employed or entrepreneurs of SMEs tax non-filers in Pakistan; and
- c) Responses are collected from individuals, tax non-filers of various cities of Pakistan during a specific span of time, that is, the year 2016.

1.13 Definitions of variables

In this thesis, 12 variables are studied, which are: tax morale; deterrence; moral persuasion; tax fairness; tax complexity; perceived self-corruption; tax awareness; attitude towards compliance; subjective norms towards compliance; perceived

behavioural control (PBC) towards compliance; and intention to comply. The variables employed have already been validated as these are adopted from previous studies. Table 3 indicates variable names with their operational and conceptual definitions with their source from literature.

Table 3 Conceptual and Operations Definitions of Variables

Variable	Definitions	Source and Modification
Tax morale	Sense of moral obligation towards payment of tax (do right or wrong).	Bobek and Hatfield (2003)
Tax fairness	Perceptions regarding general fair share in total tax burden and income tax for himself/herself and for average taxpayer.	Gilligan and Richardson (2005)
Tax complexity	Perceptions regarding difficulties in understanding of relevant tax laws, documents, keeping records, filling the forms, filing of returns and payment of tax.	Saad (2011)
Self-corruption	Telling a lie about his/her actual income, use of sources or bribery to avoid official procedures if he/she would be caught by tax authorities for non-filing of tax returns.	Anti-Corruption Commission, (2012)
Tax awareness	Awareness about general tax laws, method of tax calculation, and tax rates.	Rajmane (2014)
Deterrence	Perceptions about swift, certain, and severe penalties if caught by the tax department on non-filing a tax return.	Sapiei <i>et al.</i> (2014); Christensen and Hite (1997)
Moral persuasion	Moral appeals and informing about personal consequences of noncompliance by the tax department in order to promote income tax compliance behaviour.	Chung and Trivedi (2003); Blumenthal <i>et al.</i> (2001); McGraw and Scholtz (1991); Qualitative Research - Theory
Attitude towards compliance	The degree to which performance of the behaviour is positively or	Ajzen (1985, 1991, 2013); Saad (2011)

	negatively valued.	
Subjective norms towards compliance	Expectations about his/her referent groups in performing a specific behaviour.	Ajzen (1985, 1991, 2013); Saad (2011)
Perceived behavioural control towards compliance	Perceptive ability (easy or difficult) to comply with tax laws.	Ajzen (1991, 2013); Saad (2011)
Intention to comply	Intensity of willingness to comply with tax laws.	Ajzen (1985, 1991, 2013); Saad (2011)

1.14 Organization of remaining chapters

The remaining thesis is framed as follows. Chapter 2 reviews relevant theories and the literature and clarifies the conceptual framework; the proposed research model is presented. The research methodology is discussed in Chapter 3. Chapter 4 demonstrates the research results. Chapter 5 presents discussion of findings and Chapter 6 presents the conclusions along with implications and future prospects for further research.

CHAPTER 2: LITERATURE REVIEW

In this chapter, a detailed literature review is transcribed. This chapter describes two leading theories on human behaviour and two theories based on the carrot and stick approach. They are: theory of reasoned action (TRA), TPB, deterrence theory and theory of moral suasion. Subsequently, theoretical and empirical insights regarding impact of tax morale on tax compliance are presented along with the impact of other variables under discussion.

The use of the carrot and stick is not a new approach to change human behaviour (MacGregor, 1960). It is the use of combination of reward and punishment to attain desired behaviour. Generally, a mix of enforcement measures determined the tax compliance behaviour, such as quasi-voluntary compliance, use of third-party data, and audits, which is motivated by tax morale, such as moral factors, fiscal exchange, social norms, and trust in institutions (Luttmer & Singhal, 2014). The use of 'stick' in tax compliance literature refers to the use of deterrence measures which asserted that individuals are rationale, self-interested, avoid pain, and seek out pleasure; however, if punishment is effectively enforced, individuals will avoid pain of punishment, and give-up the pleasure of crime (Greenman, 2014) including perceived audit and probability of detection (Witte & Woodbury, 1985), tax rates (Alm et al., 1992b), and deterring fines (Grasmick & Bursik, 1990). Past studies reported positive relationship between deterrence and tax compliance (Loeffler et al., 2016; Sapici et al., 2014; Davis et al., 2003).

The use of 'carrot' in tax compliance literature refers to use of positive or soft measures that encourage voluntary tax compliance (Hasseldine & Li, 1999; Hite, 1989; Mascagni, Nell, Monkam & Mukama, 2016) including influencing and appeals to citizens in order to promote voluntary compliance behaviour through informing

individuals about the personal consequences of noncompliance, whether legal, ethical, or social labelled as moral or friendly persuasion (Chung & Trivedi, 2003), tax morale (Luttmer & Singhal, 2014; Torgler, 2003), personal attitude (Kirchler, 1997), tax fairness (Saad, 2011), tax complexity (Richardson & Sawyer, 1997), corruption (Alon & Hageman, 2012), and tax awareness (Ahmad et al., 2007). In actual fact, these factors interact in complex ways with practical aspects of taxpaying environment (e.g. quality of tax advisers, availability of tax advisers, accessibility of information, and corruption of tax collectors) and with individual characteristics (e.g. gender, employment status, and sector).

2.1 Theories on human behaviour

There are a number of human behaviour theories but the following are dominant theories used to explain a theoretical framework of individual behaviour and behaviour change.

2.1.1 Social Cognitive Theory

The theory (Bandura, 1986) posits that people are driven by external forces rather than inner factors. In the model, human functioning is explained by a triadic reciprocal interaction of behaviour, environmental events and personal factors. This is often termed as reciprocal determinism: people's behaviours are both influenced by and influence their social environment and personal factors. There are several constructs that underlie the process of human change and learning (Bandura, 1986). In the process of behaviour change, the variables of self-efficacy, self-control, reinforcements, emotional coping and observational learning have an impact (Perry *et al.*, 1990).

2.1.2 Transtheoretical (stages of change) model

James O. Prochaska (1977) and colleagues developed the transtheoretical model based on the analysis and different theories of psychotherapy and hence named as “transtheoretical”. Prochaska and others refined the model in their research. The transtheoretical model assesses an individual’s readiness to adopt change in behaviour. The model explains change in behaviour in six stages.

- i. **Precontemplation:** (Not Ready): The phase in which individuals are intended to make change in near future (often defined as next six months).
- ii. **Contemplation:** (Getting ready): The phase in which individuals are intended to change (within the next six months).
- iii. **Preparation:** (Ready): Phase of plan of action or intent to take action in immediate near future (within a month).
- iv. **Action:** Phase in which people make change in behaviour
- v. **Maintenance:** Work for sustaining and prevent relapse.
- vi. **Termination:** Individuals have 100% efficacy and zero temptation and that they would not turn to their old habit as way of coping

2.1.3 Theory of reasoned action

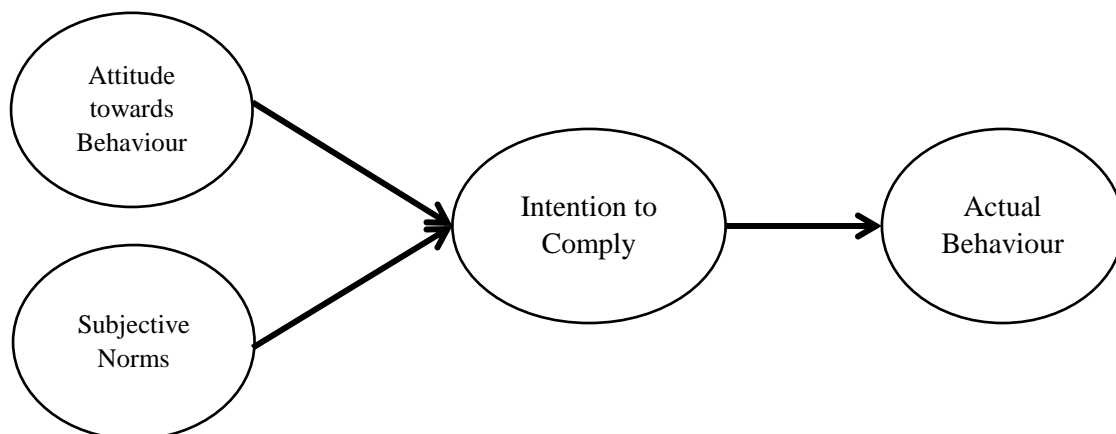
TRA was developed by Ajzen and Fishbein (1980) to understand the human behaviour for voluntarily compliance. This theory assumes that an individual’s behaviour only depends upon the motivation of an individual whether to perform the behaviour or not to perform. This behavioural intention is predicted by attitude towards behaviour and subjective norm.

Attitude towards behaviour refers to the evaluation of an individual about a particular behaviour being either favourable to perform or unfavourable (Manstead, 2004). Ajzen (2006) and Saad (2011) divided this attitude into two independent

components: affective attitude and instrumental attitude. Affective attitude deals with feelings like guilty, sad, or happy, if performing specific behaviour; whereas, instrumental attitude deals with cognitive considerations, if performing specific behaviour, like beneficial or bad (Saad, 2011; Ajzen, 2006; Breckler & Wiggins, 1989).

Subjective norm is defined as a perception of a person about those persons who are important to him, whether they are performing or not performing the specific behaviour, and whether he or she should perform or should not perform such specific behaviour (Saad, 2011; Ajzen, 2006; Manstead, 2004 Fishbein & Ajzen, 1975). In addition, to assess this perception, both descriptive qualities (perception of a person whether the family and friends are important to him and will or will not perform the specific behaviour) and injunctive qualities (perception of a person, what other people who are important to him or her will think if he or she performs such specific behaviour or does not perform) are equally important (Ajzen, 2006). TRA is presented in Figure 1.

Figure 1 Theory of Reasoned Action



Adapted from Ajzen and Fishbein (1980)

Sheppard *et al.* (1988) documented the success of TRA in determining behavioural intentions and human behaviour. They investigated 87 separate studies through meta-

analysis applying TRA and predicted a 0.66 weighted average correlation coefficient between attitude towards behaviour and intention, a 0.66 weighted average correlation coefficient for subjective norms and intention, and a 0.55 weighted average correlation coefficient for intention and actual behaviour. The behaviour included in the study that was successfully determined by TRA related to decisions to resign from jobs, buying items of specific brands, to smoke marijuana and so on. Furthermore, this theory has been employed to predict decisions for adoption of career (Felton *et al.*, 1995), driving within speed limit, engaging in regular exercise, and quitting smoking (Manstead, 2004).

TRA has capabilities to determine behavioural intentions and explain behaviour, but Saad (2011) reported that TRA has been criticized for its limitation regarding volitional behaviour. For example, Liska (1984) reported that it is unsuccessful in explaining or predicting behaviour that required resources or skills to perform or not to perform the behaviour. Such criticism led to the development of a new model, an extension to the TRA, named as TPB.

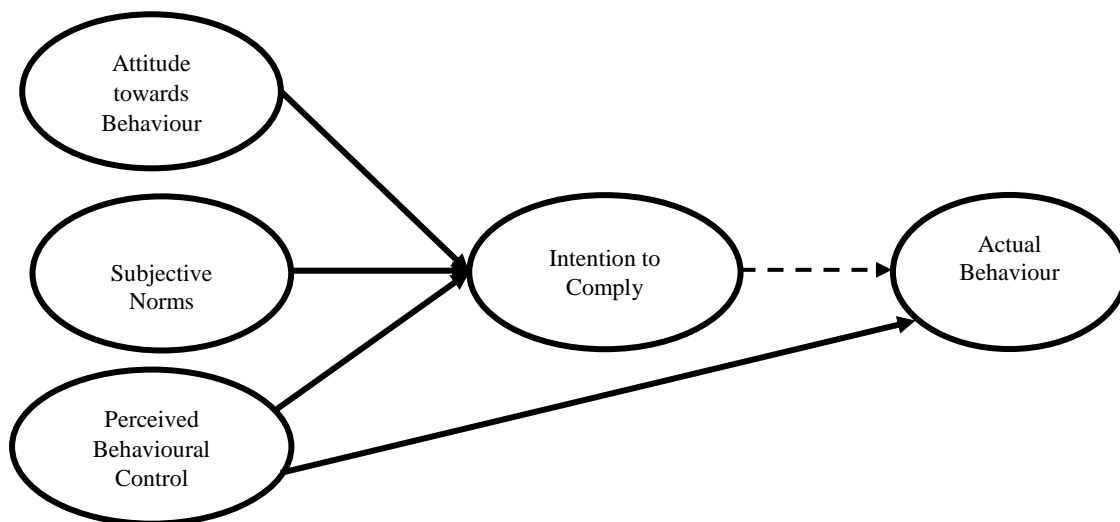
2.1.4 Theory of planned behaviour

Ajzen (1985) extended the TRA model (i.e. TPB) after realizing that all behaviours do not come under volitional control. Ajzen (1985) proposed a new construct in TPB model: PBC, to measure the perception of an individual of how difficult or easy it would be to perform the behaviour. Kraft *et al.* (2005) reported that this perception is a result of both external factors (such as resources, opportunity, and time) and internal factors (e.g., skills and knowledge) available to an individual.

The author argued that this construct instructed that an individual will be more likely to have high PBC when he/she feels a behaviour is easy to perform and form high intention to perform the behaviour, while an individual will be more likely to

have low PBC when he/she feels it would be difficult to perform a behaviour and form low intention to perform the behaviour (Saad, 2011; Manstead, 2004; Ajzen, 1985). In short, this theory suggested that the perception of an individual of how difficult or easy it is to perform the behaviour has a significant influence on the motivation of an individual to perform the behaviour, besides subjective norms and attitudes towards behaviour. In addition, perceived behavioural control with intention to perform behaviour has significant impact on actual behaviour. TPB is graphically presented in Figure 2.

Figure 2 Theory of Planned Behaviour



Source: Ajzen (2005, p. 118)

TPB also pointed out the dependence of PBC on control beliefs. Mathieson (1991) defined control beliefs as perceptions about availability of opportunities, resources, and skills, together with the perceptions about the importance of these opportunities, resources, and skills in achieving outcomes. With reference to the application of TPB, previous empirical research has documented the worthy predictive power of TPB in illuminating human behavioural intentions and/or actual behaviour. In academic databases, the TPB has above 1200 bibliographies such as PsycCRITIQUES, PsycINFO, Business Source Premier, PsycARTICLES, Academic Search Premier, and Communication & Mass Media Complete. Scholar (2018) reflected global

acceptability of the TPB either it is a developed or developing country and reported 84,000+ citation of the TPB to date. Furthermore, it might be criticizing that TPB a theory which is developed in a western context; can it be applied to a context other than western? Has TPB neglected demographic variables and other variables of this kind? Ajzen (2018) answered and clarified that demographic, personality traits, values, intelligence and variables of this kind are considered as “background factors” in TPB and they are not neglected but assume to have impact of intention and behaviour in indirect manner by affecting control, behavioural and normative beliefs.

In particular, the TPB proved better in explaining health-related behaviours such as adolescent smoking (Guo *et al.*, 2007), diet (Conner *et al.*, 2003), exercise (Nguyen *et al.*, 1997), and leisure (Ajzen & Driver, 1992). In addition, it has also been applied in various field, studies include: Law (Lee *et al.*, 2018), cardiopulmonary resuscitation involvement (Dwyer & Williams, 2002), speeding (Paris & Broucke, 2008), charitable giving (van der Linden, 2011), and deception in online environment (Grieve & Elliott, 2013).

2.1.5 Deterrence theory

Deterrence theory can be traced to the writings of Thomas Hobbes (1588–1678), Cesare Beccaria (1738–1794), and Jeremy Bentham (1748–1832). These classical philosophers together protested against legal policies of punishment when punishment within regimes was unevenly enforced and harsh in the 1700s. These theorists together tried to describe a more predictable, rational, and efficient system than the contemporary system, which would further prevent individuals from committing future crimes. Beccaria (1963; 1764) presented main points of basic framework, and Bentham (1948; 1789) offered a developed theory. The theory asserted that individuals are rationale and self-interested, and therefore will avoid pain and seek out

pleasure. It means if punishment is effectively enforced, individuals will avoid the pain of punishment and give up the pleasures of crime (Greenman, 2014).

According to Beccaria (1963; 1764), with reference to state-imposed punishment, effective punishment should be just severe enough, certain, and swift to prevent crime. It should not be extremely harsh and should be proportionate to the committed crime. In addition, he suggested a few reforms including enacting laws that were easy to get to all and clearly written and educating criminals (as a prevention method). On the other hand, Bentham (1948; 1789) focused on more abstract costs including informal costs and legal punishments. Both classical theorists were a source of inspiration for isolated theories: Beccaria's (1963; 1764) state punishment view resulted in deterrence theory and Bentham's (1948; 1789) view of informal cost and utility led to rational-choice theory.

After ample discussion on punishment theories grounded on classical school of thought, the field of punishment or deterrence moved towards positivist school of thought with Hooton (1939) and Lombroso (2006; 1876). During a period of decline, little research was conducted on deterrence theory, such as research on the death penalty (Sellin, 1959). After the research conducted by Becker (1968) and Gibbs (1968), deterrence research gained popularity again in the late 1960s. These articles coincided with improved statistics, increased availability of technology, and growth in crime rates (Nagin, 2013).

Becker (1968), drawing from Bentham (1948; 1789), claimed that because individuals are self-interested and rational, criminal behaviours should be refereed like other economic decisions, and theorized that certainty of punishment is more imperative than severity of punishment to change individuals' behaviour. On the other hand, Gibbs (1968) drew from Beccaria (1963; 1764) and focused on state

punishment as opposed to Becker's (1968) and Bentham's (1748; 1789) rational choice models. Gibbs (1968) was the first who empirically tested deterrence theory and focused on both severity and certainty. In particular, Becker (1968) and Gibbs (1968) were the first in exploring the impact of punishment on crime. Paternoster (2010) stated simplest deterrence hypothesis, drawn from Beccaria (1763; 1764), that crime rate would be lower when there would be greater celerity, severity, and certainty.

In addition to the deterrence literature, Greenman (2014) reported two types of deterrence within the scope of deterrence theory: deterrence and objective deterrence. The deterrence discovers the perceptions of individuals about punishment, such as thinking of likelihood of being caught by the tax authorities for tax evasion. On the other hand, objective deterrence deals with actually enforced punishment such as imprisonment or arrests. Perceptual and objective deterrence can be further categorized into general and specific. General deterrence refers to the threat of punishment felt by the whole society, while specific deterrence is the threat of punishment based on individual's own experience (Nagin, 2013).

According to the traditional view, general deterrence was only relevant for individuals who had never offended and specific deterrence was only relevant for individuals who had experienced punishment (Paternoster & Piquero, 1995). This traditional view of deterrence changed with Stafford and Warr's reconceptualization of deterrence theory in 1993. Stafford and Warr (1993) proposed that punishment avoidance is important to deterrence model. In addition, an individual can experience both general deterrence and specific deterrence and hypothesized that likelihood of future offenses will decrease if an individual has direct or indirect punishment

experience and future rule-breaking behaviour will increase if an individual has direct or indirect punishment avoidance experience.

Gibbs (1975) claimed that any form of deterrence must be grounded on three principles of celerity (swift), certainty, and severity, to be effective. Celerity refers to threat of immediate action. The deterrent will have more impact if there is swiftness in the threat being carried out. Certainty refers to the belief of a criminal in the likelihood of the threat (retribution, punishment, or arrest) being carried out. The deterrent will have significant influence, if there is certainty of the threat being carried out. Studies suggested that there must be a consistent level of certainty in order to produce desired consequences. Finally, severity refers to the harshness of punishment. The effectiveness of deterrent has significant correlation with increase in severity of punishment. In short, a prospective criminal will be less likely to commit the criminal offence in the presence of severity of action.

2.1.6 Theory of moral suasion

Moral suasion or appeal is a plea to morality to change or influence behaviour. The term 'moral' denotes the influence of 'moral responsibility' to operate for the purpose of good of the economy (Courchene, 1974; Chant and Acheson, 1972, 1973a, 1973b; Griffiths, 1973), while the 'suasion' aspect refers to persuade others (whether individuals or institutions) to follow official guidelines or adhere to policy. In economics, it is defined as "the attempt to coerce private economic activity via governmental exhortation in directions not already defined or dictated by existing statute law" (Romans, 1996).

In addition, Romans (1996) categorized moral suasion into two different types: pure and impure moral suasion. Pure moral suasion is applied to altruistic behaviour and rarely applied in economic policy. On the other hand, impure moral

suasion is backed by implicit and explicit threats by the regulatory authorities to provide incentives to individuals or institutions to adhere to policy. In addition, it differs from direct suasion as a policy tool using regulations and laws in which penalties are not systematically assessed for noncompliance.

With reference to the application of moral suasion, it has been applied in different fields such as monetary policy tool (Omoregie, 2013; Breton & Wintrob, 1978), to achieve school discipline (Miller, 2008), to convince the child in spite of physical violence (Greven, 2010), and tax compliance (Torgler, 2012). Cialdini (2007) described in his book, *Influence: The Psychology of Persuasion*, what can be accomplished by way of persuasion. For instance, marketing research heavily relies on persuasion where moral appeals are used to influence human nature. Some results showed that it does not work under strong competitive pressure, but is useful in emergency situations (Baumol & Oates, 1979; De Alessi, 1979).

Omoregie (2013) acknowledged moral suasion as the most dominating policy tool of central banks and higher monetary authorities. It is used to accomplish compliance objectives through monetary policy guidelines. It can be implemented through different ways, depending on the number and size of economic agents, and objectives to be achieved or nature of policy guidelines. The commonly used methods are: face to face meeting, inspections and visitation, guidelines or letter of threats, and public appeals.

Moral suasion has diverse names in different jurisdictions such as ‘jawboning’ in US and ‘window guidance’ in Asia, which indicate use of the persuasive power of talk as opposed to legislation (Omoregie, 2013). In tax compliance literature, the concept of moral suasion (Omoregie, 2013) has also been operationalized as moral persuasion (Ariel, 2012) or friendly persuasion (Chung & Trivedi, 2003). It refers to

influences and appeals to citizens in order to promote voluntary income tax compliance behaviour through informing citizens about the personal consequences of noncompliance, whether legal, ethical, or social (Chung & Trivedi, 2003).

2.2 Application of theories in this thesis

2.2.1 Theory of planned behaviour and tax compliance

Literature evidenced that behavioural intention of an individual does not always depend on his/her will. There may be many benefits or difficulties that allow or prevent him/her to comply with or to perform such behaviour, such as ethics, probability of detection, compliant peers, tax knowledge, and tax complexity (Richardson & Sawyer, 2001), and barriers and opportunities to perform a task, such as resources, competencies, knowledge, and past experience (Dwyer & Williams, 2002). Therefore, TPB is more appropriate than TRA in explaining tax compliance behaviour.

2.2.2 Deterrence theory and tax compliance

In the context of tax compliance, individuals (or taxpayers) and government are exchange parties. Theoretically, individuals will comply with income tax laws if they perceive swift, certain, and severe punishment from the government on noncompliance. Past studies reported positive relationship between deterrence and tax compliance (Loeffler *et al.*, 2016; Sapici *et al.*, 2014; Filippin *et al.*, 2013; Alm & Torgler, 2011; Davis *et al.*, 2003). In contrast, they will not comply if they do not perceive swift, certain, and severe deterrents. However, voluntary compliance may not be achieved if individuals are likely to have a non-deterrent perception.

2.2.3 Theory of moral suasion and tax compliance

Theoretically, in context of tax compliance, individuals will comply with income tax laws if they perceive effective appeals or persuasion from the government (Dwenger

et al., 2016; Dal-Bo & Dal-Bo, 2014; Fellner *et al.*, 2013; Cutter & Neidell, 2009). In contrast, they will not comply if government neither bothers about their noncompliance behaviour nor appeals to them to comply with the law. However, voluntary compliance may be achieved if individuals perceive effective persuasion or appeal from government.

2.3 Review of literature and hypotheses development

2.3.1 Tax compliance

Tax is a very significant aspect of current times that is used for public and state welfare; hence, economic and social prosperity depend on the willingness of an individual to pay tax sincerely. The growing demands of betterment and advancement of any nation compel governments to instil a sense of obligation and dutifulness in their taxpayers towards paying their taxes. The degree to which people adhere to the regulations and tax laws is commonly referred to as tax compliance (Young *et al.*, 2016). Braithwaite (2009) defined the concept of tax compliance as “the full payment of all taxes due”. In contrast, any difference in the amount actually paid and taxes due is simply referred to as tax noncompliance and this difference is due to overstating and understating deductions, expenses, and incomes (Kamleitner *et al.*, 2010). Noncompliance comprises both unintentional noncompliance and intentional evasion; it occurs due to inadequate understanding of laws, and calculation errors (Robben *et al.*, 1990b; Webley, 2004).

The past literature documented that individuals have different approaches to their tax compliance behaviour. The traditional economic approach asserted that taxpayers are rational in their behaviour like utility maximizes. Their decision to comply with tax laws or evade is an economic trade-off between probability of detection and benefit of evading as such explained in rational choice theory (Beale &

Wyatt, 2017). The rational choice theory is applied to understand the social and economic behaviour (Sen, 2008). This theory assumes that an individual has a number of choice alternatives and he prefers an alternative on the basis of completeness and transitivity. In the context of tax compliance, Allingham and Sadmo's (1972) claimed that self-interested taxpayers behave rationally and decide how to report earned incomes to tax authority by way of trading off the cost of evasion against the advantages of evasion. On the other hand, the theory of moral sentiments, concerned with morality or social psychology, stated that working of natural laws are manifested through social affairs when motives of people are less than virtuous that produce harmonious and beneficial results, and better guide to moral actions on the basis of moral rules, punish, rewards, beneficence, justice, prudence, virtue, self-interest, and sympathy (Adam Smith Institute, n.d.). As such, Erard and Feinstein (1994) and Feld and Frey (2002) stated that accounting for moral sentiments is integral to tax compliance and play a dominant role.

James and Alley (2002) stated that tax compliance is directly based on the willingness of individuals to follow both the 'letter' and the 'spirit' of tax administration and laws without any enforcement activity. This study assumed that tax compliance takes place when an individual files all his/her tax returns at the proper time in compliance with tax laws and that tax returns indicate accurate tax liability. This definition is assumed to be better, adopted from Roth *et al.* (1989), than the definitions by Jackson and Milliron (1986) and Richardson and Sawyer (2001).

Previous studies have measured compliance differently in line with different definitions of compliance. For instance, Yankelovich *et al.* (1984) developed a tax compliance scale of 15-items to get a profound image of various possible ways used by a taxpayer in overstating deductions and underreporting income in computing

his/her tax liability. Richardson (2005b) adopted this scale on a cross cultural study between Australia and Hong Kong, and found that Australian taxpayers are more responsible about paying their taxes than Hong Kong taxpayers. On the other hand, Bobek *et al.* (2007b) investigated taxpayers' noncompliant behaviour by using a hypothetical tax scenario in Australia, Singapore, and USA. Results indicated highest noncompliance rate in Australia, the USA was in the middle, and lowest noncompliance rate was in Singapore. Belkaoui (2004), in investigating 30 countries, used an index to measure tax compliance rate ranges from 0 to 6 (least compliance to highest compliance). Singapore was ranked at first in compliance; New Zealand was ranked at second, followed by Australia, UK and Hong Kong. After USA, Malaysia was ranked at eight in compliance, while Italy was acknowledged as least compliant. The above-mentioned studies would be useful in understanding the level of tax compliance behaviour of taxpayers across countries. However, these above-mentioned studies would be more meaningful if potential determinants of such behaviour were inspected.

There have been numerous further researches which were motivated by the desire to understand why individuals do comply or do not comply, cutting across several disciplines such as psychology, public administration, political science, economics, and accounting (Kasipillai & Jabbar, 2003). Jackson and Milliron (1986) reviewed 43 studies of tax compliance conducted from 1974 to 1985 and identified 14 determinants of compliance behaviour, which consisted of: tax rates; probability of detection; sanctions; tax authority contact; tax complexity; fairness; ethics; peer influence; occupation; income source; income level; education; age; and gender. In addition, authors suggested more research on relationship between tax rates,

probability of detection, tax complexity, fairness, ethics, and tax compliance behaviour in the future.

A growing body of literature on tax compliance (for extensive review see Braithwaite, 2009; Kirchler, 2007) identified the importance of psychological and economic variables to understand compliance (Erard & Feinstein, 1994; OECD, 2004). Researchers broadly agreed that deterring fines (Grasmick & Bursik, 1990), perceived audit and probability of detection (Witte & Woodbury, 1985), tax rates (Alm *et al.*, 1992b), personal attitude (Kirchler, 1997), personal and social norms (Ashby *et al.*, 2009; Wenzel, 2005), knowledge about taxation (Eriksen & Fallan, 1996), and distributional and procedural fairness (Kim, 2002; Murphy, 2004) relate positively to compliance.

In regard to tax compliance research, particularly on SMEs, there is ample literature available on OECD countries. In the last decade, figures showed that SMEs increased rapidly in OECD countries (OECD, 2014); they constituted approximately 99% of all businesses (OECD, 2008), with significant contribution to employment (80% of employment in service sector and 57.5% of jobs in manufacturing sector) among OECD countries (Clark & Thomas, 2009), and they contributed to economic growth (Freedman, 2003). In contrast to their importance, SMEs usually have weak structures and fragile economic circumstances when faced with sudden crises (Yucedogru, 2016).

Regardless of the increasing importance of SMEs for the economies of countries and tax policies, their weak performance along with fulfilment of tax obligations has been recognized as a problem in previous literature (Joulfaian & Rider, 2006; Ahmed & Braithwaite, 2005; Wallschutzky, 1984). In addition, many studies regarding the tax compliance behaviour of SMEs mainly targeted tax

practitioner effects, tax complexity problems, tax burden of SMEs, and tax compliance costs (Abdul & Wang'ombe, 2018; Yong, 2012; Freedman, 2009; Lignier, 2009; Rametse & Yong, 2009; Coleman & Evans, 2003).

Unlike international literature, a few studies are available on tax compliance regarding Pakistan. The previous focus of research studies regarding Pakistan was on factors causing low tax revenues (Chaudhry & Munir, 2010), tax reforms (Khan, 1993), exploring link between underground economy and tax evasion (Sam, 2010), determinants of tax evasion (Awan & Hannan, 2014) and causes of tax evasion (Khan & Ahmad, 2014). To the best of scholar's knowledge, there is only a single study on tax compliance most appropriately concerned with tax filing behaviour of tax filers and tax non-filers who are residents of Pakistan (wealthy self-employed); the study was conducted by Gangl *et al.* (2015) and this study found that perceived service orientation has significant positive impact on knowledge of taxpayers' rights and tax filing behaviour whereas there is a significant negative impact of self-corruption by tax administration. Gangl *et al.* (2015) found that knowledge of taxpayers' rights has significant positive impact on tax filing behaviour, and self-corruption by tax administration has significant negative impact on tax filing behaviour.

2.3.2 Tax morale

The issue of tax morale has attracted the attention of researchers and academicians since the 1990s. The probability of audits and deterring fines were low, yet taxpayers fulfilled their duties in paying taxes, this fact was considered to be a central in tax compliance literature (Torgler, 2003c). Many researchers highlighted that a considerable set of taxpayers are honest, for instance, predisposed not to evade (Long & Swingen, 1991), and in consequence they never try to find means to cheat at their tax paying (Frey, 1999). In contrast, Elffers (2000) observed that so many taxpayers

have predisposition towards payment of taxes, despite an inclination to cheat, and their intentions never bend towards evasion because they have no resources, knowledge, or opportunity to evade. In this regard, Erard and Feinstein (1994) gave a more apt explanation about actual tax compliance behaviour by pointing out the need to add social and moral dynamics to tax compliance models. Andreoni *et al.* (1998) also indicated the importance of social and moral dynamics and reported that such dynamics were undeveloped issues of tax compliance research. For example, Frey and Schneider (2000) claimed that moral costs can work as a discouraging tool in decreasing evading activity by saying that a good and responsible citizen has a moral sense to pay their due taxes to the state. In this way, we can simply say that an increase in moral costs can definitely reduce incentives to evade taxes.

Allingham and Sandmo's (1972) model, drawn from Becker's (1968) model, posited that individuals are rational and self-interested. Individuals optimize their compliance behaviour through maximizing utility and reducing cost of evasion (e.g., trade-off between utility and cost of evasion). Allingham and Sandmo (1972) found that greater probability of detection or larger penalty led to a decrease in tax evasion. In addition, they recognized that they did not employ all tax compliance motivations in their model by writing: "this is a very simple theory, and it may perhaps be criticized for giving too little attention to nonpecuniary factors in the taxpayer's decision on whether or not to evade taxes" (Luttmer & Singhal, 2014). This statement indicated the existence of nonpecuniary factors for tax compliance, in this thesis, that nonpecuniary factor is 'tax morale'.

Tax morale is a social phenomenon and tough to explicate. Its definition is very thoroughly framed in the literature. Tax morale refers to a moral obligation or ethical standards to pay tax (Bobek & Hatfield, 2003), intrinsic motivation to pay tax

(Frey, 1997), internalized obligation to pay tax (Ahmed & Braithwaite, 2005), commitment to citizenship responsibilities and respect for law (Graetz & Wilde, 1985), a sense of civic duty (Orviska & Hudson, 2003), and belief of an individual to contribute to society through payment of taxes (Cummings *et al.*, 2009). Based on above-mentioned definitions of tax morale, most researchers agreed on tax morale definitions as moral obligation or ethical standards to pay tax, and found direct impact of moral obligation on tax compliance (Bobek & Hatfield, 2003; Hanno & Violette, 1996; Kaplan & Reckers, 1985; Roth *et al.*, 1989), although slightly different definitions are also available.

In view of the consensus that tax morale is set as a moral obligation or ethical standards to pay tax, tax morale has been conceptualized in many studies as personal moral belief of an individual about whether behaviour is right or wrong (Bobek & Hatfield, 2003; McGraw & Scholz, 1991; Richardson & Sawyer, 2001; Schwartz & Orleans, 1967) and Bobek and Hatfield (2003) claimed the presence of moral responsibility in individuals felt by some individuals but not by others. Beck and Ajzen (1991) recognized that the predictive power of TPB can be increased by adding measure of moral obligation while explaining lying and cheating behaviours of college students. In addition, Ajzen (1991) stated that moral beliefs should be considered a construct that is separate from attitudes and they should be considered separately for hypothesis development. An attitude towards behaviour deals with the beliefs of an individual about what will happen if performing a particular behaviour, while moral obligation is a concept that is separate from attitude towards behaviour to (or not to) perform a particular behaviour. However, they are probably correlated (Beck & Ajzen, 1991), and have a unique influence on compliance behaviour of an individual. In confirming the importance of moral obligation for compliance

behaviour, Kaplan *et al.* (1997) found significant correlation between compliance behaviour and an individual's level of moral development.

The motivation to understand whether tax morale is important for compliance and does it only have a direct impact on compliance or does it also have an indirect impact directed further research in this context. Luttmer and Singhal (2014) reported four ways in which to understand the importance of tax morale for compliance. The first way regarding the importance of tax morale originates from surveys, where individuals were directly asked about their attitude concerning tax evasion. For instance, World Value Survey asked individuals to rate justifications of “cheating on taxes if you have a chance”. This survey concluded that over 60% of respondents rated that cheating is always an unjustifiable. Here, only one question was asked from respondents about tax morale. Likewise, the European Social Survey of 2004 also investigated the degree of tax morale of respondents with one statement that “citizens should not cheat on their taxes” and found that respondents “agreed” or “strongly agreed”. This survey pointed out that tax evasion is never considered justifiable. The way in which the World Value Survey and European Social Survey defined tax morale with one question only can be criticized because a dependent variable with only one question might not be regarded as valid or reliable (Torgler, 2003c). In this regard, an old data set, Taxpayer Opinion Survey (1987), has been used in many previous studies (Sheffrin & Triest, 1992; Smith, 1992) which makes it attractive to new research (Torgler, 2003a; Forest & Sheffrin 2002) because of the huge amount of questions to measure tax morale. In addition, a more recent study by Alasfour *et al.* (2016) developed a multi-item index containing 17 questions to measure tax morale and identified tax morale as a strong determinant of tax compliance behaviour.

The second way to realise the importance of tax morale is through indirect endeavours to predict the degree of compliance under an enforcement environment. For example, audit rates were not taken into account by Allingham and Sandmo (1972) in their tax evasion model to account for the differences between incomes reported by third party (i.e., employer) and self-reported incomes (Kleven *et al.*, 2011). In practical terms, individuals in the USA almost never try to evade declaring their incomes because employers are also required to inform the IRS of their employees' incomes. This observation can reduce tax evasion and the penalty rates as well. In contrast, compliance often seems higher than the possible prediction under observed possible level of risk aversion, realistic penalties and audit rates irrespective of the reporting of incomes by the third party.

Alm *et al.* (1992a) calibrated the Allingham and Sandmo (1972) model for USA for reasonable parameters value and found estimated coefficient of relative risk aversion ($\gamma=3$) suggested compliance of 13% in USA while there were below estimates for third party reporting and audit-based reporting. A recent audit study by Kleven *et al.* (2011), in Denmark, differentiated self-reported income and third-party income and concluded that the rate of compliance was in the range of 80–95% for self-reported income. In this way, the calibrations of Alm *et al.* (1992a) needed to be quite high in terms of coefficient of relative risk aversion ($\gamma =5$) for compliance of 44%, and to achieve higher compliance of 71%, the coefficient of relative risk aversion has to be extraordinarily high ($\gamma = 10$). These calibration exercises require at least three caveats. First, detected evasion revealed by certain audit studies would likely to be less bound to factual evasion. Second, dodging of taxes by over-reporting deductions and underreporting income is possibly detected by the tax authorities so audit rates are not considered random rather they are considered a function of

misreporting and misleading, even in the absence of third party reporting. Finally, some of the compliance as residual one could only be driven by personal monetary profits either from productivity gains or improved access to credit. However, these calibration exercises suggest the indirect role of nonpecuniary factors (i.e. tax morale) in promoting voluntary tax compliance.

The third way to analyse the importance of tax morale is to observe compliance behaviour in an environment where personal monetary benefits of compliance are considerably low and tax enforcement is either absent or narrow. Dwenger *et al.* (2014) studied compliance in the metropolitan area of Bavaria with a local Protestant Church. During collection of local church tax, it was cleared by the Protestant Church that this local tax would be considered legally obligated. However, before the collection of tax, it was explicitly declared that tax would not be enforced. Results identified that around 80% of the respondents paid more or as much tax as they owed, without any enforced activity, representing the significance of tax morale for tax compliance in this setting.

The final way to observe the importance of tax morale is to investigate the behaviour of those taxpayers that face equal enforcement but measurably vary in tax morale. DeBacker *et al.* (2012) examined the association between corruption levels in the countries of origin of owners and tax evasion in foreign corporations in USA by assuming common enforcement environment in both countries and corruption level will affect compliance through channel of tax morale only. They collected audit data from over 25,000 US Internal Revenue Service (IRS) corporates and concluded that tax evasion was more prevalent in corporations with owners from the most corrupt countries.

In conclusion, these above four major sources provide evidence for meaningful importance of tax morale in tax compliance behaviour, especially in developed countries. The above discussion clarified that there is also a relationship between tax morale and enforcement environment for tax compliance but this relation faces both practical and conceptual challenges. Conceptually, there is an interaction between enforcement and tax morale. At one extreme, no role for tax morale is found, if enforcement is so strict that it makes compliance perfect. At another extreme, tax morale may be eroded, if there is no enforcement whatsoever.

Kornhauser (2006) pointed out the tax morale direction through ‘carrot’ factors for encouraging tax compliance rather than ‘sticks’. Accordingly, extensive past literature argued that tax morale helped to explain high level of tax compliance and a correlation between tax morale and tax compliance is found in many studies (Yew *et al.*, 2015; Babu & Chariye, 2015; McKerchar *et al.*, 2013; Alm & McClellan, 2012; Pope & McKerchar, 2011; Halla, 2010; Torgler *et al.*, 2008, 2010; Kornhauser, 2006; Ahmed & Braithwaite, 2005; Riahi-Belkaoui, 2004; Feld & Tyran, 2002; Frey & Feld, 2002; Torgler, 2002; Frey & Torgler, 2007; Frey, 1997, 2003; Alm *et al.*, 1992b, 1999; Pommerehne *et al.*, 1994; Roth *et al.*, 1989; Lewis, 1982, 1979; Vogel, 1974; Schwartz & Orleans, 1967; Strumpel, 1966). In addition, Alm and Torgler (2006) examined the association between tax morale and size of shadow economy and found a strong linear relationship between them. Later research also supported their findings on shadow economy and tax morale (Torgler *et al.*, 2010).

Lisi (2015) incorporated positive association between tax morale and compliance behaviour into social welfare function in presence of tax evaders and honest taxpayers and derived optimal tax policy. He showed that the clamping down of tax evasion based on the right mix of deterrence policy instruments depended upon

taxpayers' morality. Furthermore, he recommended monitoring and tighter audit for both tax evaders and honest taxpayers as effective controls for illegal activities.

Samuel (2011) conducted a cross-sectional study to analyse the role of tax morale on compliance behaviour of taxpayers in Nigeria. A questionnaire was completed by 600 respondents; the collected data were analysed by multiple regression analysis. Multiple linkages between tax compliance and tax morale were found. It was further urged that it is important to facilitate taxpayers during tax filing. Furthermore, they should be assessed under the keen supervision of senior tax officials in order to reduce abusive responses to tax officials and tax department generally.

Alm and Torgler (2011) attempted to explain the complete riddle of tax compliance by focusing on ethical influences among individuals' behaviour towards their taxes. Only selfish, self-centred and rational individuals are portrayed in the standard neoclassical paradigm, rather they are motivated in the sense of one's ethical illusions. Ethical standard varies from one to another's mind set and these differences matter a lot. They studied on a broader scale to understand this paradigm completely and concluded by indicating three simple strategies to combat tax evasion: *a)* enforcement paradigm closely related to neo-classical literature; *b)* a less traditionally acknowledged service paradigm, and *c)* a trust paradigm that is completely based on one's ethical sense.

In regard to tax morale research in the context of Pakistan, a recent study in Pakistan by Cyan *et al.* (2016) pointed out that tax morale is a significant determinant for voluntary tax compliance and found negative/positive impact on tax compliance decision. In addition, they identified characteristics of individuals and relation towards tax morale; for example, they found a high level of tax morale in groups with

less participation in labour force, illiterate people show less tax morale than educated respondents, males exhibit less tax morale than females, and they found a high level of tax morale in respondents from major industrialized population centres. Previous literature also suggested that level of tax morale differs among different groups of taxpayers. For example, Daude *et al.* (2012) and Torgler (2005) found that older taxpayers and middle-aged taxpayers showed higher tax morale than young taxpayers. Likewise, dissimilarities between males and females were also examined but revealed contradicting results. Daude *et al.* (2012) and Torgler (2005) found no difference between males and females towards tax morale while Gaviria *et al.* (2007) and Torgler (2003b) found males showed lower tax morale than females in their studies.

Furthermore, marital status is related to tax morale. Torgler (2003a, 2005) identified that unmarried taxpayers have less tax morale than married taxpayers. With respect to marital status, Lubian and Zarri (2011) suggested that tax morale yields happiness and single taxpayers are less happy than married taxpayers. Employment status was found to be an indicator of tax morale. German scholars including Günter Schmolders (1951/1952, 1960, 1962, 1970) provided the first important finding on tax morale from 1960s and 1970s known as “Cologne school of tax psychology”. In their survey, they analysed the attitude of employees and self-employed people towards tax noncompliance. They measured tax morale through subjective tax burden and observed that the tax morale of employees was higher than that of the self-employed (Schmolders, 1960). Later research confirmed that the tax morale of salaried staff and wage earners was higher than that of self-employed taxpayers (Hug & Spörri, 2011; Torgler, 2004).

Apart from the characteristics of taxpayers that influence tax morale, Luttmer and Singhal (2014) stated that tax morale can work effectively through several

channels; the identification of these channels is significant for both plotting apt policy responses and apprehension of individuals' preferences. In addition, they recognized five broadly defined channels of potential mechanisms through which tax morale becomes more effective and these are likely to interact with each other significantly. These are classified as: *a)* deviations from utility maximization and inadequacies in the information as it may exhibit loss aversion; *b)* some are paying their taxes depending on their personal interaction with others such as peers and relatives; *c)* reciprocity, which is an individual's relationship to his/her state and it may deal with fairness of tax system; *d)* instinctive motivation, which may increase the certain amount of taxes that one decides to pay; and *e)* long-run cultural factors may affect enthusiasm to pay their taxes.

Moreover, Torgler (2007) identified three determinants of tax morale, namely: relationship between taxpayer and government, fairness and equity, and moral rules and sentiments. In addition, he argued that sense of guilt and norms affect tax morale. Fairness perception received significant attention, either distributive or procedural, and it was found that it has a positive impact on tax morale and compliance behaviour (Hartner *et al.*, 2010; Che-Azmi & Perumal, 2008; Ahmed & Braithwaite, 2005; Gilligan & Richardson, 2005; Bobek & Hatfield, 2001; Harris, 1989). The literature agrees that level of tax morale increases with an increase in trust towards government, and satisfaction with the government; hence, voluntary compliance increases (Aguirre & Rocha, 2010; Vigoda-Gadot, 2007; Mulenga, 2004; Torgler, 2003d; Frey & Feld, 2002; Adams, 1996). According to Hofmann *et al.* (2008) and Eriksen and Fallan (1996), a high level of tax knowledge or awareness or education leads individuals to have high tax morale. In contrast, the literature highlights that a complex taxation process and complex legislation are obstacles to tax morale and voluntary tax

compliance (Saad, 2014; McKerchar, 2007; Milliron, 1985). Torgler (2005) and Frey and Feld (2002) examined the relationship between tax morale and direct democratic rights. Torgler *et al.* (2010) and Güth *et al.* (2005) analysed correlation between tax morale and indicators of local autonomy (i.e. decentralization, fiscal autonomy). Barone and Mocetti (2011) examined the impact of inefficient public spending by local authorities on tax morale.

A more recent study by Alasfour *et al.* (2016) in Jordan on determinants of tax morale and compliance decision used a questionnaire survey to collect data from respondents and multivariate test procedures to draw relevant inferences. Results indicated that Jordan's government is perceived to be highly corrupted therefore tax evasion is perceived to be morally acceptable. In addition, government corruption has a significant negative impact on tax morale and positive impact on tax noncompliance; efficiency expenditures by the government have a negative impact on tax morale and positive impact on tax noncompliance. Tax noncompliance decisions are positively affected by unjust taxation system and tax rates, whereas age, gender, occupational status, educational level and religious background have significant influence on level of tax morale and compliance decision of individuals.

Heiner (1983, 1990) reported that people always may not react optimally to information. Schmidtchen (1994) applied Heiner's study to examine tax compliance. The study acknowledged that a perfect actor will only evade tax when he/she believes that he/she never gets caught. On the other side, an imperfect actor acts honestly and obeys rules ($p < \infty$). Higher the uncertainty, lower p and assumes that flexibility is termed as tax evasion. Where the p is reliability ratio between the probabilities of correct responding under right circumstance (r) to probability of mistakenly responding under wrong circumstance (w).

The author further assumes the frequency of evasion as (h) and r and w are the functions of frequency. h is an unconditional probability of choosing tax evasion (a) and T is the tolerance limit. If it is assumed that T increases, r and w also increase and as a result tax evasion is less chosen. In addition, if $p \leq T$ and h is between 0 -1, tax evasion will be zero means never done. Schmidtchen concluded that for imperfect actor tax morale is optimal choice acting rationally in his/her sense.

This above detailed discussion suggests that moral obligation not only differs from attitudes but it should also be integrated with the elements of TPB to better explain compliance behaviour; hence, it is indicated that the greater the sense of moral obligation of individuals, the less likely they will be noncompliant.

2.3.3 Tax fairness

Another key factor that contributes a lot in developing voluntary tax compliance and encouraging positive tax morale is tax fairness perception. Many years ago, fairness perception had no interaction with economic analysis but now it is an important determinant in developing taxpayers' morale towards voluntary tax compliance. Aspects of fairness and justice have been discussed by Baumol (1986), Buchanan (1976), Rawls (1971), and Sen (1987). Closely related theories were investigated, such as cognitive dissonance theory by Schlicht (1984), social norms theory by Coleman (1990), Elster (1989), and Opp (1983), and altruism theory by Becker (1981). We found many theoretical studies but empirical research was rare. The first studies analysed behavioural anomalies (Thaler, 1992; Frey & Eichenberger, 1989) through laboratory experiments (Fehr & Kirchsteiger, 1994; Rabin, 1993) and through natural experiments (Frey & Pommerehne, 1993; Kahneman *et al.*, 1986).

The importance of fairness was introduced by Adam Smith (1776) in 1776. The concept of fairness by Adam Smith claimed that either taxpayer is willing to pay

his/her tax according to his/her ability to pay or facilities received from tax-funded projects directed by the government. Taxpayers may hold some resistance due to unsatisfactory treatment from tax authorities (Ho & Wong, 2008; Murphy, 2005; Trivedi *et al.*, 2003) and the treatment and behaviour of tax authority are completely interconnected with perceptions about fairness (Murphy, 2003). By the lens of vertical fairness, it is asserted that different rates of tax should be applied on taxpayers due to their different economic situations (Kirchler *et al.*, 2006). This would mean that low income earners pay lesser amount of tax at lesser rates and high income earners pay higher amount of tax at higher rates. Nevertheless, this definition does not cover all of the tax fairness perception features completely. A new component of tax fairness was suggested by Jackson and Milliron (1986), that is to say, horizontal fairness. By the lens of horizontal fairness, it is recommended that equally circumstanced individuals should be treated equally (Michael, 1978). This would mean that equal amount of tax should be charged to individuals of similar economic positions. On the other hand, it is claimed that sometimes conflicts arise due to such equal treatment; that is why all income tax systems breach the premises of horizontal fairness in order to meet political, social, and economic objectives (Holmes, 2001).

Taxpayers are ready to pay their taxes if and only if the central system of taxation is found to be fair and equitable. Frey and Holler (1998) discovered a harsh reality of inequity and biased attitude of tax officials that increases a state of deterrence, that is, the feeling of being punished and fined in spite of paying all the fair dues and the freedom to violate tax laws disrupts the balance in society. Smith (1992) as well as Spicer and Lundstedt (1976) postulated that taxpayers will detect cheating if they think their tax burden is distributed falsely. Moreover, cheating can only get a higher score when it is encouraged by unfair tax system. Many researchers

studied perceived inequity and unfair tax system (Song & Yarbrough, 1978; Spicer, 1974) and found a gloomy distress is created in victims and other influenced social members due to lack of equity, as suggested by social psychology research (Walster *et al.*, 1978). Tax evasion may be visible as a reaction in the revival of fairness (Adams, 1965). Spicer and Becker (1980) reported that the rate of tax evasion is higher among those who hold higher tax rates and lower among those who hold lower tax rates and average tax rates. However, different experiments might not find such consequences (Webley *et al.*, 1991).

How do we know what is fair and what is now not? Binmore (1998) stated that what is judged to be fair is in step with our current specifications of morality that are determined by an intricate blend of contingent circumstances. We can observe that it has some dependence on people's social pecking order.

Bordignon (1993) introduced fairness as an incentive to the decisions of evasion. He supported tax compliance in rationalizing the moral norms and proposed that compliance was dependent upon public expenditure, tax structure and tax evasion by other taxpayers. Bordignon (1993) assumed that a fair trade can be computed between government provisions and personal utility of public welfare, done by taxpayers. This strategy shows a fair competence of taxpayers towards paying taxes whether it is in their self-interest or not. Alm *et al.* (1992a) suggested that some people have compliant behaviour towards taxes just to fulfil the public good even when they are free from risk of being caught and, by this, compliance rate increases. Cowell (1992) showed that psychological research and economic analysis have the same consequences only when the forms of personalized inequity and economic models work together. Falkinger (1995) stated that when an economic system is based on complete fairness, there will be a true reduction in tax evasion. If the system under

which we are living is not made on the chief principles of fairness and it gains a bad reputation for cases of evasion, then the aversion of risks and threats is automatically drowned.

The following studies were conducted in different countries (i.e. United States, Australia, Hong Kong, New Zealand, and Malaysia) and documented the dimensions of tax fairness perceptions. Gerbing (1988) conducted a study in order to identify further dimensions of tax fairness perceptions. Responses were collected from 225 taxpayers' resident in USA (Fort Worth metropolitan area/Dallas) through a mail survey after latest Tax Reforms Act 1986. The study identified four further dimensions: a) general fairness towards tax system; b) preferred tax rate structure; c) attitude towards amount of tax paid by rich/wealthy people; and d) exchange with the government.

Christensen *et al.* (1994) attempted to identify further dimensions of tax fairness perceptions along with analysing the influence of education on tax fairness perceptions by using a refined instrument developed by Gerbing (1988). Responses were collected from 296 university students in USA. The study identified five dimensions: a) general fairness towards tax system; b) preferred tax rate structure; c) attitude towards amount of tax paid by rich/wealthy people; d) exchange with the government; and e) self-interest.

Bobek (1997) conducted a study on income-tax system of USA concerned with three dimensions of tax fairness perceptions: policy fairness; procedural fairness; and distributive fairness. In this study, respondents were categorized in three groups: a) 51 residents of Georgia and Florida; b) 19 elementary school parents; and c) 108 university students. Bobek (1997) concluded that policy fairness deals with distribution outcomes (antecedent for distribution outcomes), procedural fairness

concerns with the procedure implemented to reach distribution-outcomes, and distributive fairness relates to vertical equity and horizontal equity.

Richardson (2005a) administered a refined instrument developed by Gerbing (1988) to Australian postgraduate business students. This study identified five tax fairness perceptions' dimensions: *a)* general fairness; *b)* self-interest; *c)* tax rate structure; *d)* special provision; and *e)* exchange with the government. Richardson (2006b) surveyed postgraduate business students in Hong Kong. This study identified six tax fairness perceptions' dimensions: *a)* general fairness; *b)* attitude towards tax burden of middle income earners; *c)* self-interest; *d)* tax rate structure; *e)* special provision regarding taxation for wealthy/rich people; and *f)* exchange with the government.

Che-Azmi and Perumal (2008) conducted a study to identify the dimensions of tax fairness perceptions among taxpayers of Malaysia. In this study, a research instrument developed by Gerbing (1988) was used to collect responses from registered individual taxpayers. This study concluded that taxpayers claimed Malaysian income tax system to be moderately fair in terms of self-interest, tax rate structure, and general fairness.

Saad (2011) attempted a cross-country study in order to validate tax fairness perception as a multi-dimensional construct. In this study, seven tax fairness dimensions perceived as important were included in the survey instrument: general, administrative, retributive, horizontal, vertical, exchange, and personal fairness already identified by Tan (1998); Richardson (2005a, 2005b, 2006b); Gerbing (1988); Christensen *et al.* (1994); and Che-Azmi and Perumal (2008). This study validated the findings of previous studies and confirmed tax fairness as multi-dimensional based on the responses of Malaysian and New Zealand taxpayers. The results suggested that all

tax fairness dimensions are vital to Malaysian taxpayers for tax fairness perception except exchange fairness. In New Zealand, administrative fairness, retributive fairness, horizontal fairness, exchange fairness, and general fairness were significantly important; however, personal fairness and vertical fairness were less important. In addition, results indicated different fairness perceptions levels among Malaysian and New Zealand individual taxpayers.

The above-mentioned studies evidenced different dimensions of tax fairness but many studies also attempted to analyse the level of tax fairness perceptions of taxpayers in different countries. Hasseldine *et al.* (1994) worked in New Zealand with individual taxpayers in Christchurch using Electoral Roll. In this study, two items were used to measure tax fairness perception, that is, fairness of tax amnesty and overall fairness of tax system. Individual taxpayers claimed the New Zealand tax system is completely unfair.

Christensen *et al.* (2000) assessed the level of federal income tax fairness. In this study, the unit of analysis was the families that differ regarding marital status, number of spouse employed, and number of dependent children. The responses were collected from 386 prospective jurors from Colorado and Alabama. Tax liabilities in a between-subject design were: *a*) same for single and married couples when their total incomes are the same; *b*) same if either one or both spouses are employed; and *c*) lower with dependent children. This study concluded that respondents consider it fair for a married couple with children to pay significantly more tax than a single parent.

McKerchar (2003) attempted to analyse the tax fairness perception among Australian personal taxpayers (taxpayers who complete their own tax returns). In this study, a taxpayers-rating criterion was used to measure the level of fairness regarding

Australian income tax system. This study concluded that more than 60% of personal taxpayers claimed Australian income tax system to be unfair.

Gilligan and Richardson (2005) and Richardson (2005b) conducted a cross-cultural study and compared the findings revealed from Hong Kong and Australia. This study revealed several differences of opinion between Hong Kong postgraduate business students and Australian postgraduate business students regarding tax fairness perceptions. The main reasons for such differences were: different tax systems in Hong Kong and Australia, where Hong Kong has no tax on interest incomes, no tax on dividends, no self-assessment system (SAS), no withholding tax, and flat tax rate structure.

Verboon and Dijke (2007) investigated the level of tax fairness perceptions of Dutch taxpayers concerned with distributive fairness. The responses were collected either through face-to-face interview or from the internet and respondents were selected using a marketing bureau. In this study, one item was used to measure distributive fairness and taxpayers claimed Dutch tax system to be moderately fair. On the other hand, level of distributive fairness declined when another survey was conducted and distributive fairness was measured using five items. These inconsistent findings might be due to change in measures and sample selection criteria.

Khasawneh *et al.* (2008) attempted to analyse the level of tax fairness perceptions and compliance of Jordanian taxpayers. Responses were collected from 246 Jordanian taxpayers through self-administered questionnaire. This study concluded that Jordanian taxpayers claimed Jordanian income tax system as fair and they have high degree of tax compliance.

Notwithstanding the level of tax fairness perception of taxpayers is different in different countries but the importance of tax fairness cannot be avoided in developing tax compliance behaviour.

Tan (1998) attempted to analyse the relationship between tax fairness perceptions and tax evasion behaviour. The responses were collected from part-time and full-time university students of New Zealand. In this study, three dimensions of tax fairness perceptions were operationalized: tax rate structure, tax burden fairness, and personal fairness. This study revealed a significant relationship between tax fairness perceptions and tax evasion behaviour; the university students of New Zealand claimed personal fairness as a more vital dimension than tax rate structure and tax burden fairness in forming tax fairness perceptions. In addition, taxpayers were unhappy with unfair treatment between middle-income and high-income earners, flat tax rate structure, and unfairly distributed tax burden.

In his preliminary study, Richardson (2005a) attempted to examine relationships between tax fairness perceptions and tax compliance behaviour in Australia. The responses were collected through a survey of Australian postgraduate business students and it found significant relationships between tax fairness perceptions and tax compliance behaviour. Richardson (2005b), in a cross-cultural study, attempted to analyse the impact of tax fairness perception on tax compliance behaviour in Hong Kong and Australia. This study found significant impact of general fairness on compliance behaviour in both countries. In addition, tax rate structure, self-interest, and special provisions do have an impact on compliance behaviour in Australia. Similarly, Richardson (2006b) found significant relationships between tax fairness perceptions and tax compliance behaviour while examining the relationships

between fairness perceptions and tax compliance behaviour in the case of Hong Kong postgraduate business students.

Loo and McKerchar (2010) conducted an exploratory study to investigate the relationship between tax fairness perceptions and income tax compliance in Malaysia. The survey was administered to 60 individual taxpayers. The study found that tax fairness perceptions have significant positive impact on tax compliance behaviour particularly vertical fairness.

Faizal and Palil (2015) attempted to analyse the impact of fairness perceptions on the tax compliance behaviour of Malaysians taxpayers. In this study, fairness was segmented into retributive fairness, procedural fairness, and distributive fairness. Data were collected from 82 academician respondents using questionnaires. Results indicated a significant positive impact of procedural fairness on tax compliance behaviour. In the meantime, retributive fairness and distributive fairness have positive but insignificant impact on tax compliance behaviour.

Belay and Viswanadham (2015) examined the impact of fairness perception of business income tax payers on compliance behaviour in Ethiopia. In this study, a qualitative research approach and cross-sectional survey design were adopted. Data were collected from 24 business income tax payers using semi-structured interviews and analysed through thematic analysis. The study concluded that business income tax payers had different fairness perceptions levels, and these fairness perceptions were found to be paramount for tax compliance behaviour.

From the above discussion, it is clear that tax fairness perception is effective for encouraging tax morale, attitude towards compliance, and ultimately compliance behaviour. Niesiołędzka (2014) reported that perceived fairness is high when tax authorities take unbiased decisions regarding tax system showing equity and fairness

for all individuals and allowing an opportunity to all individuals to express individual opinion. Consequently, these fair practices are a symbolic message and guarantee fair outcomes in the shape of increased trust in government, level of tax morale, and ultimately tax compliance. Siahaan (2005), Torgler (2003c), and Torgler *et al.* (2008) also claimed that equity and fairness in tax system encourage a level of tax morale and tax compliance. Likewise, Abdul-Razak & Adafula (2013), Jones (2009), and Saad (2011) stated that these fairness perceptions also develop a positive attitude in individuals towards compliance. Therefore, it is also indicated that the greater the sense of perceived fairness of individuals regarding tax system, the greater their tax morale and positive attitude towards tax compliance.

Additionally, the above-mentioned studies found positive impact of tax fairness on compliance behaviour but contradictory evidence is also found in the literature. For example, Bokek (1997) studied the role of tax fairness perception in tax compliance behaviour but did not find any relationship between them. Similarly, Richardson and Sawyer (2001) documented some studies (for example, Roberts & Hite, 1994; Porcano, 1988; Coleman, 1997) which found no direct link between tax fairness perception and compliance behaviour. On the other hand, Richardson and Sawyer (2001) also documented several studies (for example, Smith, 1992; Cowell, 1990, 1992; Falkinger 1988, 1995; Cowell & Gordon, 1988; Becker *et al.*, 1987) which found a negative link between tax fairness perception and compliance behaviour. These contradictory results might be due to differences in culture or taxation system. The above discussion suggests that fairness perceptions have mixed evidence regarding their effect on tax compliance behaviour but most studies found a significant positive impact of fairness perceptions on tax compliance. Thus, it is

indicated that the greater the individual's sense of perceived fairness, the less likely they will be noncompliant.

2.3.4 Deterrence

Deterrence has been the most researched topic, since the late 1960s, in the subject of criminology; lawmakers and criminologists focussed on deterrence (Akers, 1990). In 1970s, objective deterrence research was conducted on macro level where relationships were looked up between aggregate crime rate in specified jurisdictions and objective measures of certainty of punishment and severity of punishment in those specific geographical areas (Gibbs, 1975; Zimring & Hawkins, 1973), and the research on deterrence shifted to micro level.

Foglia (1997) stated that deterrence deals with psychological processes that depend upon an individual's subjective perception. Greenman (2014) defined deterrence as the perceptions of individuals about punishment, such as thinking of likelihood of being caught by the tax authorities for tax evasion. Hence, perceptions of deterrence activity are spread through the community to the population as a whole. Furthermore, the tax authority uses as a fear of being caught in result tax evasion is expected to decrease. A degree of support for deterrence perception has been found from the hypothesis that when taxpayers perceive higher probability of being caught together with perceived adverse consequences, compliance is likely to be high (Richardson & Sawyer, 2001; Grasmick & Bursik, 1990; Lewis, 1982).

In the literature of deterrence, certainty is measured by asking respondents about likelihood to be arrested on committing a crime and severity is measured by asking about the kind of punishment respondent's expect if they are caught after committing a crime. However, the focus has expanded to include internalized norms perceptions and social sanctions perceptions. These two additional variables are

treated as control variables in research models to ensure that relationships between behaviour and sanction risk were not attributable to individual's moral inhibitions or social pressures (Paternoster, 1987). Internalized norms are measured through asking individuals about their feelings of guilt if they commit an offence. This assessment has been given a number of names: self-stigma, shame, belief in legitimacy of law, and moral commitment. Social sanctions, on the other hand, are measured through influence of family, friends, and acquaintances, and labelled: social stigma, embarrassment, peer disapproval, and informal sanctions (Green, 1989). These studies were grounded in rational choice theory (Blackwell *et al.*, 1994; Grasmick & Bursik, 1990; Paternoster, 1989a, 1989b; Piliavin *et al.*, 1986). Discussion on variables measured revealed that three similar types of perceptions were examined in most of the studies, although the names vary: beliefs regarding internalized norms, social sanctions, and legal sanctions; similarities between approaches were discussed by Akers (1990) and Grasmick *et al.* (1993).

On the basis of the results that emerged from existing deterrence studies, little or no relationship was found between perceived severity of legal sanctions and behaviour at aggregate-level research, and weak relationships were found for internalized norms and social sanctions (Williams & Hawkins, 1986). Due to continuous unsuccessful attempts in finding the impact of perceived severity, some studies excluded it and added perceived certainty measured through risk of legal sanctions (Paternoster & Piquero, 1995; Burkett & Ward, 1993). Studies found mixed impact of perceived certainty. Most of the studies found an inverse relationship between self-reported delinquency and perceived certainty (Paternoster, 1987), some studies showed no impact of perceived certainty when the other two constructs were controlled (Williams & Hawkins, 1989; Paternoster & Iovanni, 1986; Paternoster *et*

al., 1983a, 1983b; Meier & Johnson, 1977), and some studies identified independent relation of perceived certainty with behaviour when the other two variables were controlled (Paternoster 1989a, 1989b; Bishop, 1984; Tittle, 1980; Anderson *et al.*, 1977; Kraut, 1976).

Wenzel (2004) attempted to analyse the moderator effect of social norms and personal norms between deterrence and tax evasion in Australia. Data were collected from 1406 citizens of Australia through a questionnaire. The results indicated that social norms and personal norms have significant moderator effect between deterrence and tax evasion. In addition, internalized and personal norms of tax honesty have significant negative impact on tax evasion and moderating effect between severity of sanctions and tax morale. Perceived social norms of tax honesty have no significant impact on tax evasion but have a moderating effect between severity of sanctions and tax morale.

The responses of organizations and citizens have been studied by compliance theorists towards laws and legal commands which were influenced by several factors such as Benthamite tradition's compliance studies that focused on the components of governmental enforcement policies, that is, threat of legal sanctions (Casey & Scholz, 1991). Since von Neumann and Morgenstein (1944) developed expected utility theory, models of decision making were used to analyse compliance behaviour under uncertainty and risk in which expected utility of potential gains was balanced against potential internalized sanctions, and social and legal sanctions (Klepper & Nagin, 1989; Ehrlich, 1973; Becker, 1968). In this regard, compliance behaviour was based on individual's preferences and seen as intellectual response to enforcement policies of government like prosecuting alleged tax evaders and auditing selected taxpayers (Chung & Trivedi, 2003).

Sapiei *et al.* (2014) conducted a study to examine the determinants of compliance behaviour regarding corporate income tax reporting in Malaysia. A questionnaire survey was used to collect data from respondents. The results showed that deterrence perception was a significant determinant of overall noncompliance and under-reporting of incomes, and an increase in deterrence sanctions with respect to likelihood of audit, likelihood of detection, and severe penalties resulted in decrease in noncompliance.

Davis *et al.* (2003) examined the impact of enforcement on the dynamics of compliance behaviour of taxpayers. In particular, they developed two models to assess the difference between noncompliant and compliant tax-payers. In aggregate model, two stable equilibrium were found: *a)* the tax agency can minimize the enforcement on compliance among compliant population, and *b)* among noncompliant population, enforcement led to increased compliance to a critical mark. Analysis revealed that whenever the enforcement by tax agency was decreased to some critical point, a significant change in behaviour occurred as people moved from compliance to noncompliance; likewise, when the level of enforcement was increased by the tax agency initially on noncompliant population, the population became compliant in equilibrium. These results were vigorous but the assessment of complex models lead to equivalent results in a way to additional flows among taxpayers.

In the seminal work of Becker (1968), an individual's preferences, such as expected gains from offending compared with expected penalty from offending, and recognizing 'risk preferences' were key to compliance behaviour. In particular, risk-neutral individuals only care about the expected penalty rather than its composition and therefore are uncaring about probability and the ruthlessness of punishment, while risk-averse individuals are more deterred by the increasing severity of punishment

than the increasing probability of punishment. However, the increasing probability of detection is more deterring to risk lovers. Despite various extensions to Becker's theoretical model (Eide, 2000), severity versus detection is still an unresolved riddle.

Friesen (2012) reported that compliance depends upon expected penalty facing violators and expected penalty further depends upon both probability and severity of punishment. A key question was whether probability of punishment is more effective than severity of punishment in improving compliance; he found that probability of punishment is less effective than severity of punishment in lowering crimes and increasing compliance.

Extensive previous literature evidenced the significant impact of deterrence (threat of punishment) on compliance behaviour. For example, Mohdali *et al.* (2014) stated that punishment threat has been considered an effective tool to discourage noncompliance attitude of taxpayers. Thus, the purpose of their study was to examine the impact of punishment threat on both compliant attitude and noncompliant attitude of individual taxpayers. The results indicated insignificant impact of punishment threat on individual taxpayer willing to comply. Despite this fact, they tried to escape from paying taxes when they were threatened with penalties and tax audits.

Although deterrence or punishment is found to affect tax compliance behaviour, previous studies used different proxies of deterrence in their studies such as tax rates, audit threats, and penalties. In general, studies that have examined threat of punishment through tax rates to deter noncompliance behaviour produced mixed results. It is obvious that taxpayers understate their incomes when tax rate is high (Skinner & Slemrod, 1985; Clotfelter, 1983). In contrast, Feinstein (1991) and Etzioni (1986) found conflicting results that compliance rate was near to ground even tax rate remained stable. On the other hand, Sandmo (2005) claimed that tax rate was not a

key factor to influence decision-making behaviour of taxpayers as compared to audit rate and tax penalty. Most of the studies evidenced a positive relationship between compliance and audit probability (Fischer *et al.*, 1992); this relationship varied depending on type of taxpayer. For instance, audit probability has little impact on tax compliance for salaried taxpayers but has very strong impact for sole proprietors (Witte & Woodbury, 1985). In addition, audit probability may only influence those taxpayers who intend to evade (Trivedi *et al.*, 2003; Hanno & Violette, 1996). Studies that examined threat of punishment through penalties to deter noncompliance behaviour produced mixed results. Many studies found positive impact of penalty on tax compliance (Park & Hyun, 2003; Beck *et al.*, 1991) but some found opposite results (Alm *et al.*, 1990, 1992b). In addition, effect of tax penalty varied depending on type of taxpayer. For instance, severe criminal penalties have highly significant positive impact on high income self-employed individuals (Alm *et al.*, 1990), and civil penalties have significant negative impact on middle income individuals and small proprietors (Witte & Woodbury, 1985).

Charles Rossotti mentioned that the honesty towards tax laws can be suffered a lot, if taxpayers found the declination of fears and risks. If they are going to think that somewhere tax noncompliance is occurred then it will become an irremediable error (Weisman, 2001). In addition, Rossotti remarked that social behaviours of individuals are affected by tax enforcement strategies, and, in turn, compliance is also affected eventually. In this regard, prior tax research concluded that taxpayers who know ways of evading are less likely to obey tax laws (Grasmick & Scott, 1982; Scott & Grasmick, 1981; Spicer & Lundstedt, 1976; Vogel, 1974).

Empirical evidence on general theory of deterrence was largely derived from general crime data (Eide, 2000). The probability of detection and probability of

conviction reduce crime rates along with increase in either jail terms or fines; the controversial results of these studies depend upon the nature of data used at either aggregate or individual level. An analysis based on aggregate level data must control for enforcement parameters like detection probability and possible endogeneity of crime rate (Levitt, 1998). In the case of individual level data, on the other hand, either data based on self-reported data or derived from criminal justice system, there is a sample selection problem (Grogger, 1991). Regardless of data employed, all empirical studies proxy the probability of punishment and severity of punishment based on past data and without knowledge of level of offending. These measures will vary from individual perceptions of being caught and possibility of punishment if arrested. This led Polinsky and Shavell (2000) to conclude with the following statement: "empirical work on law enforcement is strongly needed to better measure the deterrent effects of sanctions, especially to separate the influence of the magnitude of sanctions from their probability of application".

Based on a few empirical studies on regulatory enforcement, the general crime studies depend upon numbers of key variables while penalty data have not been accessible in the case of environmental enforcement until recent studies. For instance, Gray and Deily (1996) found an increase in compliance behaviour due to enforcement actions among steel-making plants; however, no data on fines were used for analysis and enforcement was measured through number of actions during past 2 years. Stafford (2002) assessed the enforcement measure through increase in fines for violations regarding hazardous waste for pre-post change years. Moreover, Shimshack and Ward (2005) used data on past penalties to measure enforcement for water pollution. Most studies in tax compliance literature used fines or audit probabilities but rarely both (Kirchler *et al.*, 2010). The results generally accord with crime

literature and identified higher impact of audit probabilities on decreased evasion than fines. In addition, besides above literature, many previous studies found deterrence effective for enhancing level of tax morale (Daude *et al.*, 2013; D'Arcy, 2011; Levi & Sacks, 2009). The above discussion suggests that deterrence has a significant impact on compliance behaviour and tax morale either with the eye of objective deterrence (tax rates, audit probabilities, and penalties) or deterrence (swiftness, certainty, and severity of punishment). Thus, it is indicated that the greater the individuals' sense of perceived deterrence, the greater their tax morale and attitude towards compliance, and the less likely they will be noncompliant.

2.3.5 Moral persuasion

Moral persuasion/suasion is a technique used by policymakers to inspire the intrinsic motivation of individuals to generate prosocial behaviour (Ito *et al.*, 2017). It is defined as a strategy used by authorities to influence, but not pressure, individuals and institutions into adhering to their guidelines and policy (Omoregie, 2013). It is also defined as normative appeals to taxpayers informing taxpayers about personal consequences of noncompliance, whether legal, ethical, or social, and named as friendly persuasion (Chung & Trivedi, 2003). For instance, regulators have widely used moral suasion for law enforcement (Fellner *et al.*, 2013), discouraging tax evasion (Dwenger *et al.*, 2016), incentivizing workers (Dal-Bo & Dal-Bo, 2014), air quality preservation (Cutter & Neidell, 2009), and energy conservation (Costa & Gerard, 2015; Reiss & White, 2008).

In the tax compliance literature, use of friendly/moral persuasion has been recognized as one approach to influence individuals towards compliance (Blumenthal *et al.*, 2001; McGraw & Scholz, 1991). The model of moral persuasion assumes that voluntary compliance is encouraged when tax authorities appeal to tax morale of

taxpayers. Encouraging normative support should suffice for compliance without any threat. In addition, taxpayers have social and moral obligations at stake; hence, they do not search ways to maximize utility, in their preference to act (Torgler, 2007; Beetham, 1991). The literature evidenced two competing approaches to compliance in order to motivate individuals: a) normative approach, and b) personal consequences approach. Normative approach deals with moral reasoning regarding appropriateness of principles and norms related to legal obligations and it may be measured by asking questions “what am I obligated to do?” or “what should I do?” (McGraw & Scholz, 1991). On the other hand, personal consequences approach deals with trade-off between gains from underreporting incomes and cost of legal sanctions and it may be measured by asking question "what will make me better off?".

McGraw and Scholz (1991) proposed a choice process for decision making regarding payment of tax based on ethical decision-making theories proposed by Rest (1984). The choice process consisted of four stages, which were: a) identification of decision context either context based on ethical principle or moral principle; b) formulation of course of action based on either ethical principle or moral principle; c) contemplation of course of action consistent with cost and goals; and d) implementation of chosen action. During the third stage, it is critical that personal consequences and/or ethical/moral principles are considered before taking decision regarding course of action. This principle highlighted that messages emphasizing personal consequences and norms will affect tax reporting behaviour. This area of research may also be grounded on the cognitive consistency principle that attitude(s) of an individual is consistent with other related attitudes and his/her behaviour. Subsequently, behaviour would change with a change in attitude(s). In this regard, it

was postulated by Cialdini (1989) that friendly persuasion has a significant impact on attitude(s) of an individual in an attempt to change his/her compliance behaviour.

In response to the hypotheses of Cialdini (1989), McGraw and Scholz (1991) conducted an experimental study with assistance of US IRS in order to examine the compliance behaviour of taxpayers based on normative principles and personal consequences for compliance. During the experiment, taxpayers were assigned to three groups and each group was provided with a video. The first group watched video relating to normative principles, the second group watched video relating to personal consequences, and the third group performed as control. The researchers collected data regarding tax returns from IRS for two years: 1985 and 1987. The study concluded that messages contained in videotapes proved successful in changing attitudes of individuals but unsuccessful in increasing compliance. Blumenthal *et al.* (2001) extended the work of McGraw and Scholz (1991) with the help of Minnesota Department of Revenue. In their study, they sent letters to taxpayers. During the experiment, taxpayers were assigned to three groups. The first group received a letter with the description of services rendered by tax department against taxes, the second group received letter with description of 'refund the claim that on tax cheating', and third group performed as control. The researchers collected data regarding tax returns from Minnesota Department of Revenue for two years: 1993 and 1994. The study found no or little impact of either type of persuasion on individuals' behaviours. Both studies failed to find out the impact of friendly persuasion on compliance behaviour, and warranted more investigation of its effectiveness.

Ariel (2012) attempted to analyse the impact of both moral persuasion and deterrence on tax reporting behaviour of corporations in Israel. Ariel (2012) conducted a randomized field test on 4,395 corporations and formed two experimental

groups. Both groups received tax letters, one conveying moral persuasion message and the other a deterrent message. In order to evaluate compliance, three types of measures were used: a) tax deductions; b) tax paid to authority; and c) gross sales values reported. The study found that both moral persuasion and deterrence did not produce significant compliance. These results challenged the policy of sending tax letters for true tax liability reporting or true payment of tax by corporations.

Beside above studies, many previous studies supported the persuasive appeals approach (Coleman, 2007; Schwartz & Orleans, 1967; Wenzel & Taylor, 2004), but some found causal links to be tenuous (Blumenthal *et al.*, 2001). Some studies found counterproductive effect. For instance, Slemrod *et al.* (2001) and Wenzel (2002, 2006) recognized backfiring effect of letters sent to taxpayers on their reporting behaviour showing signals of defiance in tax compliance context (Bouffard & Piquero, 2010; Braithwaite, 2009; Sherman, 1993, 2010). The above discussion suggests that moral persuasion has mixed evidence regarding its effect on sense of moral obligation to pay taxes and willingness to pay tax, but most studies found significant or weak impact of moral persuasion on tax morale and tax compliance. Thus, it is indicated that the greater an individual's sense of perceived moral persuasion, the greater their tax morale and attitude towards compliance, and the less likely they will be noncompliant.

2.3.6 Tax complexity

Tax complexity has turned out to be a problem for tax authorities with sophistication of tax law (Richardson & Sawyer, 1997). In consequence, it has captured the interest of many studies in the literature (Laffer *et al.*, 2011; Kirchler *et al.*, 2009; Richardson, 2006b; Forest & Sheffrin, 2002; Cuccia & Carnes, 2001; Krause, 2000; Richardson & Sawyer, 1997; Kaplow, 1996; Beck *et al.*, 1991). The literature documented various

types of tax complexity such as: low level of readability (Pau *et al.*, 2007; Tan & Tower, 1992), procedural tax complexity (Cox & Eger, 2006), rule and compliance tax complexity (Carnes & Cuccia, 1996), forms and computational tax complexity (American Institute of Certified Public Accountants, 1992), and compliance, structural, and technical tax complexity (McCaffery, 1990). All the above-mentioned types of complexities contribute to prevent an individual from complying, even if he/she knows how tax operates.

Kaplow (1996) explained the term tax complexity as a hurdle or hindrance to taxpayers' understanding of the requirement which they are bound to fulfil under the tax laws. The classical approach to taxation, in support of above-mentioned explanation, correlates tax noncompliance with tax complexity. Previous studies found a negative relationship between understanding of law and tax complexity (Kirchler, 2007). For instance, Richardson (2006a) examined 45 countries and found tax complexity encourages noncompliance. Likewise, Kirchler *et al.* (2006) identified that when taxpayers perceive tax law to be less complex then they have more intention to comply. Moreover, Lago-Peñas and Lago-Peñas (2010) claimed that tax complexity has direct and indirect impact on tax morale as it upturns the perceived tax burden. Torgler *et al.* (2008) also showed that tax complexity reduces tax morale. In addition, it increases compliance and administrative costs of tax paying (Hasseldine, 2001).

Although tax complexity has significant impact on the tax morale and compliance behaviour of an individual, it also has an impact on taxpaying behaviour of corporations. Warren (2003) documented that compliance behaviour of majority of UK and Australian small companies is negatively affected by tax complexity. Similar results were also found by many studies: the positive attitude of small businesses

towards tax is negatively affected by tax complexity (Ingraham *et al.*, 2005; Freudenberg *et al.*, 2012; Rametse & Yong, 2009; Tran-Nam & Karlinsky, 2008).

Strader and Fogliasso (1989) examined the tax system of US, Italy, UK, France and Japan and found them to be complex, whereas Netherlands and Sweden are viewed as having a moderate approach to tax complexity. In New Zealand, reformation of a variety of tax systems was considered to simplify the tax complexity of the tax process in mid-1980s (Hasseldine & Bebbington, 1991). In this regard, Tan and Tower (1992) documented the failure of tax authorities in making tax laws simple and comprehensive. The Flesch Reading Ease Index is applied for checking the readability of tax return guides, tax information bulletins, and tax legislations. The Flesch Reading Ease Index ranges from zero (most complex) to one hundred (least complex) to measure the reading difficulty. Tan and Tower (1992) pointed out that there were no positive remarks regarding simplification of tax information bulletins and tax legislations, apart from for the tax return guides. Tan and Tower (1992) further suggested that active writing style and shorter sentences would help people to read tax legislations more easily and gradually it can reduce tax complexity.

Mustafa (1996) observed common perceptions of Malaysian's taxpayers towards SAS implemented by Malaysian tax authority and identified the tax complexity in terms of tax laws ambiguity, much detail in tax laws, and record keeping. These results were consistent with the findings of Long and Swingen (1987) who presented the following causes of tax complexity: record keeping, forms, details, changes, calculations, and ambiguity. Such tax complexity is also found in Australia where tax agents were hired to monitor tax-related issues (McKerchar, 2001, 2003). Furthermore, the study recognized major difficulties in understanding the statements

of Tax Pack 2000, tax return forms, problems in understanding tax rules, and other information by tax authorities regarding tax laws.

Five early reviews in the literature provide a history into possible results of tax complexity. Song and Yarbrough (1978) disregarded the compliance factor in the value of tax complexity; whereas the other four have views that tax complexity could have potential effects on compliance. Of these, two (IRS, 1976; Dean *et al.*, 1980) relate tax complexity and equity. The other two connect tax complexity and opportunity to evade. Among all studies, there were various perspectives in relating tax complexity with several compliance factors.

Song and Yarbrough (1978) developed a survey instrument. It was assumed that equity factors, tax burden on middle-class and tax loopholes are considered to be independent tax compliance factors. Only 13% of the respondents considered tax complexity an issue; however, they concluded by saying that it is no greater an issue than other problems facing many taxpayers. But this conclusion relies on the idea of independent survey of tax issues.

There are conflicting conclusions about the relation between tax complexity and the opportunity for evasion. In illustrating an example, by New York State Bar Association (1972), the committee on tax policy implied an ambiguity of being complex under the current tax law in serving the change in the income tax return of the opulent into the lottery. On the other hand, large number of taxpayers put a faith in the audit deficiencies and the tax complexities to get a significant position and conclusively. This implication is defied by Westat (1980) by arguing the fact that tax complexity exaggerates taxpayer uncertainty in a compliance study by IRS. It can be seen that taxpayers are afraid of IRS, so that this uncertainty is considered a deterrent itself. Additionally, IRS can resolve this uncertainty in tax law.

Different studies expressed different opinions that can illustrate a variety of unverified conflicts and ambiguities in the concept of tax complexities. Tax compliance may be increased by tax complexity because the added uncertainty induces a dread in taxpayers. Otherwise, it may be reduced by tax complexity as it has enough space to afford more evasion chances. Hence, we find many ways in which tax complexity can affect compliance with several forms and features. In this regard, a study by Milliron (1985) helped to affirm the findings of the previous studies, mentioned above. This study consisted of two phases: operational definitions of tax complexity and these definitions were found helpful in the second phase to interrelate the potential factors in four different situations. Phase 1 concluded that operational definitions have four interpretations of tax complexity, which are: readability of the passage, the weakness of law to misuse it, the quantitiveness of the presentation and the nature of the topic (financial versus personal). Phase 2 concluded that tax complexity definitely affects tax reporting positions.

The above discussion suggests that tax complexity is effective to encourage tax morale, attitude towards compliance, and tax compliance behaviour of individuals and corporations. In addition, it has more than one type as identified by the previous research studies. Therefore, it was decided to include tax complexity in tax morale model and it was separated into two dimensions: content tax complexity and compliance tax complexity. Content tax complexity deals with tax complexity of relevant tax laws and tax documents whereas compliance tax complexity relates to the keeping of records, filling tax return forms and then filing them with tax department, and making tax payments. Then, these dimensions are integrated and indicate that the smaller an individual's sense of tax complexity, the greater their tax morale and attitude towards compliance, and the less likely they will be noncompliant.

2.3.7 Self-corruption

Pakistan is facing the most serious issue of contemporary times, ‘Corruption’. Unfortunately, we have no systematic research of this grave challenge, due partially to a lack of effective research tools and the hidden sensitive nature of corruption. Guo (2008) reported that empirical efforts on this matter are usually dependent on subjective surveys or the number of cases found about corruption and the cases punished strictly for corruption every year. Some shrewd studies found ways and processes by which corruption occurs but could not find any mechanism to capture the whole picture of this plague. All these things make it difficult to understand the real image of corruption in Pakistan.

In contemporary studies, we discovered multi-faceted definitions of corruption but none apply to tax complexity appropriately. Some of the definitions have a limited approach that can only penetrate a narrow range of cases whereas some are so broad as to be useless (Waite & Allen, 2003). Intellectual discussions and researches are essential in order to develop a keen understanding of corruption. However, multiple definitions illuminate multiple aspects of this phenomenon (Rumyantseva, 2005).

There is an ample literature that discusses several definitions of corruption that arose from social anthropology. Corruption is referred to as an abuse of power for personal gain (Aguilera & Vadera, 2008). It is a form of unethical or dishonest conduct by an individual to acquire personal benefit. It may include various activities such as embezzlement and bribery (Kaufmann & Vicente, 2005). Alm *et al.* (2016) claimed that a society is more corrupt where officials seek income through bribes and characterized this activity as ‘corruption’. Senior (2006) defined corruption as an action to provide either goods or a service secretly to a third person in order to influence certain action of third party. The literature also explores some subtle

modulations of corruption such as extortion, graft, nepotism, bribery, and many others (Miller *et al.*, 2001; Parry, 2000; Olivier de Sardan, 1999; Gupta, 1995; Leys, 1965). However, in policymaking, such nuances fade. In essence, Anechiarico and Jacobs (1996) defined corruption as abuse of authority for material benefits. Nye (1967) has also provided a similar definition that corruption is a violation of legal barriers that are established between private interests and public office for personal pockets. Explicitly, the most virtuous point in the above definition is to analyse the conflicting separation of private and public interests. Additionally, Jain (2001) defined corruption as the exchange of money for power and it is rooted in some public positions. This definition also has some alternative possibilities such as the exchange of power for power, reflecting another form of corruption.

Corruption has become a universal fact almost all over the world. The Corruption Perception Index (CPI) offers a composite whole indicating corruption among business experts (developed by TI, 2005). It reports the perception level about corruption among 150 countries in the form of a league table. It is no surprise that Southern countries, particularly African countries, are found at the bottom of the league while Scandinavian countries top the league. Iceland topped whereas Bangladesh and Chad had the distinction of coming last in the CPI survey league, 2005. The bitter fact is that these measurements are only based on perceptions, not on the practices of corruption. Harrison (2007) described some facts that this above league can share some negative aspects of corruption worldwide. In addition, CPI has been criticized and has a number of significant failures (Galtung, 2005). It relies on inaccurate, narrow and baseless definitions of corruption and draws its surveys and data from an ignorant source. TI now offers Global Corruption Barometer and Bribe-Payers Index. The Global Corruption Barometer targeted 55,000 people to hear their

perceptions about corruption among 69 countries in 2005. However, this has not been improved and is based on mere perceptions.

Guo (2008) had brilliant data on corruption (594 major corruption cases) from media reports, published material and official files and developed 31 indicators to extract data from selected corruption cases. He presented three tools that may help in estimating real corruption situation in society, which are: a) a way of measuring institutional loopholes facilitating corruption, b) concept of corruption latency period, c) and indicator for cumulative number of cases. In the years 1989–1992, corruption is specifically influenced by law enforcement and deep reforms. Corruption cases have increased due to prolonged latency period and this issue became graver and more complex. However, economic transitions affected this series after 1992. Although some of these circumstances are not so novel, there is some new evidence.

Wu and Teng (2005) adopted a different approach to get a range into the determinants of tax compliance through developing an index for 58 countries over 1996–2000. They used cross-country data collection providing developed evidence for compliance. Their study indicated that tax rates affect compliance negatively. Tax compliance is more dependent on government expenditures as the level of compliance increases with the efficiency of government while the more corrupt a government is perceived to be, the lower the level of compliance. Within the same study, another accomplished review reports the conflict of high or low political rights between Singapore and Philippines. Singapore has high government efficiency with lower degree of corruption and least noncompliance, consequently touches on low political rights, whereas Philippines has opposite degrees: low government efficiency, high degree of corruption and more noncompliance. Smith (1992) stated that public thoughts about corrupt government are not identical to the understanding of fair tax

system; the corruption among governmental powers reduces taxpayers' trust in government, consequently, it results in low compliance. Shleifer and Vishny (1993) also reported negative relationship between corruption and tax compliance.

Corruption does not only have relationship with tax compliance but also has significant association with tax morale of individuals. For instance, Chariye (2016) conducted a study to examine the impact of corruption on tax morale of individuals. They used a structured questionnaire to collect data from taxpayers of corporations. They found a significant negative correlation between corruption and tax morale of taxpayer. These findings are also consistent with Daude *et al.* (2013) and they further reported that individuals who perceive more corruption have lower tax morale. Similarly, Jahnke and Hannover (2015) reported that corruption significantly reduces taxpayers' willingness to pay taxes.

The above discussion showed that corruption has a significant negative impact on tax compliance (Alon & Hageman, 2012; Pashev, 2006; Picur & Riahi-Belkaoui, 2006; Wu & Teng, 2005; Shleifer & Vishny, 1993; Smith, 1992), and tax morale (Chariye, 2016; Jahnke & Hannover, 2015; Daude *et al.*, 2013; Torgler, 2004) but no evidence is found in the context of Pakistan. Therefore, it was decided to include corruption perception in tax morale model. Thus, it is indicated that the greater the individual's sense of perceived corruption, the less likely they will have tax morale and positive attitude towards compliance, and will be more noncompliant.

2.3.8 Tax awareness

Awareness is an ability or state to feel, perceive, or be conscious of sensory patterns, objects, or events. Tax awareness, on the other hand, is defined as a situation when an individual understands the process of tax calculation and payment of tax liability (Andreas & Savitri, 2015). In general, tax awareness creates tax morality in

individuals and in order to enhance voluntary tax compliance and increase tax revenues, tax awareness is necessary. Individuals feel tax payment to be their moral obligation as well as the civic duty of every citizen (Siahaan, 2010); individuals who have a greater level of tax awareness have higher tax compliance (Ahmad *et al.*, 2007) and positive attitude towards tax system (Domstein, 1987).

McKerchar (2007) and Eriksen and Fallan (1996) suggested that tax education should be given to taxpayers either through formal program or informal program to facilitate them in completing tax return and cultivate awareness of responsibilities. For instance, a public information program through media channels, facilitators provided training, in-depth tax courses, or workshops on self-employment tax issues, preparing personal and business tax returns, recordkeeping, starting a business, and filling tax returns are likely to be helpful to educate self-employed individuals and small business owners. Suryadi (2006) identified four indicators that may help to increase tax awareness: *a*) learn about taxpayers' characteristics; *b*) build positive perception of tax obligation; *c*) improve taxpayers' knowledge of tax laws; and *d*) periodic tax socialization.

Previous studies supported the finding that there is a significant relationship between tax awareness and compliance behaviour (Ahmad *et al.*, 2007). Harris (1989) categorized awareness into two aspects, which are *a*) awareness received through formal or common education particularly relates to matter of course, and *b*) specifically directed awareness to evade tax. Previous literature showed that general awareness through formal education is especially effective for understanding tax laws and regulations (Eriksen & Fallan, 1996) and ability to comply with tax laws and regulations (Singh, 2003).

Tax awareness is not only important in understanding tax laws but also important in attitudes towards compliance. For instance, Eriksen and Fallan (1996) also claimed this mentioned argument and illustrated the influence of tax awareness on attitudes towards compliance along with the importance of tax awareness for better compliance decision, especially in a SAS. They divided their study into three parts and conducted pre and post testing in Norway through quasi experiment of two student groups. Firstly, they investigated the importance of tax awareness. Secondly, they examined the influence of tax awareness on compliance behaviour. Thirdly, they analysed the role of tax agents in determining a taxpayer's behaviour. One group of students took marketing subjects as elective and another group of students took tax law subject as elective. The findings of Collins *et al.* (1992) contradicted the results of Eriksen and Fallan (1996) where Eriksen and Fallan (1996) found that tax awareness is necessary to reduce tax evasion, improve fairness and equity perception and tax ethics. In addition, they suggested that tax awareness and tax laws should be included as a compulsory course in schools. Lewis (1982) also analysed the connection between attitude during completing tax return and specific tax awareness, and found insufficient tax awareness among taxpayers which led to increase in tax gap (negative economic effects).

Hasseldine and Hite (2003) made a considerable contribution to tax compliance literature and tested goal framing in setting of tax compliance. The variables studied in this research although they did not directly relate to awareness, they did address information about inclination of behaviour and tax laws; hence, these findings contributed to tax awareness literature particularly in regard to how it affects attitude towards tax. They particularly tried to answer whether tax information in

certain assessment year (positively or negatively) affects tax compliance behaviour and focused on research framing presented by Levin *et al.* (1998).

Levin *et al.* (1998) proposed that three goal framing effects: *a*) goal framing; *b*) attribute framing; and *c*) risky choice framing. First, goal framing deals with the individual's behaviour in response to persuasive communication by referent group. Second, in attribute framing, when a single attribute, either negative or positive, is framed, it will influence whole compliance behaviour (i.e. regardless of framing manipulation, every consumer of a certain product may have his/her own perception about that product). Third, in risky choice framing, every decision choice by a taxpayer may involve different levels of risks. Hasseldine and Hite (2003) postulated that: *a*) tax compliance or tax reporting behaviour of men will be different from women after reading persuasive communication, and *b*) tax compliance behaviour will be different between taxpayers who read positive framed persuasive communication and those taxpayers who read negative framed communication. A questionnaire survey was used to collect data as sponsored by Dillman (1978). Attitude towards noncompliance was included as controlled variable in the study and dependent variable measured whether individuals illegally omit cash incomes. In this regard, Eriksen and Fallan (1996) suggested that:

...a successful means of preventing tax evasion is to provide more tax awareness to larger segment of society in order to improve tax ethics and people's conception of the fairness of the tax system.

It would be a step in the right direction to make teaching in tax law and tax awareness as a compulsory part of social science teaching in the schools (p. 399).

The above discussion showed that tax awareness is effective to encourage tax compliance behaviour (Abdul-Razak & Adafula, 2013; Vadde & Gundarapu, 2012; Ahmad *et al.*, 2007; Hasseldine & Hite, 2003; Singh, 2003; Eriksen & Fallan, 1996), level of tax morale (Siahaan, 2010), and attitude towards compliance (Hasseldine & Hite, 2003; Domstein, 1987; Lewis, 1982). Therefore, it was decided to include tax awareness perception in tax morale model, specifically in context of Pakistan regarding income tax non-filer entrepreneurs of SMEs. Thus, the greater the individuals' sense of perceived tax awareness, the greater their tax morale and positive attitude towards compliance, and the less likely that they will be noncompliant.

2.3.9 Attitude towards compliance

Attitude towards compliance (noncompliance) behaviour is one of the key factors of TPB. Research regarding tax compliance refers to attitude towards behaviour as attitude towards compliance with tax liabilities or obligations. Cullis and Lewis (1997) presented the significance of attitude with reference to compliance with tax laws by reviewing three approaches in regard to taxpayer decision to either pay or not to pay tax. In their research, it was found that compliance decision of taxpayers is primarily based on their morals, perceptions, attitudes, and values. They also described that a positive attitude towards compliance further leads to higher tax compliance. An empirical research conducted by Hanno and Violette (1996) had similar findings that revealed that attitude towards tax compliance is positively associated with compliance behaviour. The research involved 73 college students who knew the process or method of filing tax returns.

Trivedi *et al.* (2005) studied both tax compliance and noncompliance behaviour under TPB in Canada. They also targeted university students by utilizing

both experimental and survey design. Their findings were similar in respect of attitude and compliance behaviour to those of Hanno and Violette (1996). Additionally, these results further supported the findings of Elffers *et al.* (1987) where both attitudes towards compliance and intention to comply were found to be positively associated with each other. Kasipillai and Jabbar (2003) identified that attitude towards compliance is important for significant income reporting behaviour specifically in Malaysia. Loo *et al.* (2008, 2009) also found a positive impact of favourable attitude on compliance behaviour in their research that utilized mixed method survey designs, case study and experiment. They divided the attitude towards behaviour into two categories showing different impacts of compliance behaviour. They revealed that the degree of confidence of a taxpayer in handling tax-related issues will match their positive behaviour towards tax compliance, and attitude towards tax system administration inversely influences compliance behaviour.

Although attitude towards behaviour has been studied with compliance behaviour in many studies, some other studies have studied attitude with other variables that can be considered determinants of attitude, which are fairness (Devos, 2009; Feld & Frey, 2007; Taylor, 2001; Roberts, 1994), tax awareness (Lewis, 1982), culture (Torgler & Schneider, 2004), trust and pride (Torgler & Schneider, 2005), and education (Hasseldine & Bebbington, 1991). The above discussion showed that attitude towards compliance is effective to encourage tax compliance behaviour and a number of factors contribute to promoting attitude towards compliance and further compliance behaviour. Hence, the present study is interested in analysing the impact of deterrence, moral persuasion, tax fairness, tax complexity, and tax awareness on attitude towards compliance and further impact on intention to comply.

2.3.10 Subjective norms and compliance behaviour

Subjective norm is the second key factor in TPB and compliance behaviour among different countries differs in respect of subjective norms, which has a pivotal role in this connection (Alm *et al.*, 1995). Cialdini and Trost (1998) defined subjective norms as expectations of others and divided subjective norms into four aspects that are personal norms, injunctive norms, descriptive norms, and social norms. Personal norms are defined as one's own self-based standards. Injunctive norms specify what should be done. Descriptive norms specify the development of standards based on observations of other's actual behaviours. Social norms refer to the behaviour pattern in a particular culture, community, or group, accepted by the individuals to conform. Although all four are different by definition, they are actually correlated (Bobek *et al.*, 2007b).

Ajzen (2006), in contrast to Cialdini and Trost (1998), defined subjective norms as descriptive and injunctive. Ajzen (2006) argued that a research instrument should measure both descriptive and injunctive aspects to capture subjective norms. Although there are different thoughts on subjective norms, Bobek (1997), Ebimobower and Elizabeth (2016), Elffers *et al.* (1987), Hanno and Violette (1996), and Shaharuddin *et al.* (2012) found positive impact of subjective norms on compliance behaviour. Such findings were also discussed by Trivedi *et al.* (2005) in Canada but only in the case of compliance behaviour rather than noncompliance situation. Bobek *et al.* (2007b), in a cross-cultural study in US, Singapore, and Australia, concluded that subjective norms and personal norms are most effective to encourage compliance behaviour. However, the results regarding Australia were found to be inconsistent with the results of Kirchler *et al.* (2006), who failed to find a significant relationship between them.

The above discussion showed that subjective norms towards compliance are effective to encourage tax compliance behaviour. Hence, the present study is interested in analysing the impact of subjective norms on intention to comply. Thus, the greater an individual's sense of perceived subjective norms, the greater his or her tax morale and the less likely they will have noncompliance behaviour.

2.3.11 Perceived behavioural control and compliance behaviour

Perceived behaviour control is the third key factor in TPB. As discussed earlier, it has either a direct impact on actual behaviour or indirect impact through intention to comply. PBC has less supporting evidence in regard to impact on compliance behaviour either because of limited use of TPB in many research studies or because it is not used as an independent variable in compliance behavioural model. From the few studies, Trivedi *et al.* (2005) and Bobek (1997), investigated the relationship between PBC and tax compliance and found no significant relationship between them. However, Bobek (1997) pointed out the influence of PBC on intention to comply when behavioural control interacts with intention to comply. Saad (2011) analysed the impact of PBC on intention to comply for two scenarios that are overstating business expenses and understating other incomes in context of Malaysia and New Zealand. He found no significant impact of PBC on intention to comply in case of overstating business expenses for both of the countries whereas found significant impact of PBC on intention to comply in the case of understating other incomes for both of the countries.

The above discussion showed that impact of PBC on compliance behaviour has not yet been studied extensively. Hence, the present study is interested in analysing the impact of PBC on intention to comply in context of Pakistan. Thus, the

greater the individual's sense of PBC, the less likely they will have noncompliance behaviour.

2.4 Conceptual framework

The literature introduced two different schools of thoughts regarding tax compliance behaviour i.e. the traditional economic approach and the behavioural approach. The first school of thought asserted that taxpayers are rational in their behaviour as utility maximisers. Their decision to comply with tax laws or evade is economic trade-off between probability of detection and benefit of evading. In this regard, Allingham and Sadmo's (1972), Becker's (1968) and Gibbs's (1968) models claimed that self-interested taxpayers behave rationally and decide how to report earned incomes to tax authority by way of trading off the cost of evasion against the advantages of evasion that is to say people consider much complicated decision-making process. The second school of thought stated that individuals are not always utility maximisers. They interact in relation to different roles, norms, beliefs, and attitudes. Tversky and Kahneman (1979) challenged that traditional economic approach by arguing that human responses vary; their decisions are not always optimum; and their behaviours are framed by environment in which they trained and socialized. Thus, Alm *et al.* (1992b) argued that individuals have irrational behaviour even though evading and makes more economic sense and stressed to explore tax behaviour. Besides, Antonides (1996) claimed that there are feelings that affect tax behaviour like responsibility, revenge between people, malice, hatred, anger, altruism and commitment, loyalty, love, and moral considerations; and these are not included in cost or benefit functions.

Heiner (1983, 1990) further added literature on behavioural implications of imperfect choice and asserted that it is an effort to understand dynamic process rather

than the observed behaviour. In analysis, Heiner starts with imperfect decisions and ends up with systematic behaviour. To make behaviour more predictable, there are systematic incentives to regulate choices with rules. Rules limit the choices of potential actions and make easy to predict behaviour. Heiner concluded that imperfect choice can provided theoretical foundation to constitutional economics.

In this dissertation, hence, author assumes that tax non-fillers have irrational behaviour based on behavioural approach and do not follow the complicated decision-making process. Thus, variables used in this dissertation are mostly related to irrational behaviuor.

Tax compliance research based on economic deterrence theories explains compliance through punishment and deterrence (Roth *et al.*, 1989) but these theories remained unsuccessful in capturing the behavioural aspects of compliance; this motivated the researcher to use non-economic or behavioural model to investigate tax compliance behaviour through a range of latent variables affecting tax compliance such as tax morale, perceived deterrence and moral persuasion.

This section presents the proposed conceptual framework of this thesis based on behavioural approach to explain tax compliance.

2.4.1 The proposed conceptual framework and hypotheses

In this thesis, a conceptual framework is proposed to examine the relationships between tax morale, together with other variables, and tax compliance. While a number of studies have been undertaken to date on tax compliance behaviour, this thesis investigates the role of tax morale in the decisions of taxpayers to act or not to act in accordance with tax laws and regulations. For that purpose, the TPB, a dominating theory on human behaviour, is integrated in a conceptual framework along with other factors to analyse the compliance behaviour of individuals. The TPB

hypothesizes that actual behaviour is an outcome of behavioural intention whereas attitude towards behaviour and subjective norms are the determinants of behavioural intention. In addition, TPB postulates that PBC has a direct impact on actual behaviour as well as an indirect impact on actual behaviour passing through the behavioural intention. Previous literature showed that TPB has been proved effective in understanding unethical and ethical behaviours across several disciplines with an adoptable structure by including additional variables to extend the model for further applied research (Smart, 2012; Sommer, 2011; Bobek *et al.*, 2007b; Armitage & Conner, 2001; Ajzen & Driver, 1992). In particular, a limited number of studies used TPB in tax compliance research (Hamid, 2014; Smart, 2012; Trivedi *et al.*, 2004; Bobek & Hatfield, 2001). As per scholar's knowledge, only one study is found, which was conducted by Yucedogru (2016), which used TPB to explore the tax morale of owner-managers of small companies of Turkey but not a single study could be traced that used TPB to examine the tax morale of individual income tax non-filers neither globally nor in the particular context of Pakistan. Thus, the further use of TPB in tax morale research can be claimed to be promising.

The researcher also considers deterrence theory along with theory of moral suasion to further investigate whether or not both deterrence perception and moral persuasion contribute to inspiring tax morale, positive attitude towards compliance, and further their compliance behaviour. Drawing from previous literature, it has been conceptualized that both deterrence perception and moral persuasion are effective to discourage the noncompliance behaviour of taxpayers, but practically no significant influence of moral persuasion was found by Blumenthal *et al.* (2001) and McGraw and Scholtz (1991). For instance, deterrence theory is concerned with sanctions, threats and effects of sanctions (Cuccia, 1994), where increased imposition of severe

penalties and increased possibility of being caught will discourage taxpayers' noncompliance behaviour (Jackson & Milliron, 1986; Pate & Hamilton, 1992). On the other hand, moral persuasion is concerned with influences and appeals to citizens in order to promote voluntary income tax compliance behaviour through informing citizens about personal consequences of noncompliance, whether legal, ethical, or social. The important premise drawn from deterrence theory and moral suasion theory is: both perceived deterrence and moral appeals by the tax authorities not only influence the sense of moral obligation to comply with tax obligations but also promote a positive attitude towards compliance and further encourage tax compliance behaviour.

In short, a review of TPB, deterrence theory, and moral suasion theory indicates that all of the three theories lead to forming the determinants of intention towards compliance and subsequently actual behaviour. On the basis of that understanding, the premises of all of the theories are combined to inspect the impact of tax morale, attitude towards compliance, subjective norms towards compliance, PBC towards compliance, perceived deterrence, and moral persuasion on compliance behaviour along with the effect of perceived deterrence and moral persuasion on attitude towards compliance. This thesis adopts behavioural intention as proxy of actual compliance behaviour because of the difficulty in gathering data on actual compliance behaviour (sensitive issue to taxpayers). Such practice is common in previous empirical studies in application of TPB (Saad, 2011; Blanchard *et al.*, 2008; Paris & Broucke, 2008; Simsekoglu & Lajunen, 2008; Warner & Aberg, 2008; French *et al.*, 2005) and, indeed, a strong relationship between behavioural intention towards compliance and actual compliance behaviour has also been demonstrated by some previous studies (Dean *et al.*, 2007; Kraft *et al.*, 2005).

Besides the elements of TPB, deterrence theory, and theory of moral persuasion, four other variables are integrated in the tax morale model of this thesis: tax fairness, tax complexity, perceived corruption, and tax awareness. These four variables are considered important for enhancing sense of moral obligation to comply with tax obligation, promoting positive attitude towards compliance, and encouraging tax compliance behaviour. A review of past literature in Chapter 2 clearly indicates the impact of these four variables on tax morale, attitude towards compliance, and compliance behaviour.

Although the factors under investigation have been examined in past studies, this thesis is different in various ways. First, TPB has been utilized in various disciplines such as criminology, child education and psychology, but limited research is available for tax compliance discipline whereas only one study is found that deals with tax morale discipline (Yucedogru, 2016).

Second, perceived deterrence, moral persuasion, tax fairness, tax complexity, perceived corruption, and tax awareness have been widely investigated separately in explaining compliance behaviour. This thesis examines, rather than reinvestigating already confirmed associations, how these factors affect tax morale, attitude towards compliance, and subsequently compliance behaviour. In simple terms, the present study considers tax morale and attitude towards compliance as mediating variables of perceived deterrence, moral persuasion, tax fairness, tax complexity, perceived corruption and tax awareness with respect to behavioural intention.

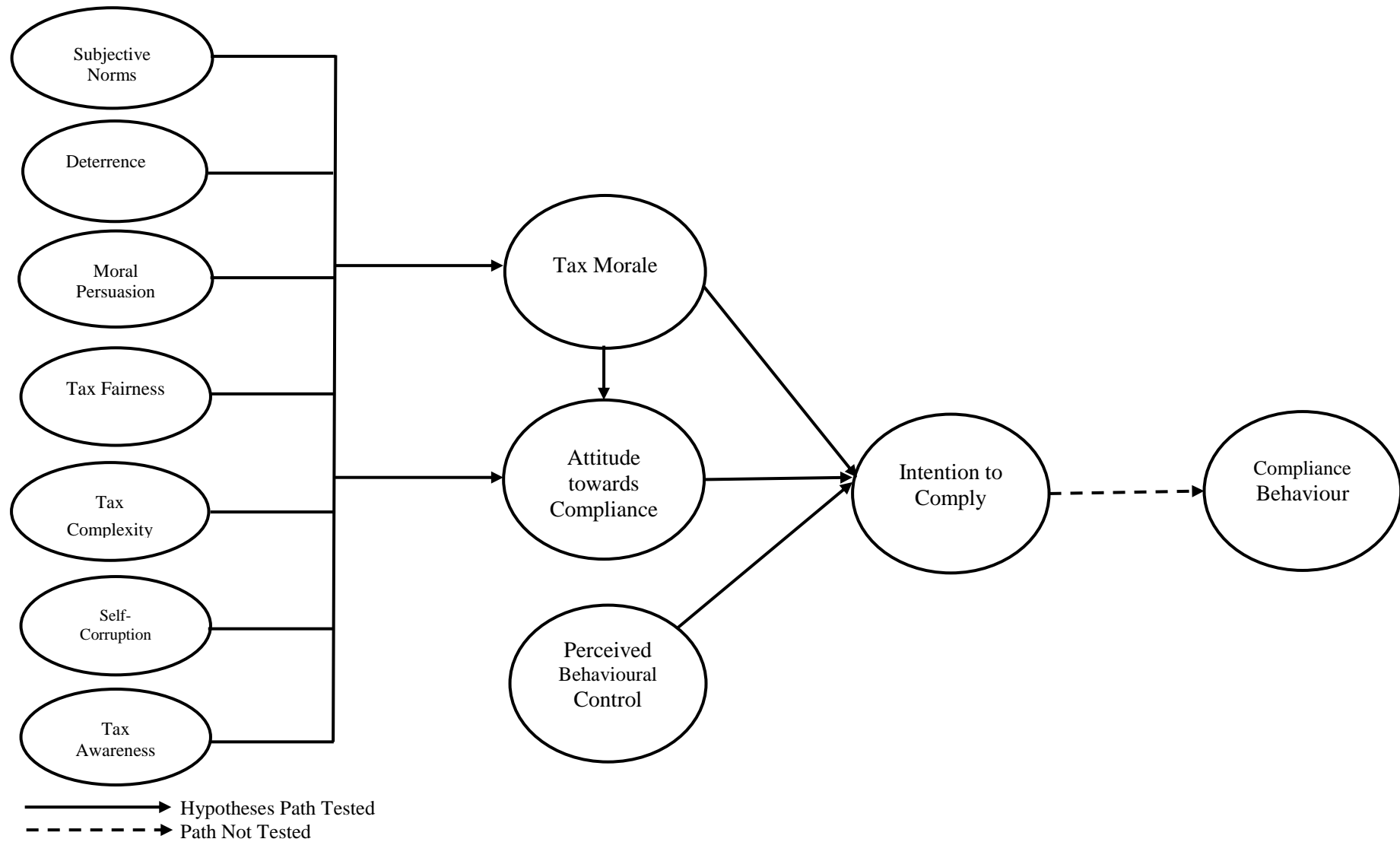
Third, the above-mentioned factors have been studied independently in previous research studies while this is the first study which proposes a full conceptual model integrating the elements of TPB, deterrence theory and theory of moral suasion along with tax fairness, tax complexity, perceived corruption and tax awareness.

Yucedogru (2016) utilized TPB in tax morale research in the context of Turkey but he defined tax morale as intrinsic motivation to pay tax and used it as a proxy of behavioural intention, whereas in this research tax morale is defined as moral obligation to pay tax and it is utilized as an external variable for explaining tax compliance behaviour of income tax non-filer SME entrepreneurs of Pakistan.

Last, but not least, this is the first comprehensive study based on TPB and proposing a full conceptual model of tax morale and compliance behaviour conducted in the relatively rarely examined jurisdiction of Pakistan. The conceptual framework is shown in Figure 3.

In a nutshell, the integration of TPB, deterrence theory, theory of moral persuasion and variables are supposed to deliver a better understanding of compliance behaviour in general and specifically for Pakistan and proposes that: (1) behavioural intention of individual tax non-filers depends on tax morale, attitude towards compliance, subjective norms towards compliance, PBC towards compliance, perceived deterrence, moral persuasion, tax fairness, tax complexity, perceived corruption, and tax awareness; (2) tax morale is influenced by subjective norms towards compliance, perceived deterrence, moral persuasion, tax fairness, tax complexity, perceived corruption, and tax awareness; and (3) attitude towards compliance is influenced by perceived deterrence, moral persuasion, tax fairness, tax complexity, perceived corruption, and tax awareness.

Figure 3 Conceptual Framework



2.4.2 Hypotheses development

Based on the literature review and proposed conceptual framework, 33 hypotheses given below are proposed to be tested.

H_{1a}: There is a positive relationship between subjective norms and attitude towards compliance.

H_{1b}: Attitude towards compliance mediates the relationship between subjective norms and intention to comply.

H_{1c}: There is a positive relationship between subjective norms and tax morale.

H_{1d}: Tax morale mediates the relationship between subjective norms and intention to comply.

H₂: There is a positive relationship between attitude towards compliance and intention to comply.

H₃: There is a positive relationship between tax morale and intention to comply.

H₄: There is a positive relationship between perceived behavioural control and intention to comply.

H_{5a}: There is a positive relationship between deterrence and attitude towards compliance.

H_{5b}: Attitude towards compliance mediates the relationship between deterrence and intention to comply.

H_{5c}: There is a positive relationship between deterrence and tax morale.

H_{5d}: Tax morale mediates the relationship between deterrence and intention to comply.

H_{6a}: There is a positive relationship between moral persuasion and attitude towards compliance.

H_{6b}: Attitude towards compliance mediates the relationship between moral persuasion and intention to comply.

H_{6c}: There is a positive relationship between moral persuasion and tax morale.

H_{6d}: Tax morale mediates the relationship between moral persuasion and intention to comply.

H_{7a}: There is a positive relationship between tax awareness and attitude towards compliance.

H_{7b}: Attitude towards compliance mediates the relationship between tax awareness and intention to comply.

H_{7c}: There is a positive relationship between tax awareness and tax morale.

H_{7d}: Tax morale mediates the relationship between tax awareness and intention to comply.

H_{8a}: There is a negative relationship between tax complexity and attitude towards compliance.

H_{8b}: Attitude towards compliance mediates the relationship between tax complexity and intention to comply.

H_{8c}: There is a negative relationship between tax complexity and tax morale.

H_{8d}: Tax morale mediates the relationship between tax complexity and intention to comply.

H_{9a}: There is a positive relationship between tax fairness and attitude towards compliance.

H_{9b}: Attitude towards compliance mediates the relationship between tax fairness and intention to comply.

H_{9c}: There is a positive relationship between tax fairness and tax morale.

H_{9d}: Tax morale mediates the relationship between tax fairness and intention to comply.

H_{10a}: There is a negative relationship between self-corruption and attitude towards compliance.

H_{10b}: Attitude towards compliance mediates the relationship between self-corruption and intention to comply.

H_{10c}: There is a negative relationship between self-perceived corruption and tax morale.

H_{10d}: Tax morale mediates the relationship between self-perceived corruption and intention to comply.

H_{11a}: There is a positive relationship between tax morale and attitude towards compliance.

H_{11b}: Attitude towards compliance mediates the relationship between tax morale and intention to comply.

2.5 Chapter summary

This chapter describes the two leading theories on human behaviour along with deterrence theory and theory of moral suasion which shape the background of this thesis. The TRA and TPB are used to predict the behavioural intentions of individuals. The TRA proposes that actual behaviour is determined through behavioural intention which is based on attitude and subjective norms towards a particular behaviour. The TPB is an extension of TRA, which proposes that PBC towards behaviour is also a determinant of behavioural intentions along with attitude and subjective norms towards behaviour. In this thesis, the adoption of TPB over TRA is mainly due to PBC factor that has a key contribution in explaining compliance behaviour.

A review of literature on tax morale, tax fairness, deterrence perception, moral persuasion, tax complexity, self-corruption, and tax awareness along with the elements of TPB show mixed but interesting results. For instance, tax morale has a significant positive relationship with compliance behaviour primarily supported by previous empirical research studies. Tax fairness perception has a significant positive relationship with compliance behaviour but contrary evidence is also available. These contradictory results might be attributable to different background theories, definitions, proxies, and measurement scales of studied variables in these studies. In sum, review of tax morale, tax compliance, and TPB literature offers an avenue to present the conceptual framework of this thesis in the following chapter.

CHAPTER 3: METHODOLOGY

This chapter describes research design, participants, instrumentation, procedures and statistical techniques employed to test the hypotheses in this study in order to examine the relationship between tax compliance determinants and tax compliance behaviour with mediating mechanism of tax morale and attitude. This chapter is organized in six sections: (a) research approach, (b) design of questionnaire and pilot study, (c) data sampling, (d) ethical considerations, (e) data analysis and (f) chapter summary.

The first section (3.1) provides insights into research paradigm and employed methods. The next section (3.2) presents measure of survey, building questionnaire, instrument validity and reliability and pilot testing. Section 3.3 explains target population, sampling frame, sampling technique, sample size, data collection procedure and validation of the sample. In the fourth section (3.4), ethical considerations are addressed. Section 3.5 elaborates data analysis and last section (3.6) is a chapter summary.

3.1 Research approach

Specific assumptions are important for inquiry of work by a researcher as he or she determines procedures to conduct research work (Creswell, 2003, 2009). Generally, researchers define the nature of enquiry in terms of the following philosophical assumptions: ontology (what the knowledge is), epistemology (how it is known), axiology (what values go into it) and rhetoric (how to write about it) (Lincoln & Guba, 2000; TerreBlanche & Durrheim, 1999; Mertens, 1998; Creswell, 1994). Thomas Kuhn (1962) defined a paradigm as “an integrated cluster of substantive concepts, variables and problems attached with corresponding methodological approaches and tools....” It can be summed up as a research culture with a set of beliefs, values and assumptions that a community of researchers has in common

regarding the nature and conduct of research (Kuhn, 1977). The term paradigm originated from Greek word *paradeigma* which means pattern. The selection of a paradigm is important for the researcher as it guides philosophical assumptions, selection of methods, tools, instrument and participants (Denzin and Lincoln, 2000)

A paradigm is a cluster of beliefs and dictates which, for scientists in particular discipline, influence what should be studied, how research should be interpreted (Bryman, 1988). Bazargan (2007) reports that researchers, consciously or unconsciously, employ research paradigm approaches in their research. Mackenzie and Knipe (2006) claimed that a researcher's choice of paradigm is a reflection of his or her motivation, intention and expectation. Consequently, employing and understanding research paradigms is a vital task for researchers. At the same time, a research paradigm is important for the reader so that they can have an understanding about the researcher's predisposition, about how he or she interprets knowledge and how he or she sees it (Rehman, 2013). In other words, a research paradigm provides similar glasses for the reader to see the knowledge precisely as the researcher intends to show it.

There are three generally accepted philosophical perspectives which are used in management, contemporary social and organizational research (Rehman, 2013). They are constructivism, positivism/post-positivism and pragmatism. Constructivism is based on subjective meaning (multiple realities), inductive logic and qualitative methods (Creswell, 2003). Furthermore, individuals seek understanding of the world where they live and work (Neuman, 2000; Crotty, 1998; Berger & Luckmann, 1967).

The positivist paradigm is based on the philosophical ideas of French Philosopher August Comte and Comte declared observation and reason as the best

means for understanding human behaviour. Positivism holds a scientific approach to knowledge (Bryman, 2004), numeric measurement of objective reality that exists in the world (Creswell, 2003) and is based on hypothetic-deductive and quantitative methods (Cacioppo *et al.*, 2004). Hwang (1996) associated positivism with broad variety of practices and theories, such as cognitive science, Comtean-type positivism, behaviourism, logical positivism and empiricism. Positivistic paradigm continued to influence academic research for a long period of time especially in the latter half of twentieth century. Its dominancy was challenged by two alternative traditions – interpretive constructionism and critical postmodernism – due to its lack of subjectivity in interpreting social reality. Gephart (1999) criticized positivism and proposed that critical postmodernism and constructionism offer alternate methodological, theoretical and practical approaches to research. However, positivistic prefer positivism by observing objectives of the study (Fuchs, 2017; Weiss, 2017).

Quantitative approach is more controlled, highly formalized, closely related to range defined by social sciences and more explicitly controlled than the qualitative approach (Creswell & Clark, 2007; Kumar & Phrommathed, 2005; Leedy & Ormrod, 2005). On the other hand, procedures in qualitative approach are less strictly formalized and scope is undefined (Mouton & Marais, 1990). Due to the benefits of stated two approaches, the pragmatic approach is necessitated (Murphy, 1990; Creswell, 2003). Pragmatism is the combination of constructivism and positivism allowing flexibility to researchers in understanding the problem (Pansiri, 2005; Badley, 2003).

3.1.1 Deciding the research paradigm

The selection of an appropriate paradigm is based on the research problem that needs to be addressing (Creswell, 2003). For instance, to test a theory or explanation, or if the problem is to identify or examine the factors that have an impact on outcome or understanding the best predictors, then the application of a positivism/quantitative approach is appropriate (Creswell, 2003). On the other side, if a phenomenon or concept needs to be explored or understood, then a constructivism/qualitative approach is best. However, if the researcher wants to explore a phenomenon and then generalize it by using sequential, concurrent or transformative procedures, pragmatism/mixed method is useful (Creswell, 2003). Hence, appropriateness of research design affects how efficiently and effectively the objectives of the study are accomplished (Neuman & Kreuger, 2003; Mertens, 1997).

The objective of this study is to propose and test a model on the mediating relationship between tax determinants and tax compliance behaviour of individual tax evaders (non-filers) in Pakistan and get generalized and comparable results. Moreover, the concepts of tax determinants, tax compliance and tax evasion are well established and have been understood in this study context. The scenario leads to a quantitative approach under which the paradigm of positivism is the most suitable method for achieving the goals of this study.

There are three general types of studies in quantitative research: descriptive, associational and intervention studies. Descriptive research approach describes the current status of phenomenon or variable. Fraenkel and Wallen (2000) further added that this type explores problem and summarizes characteristics of sample, and attitudes and behaviour of the problem. Data collection is through content analysis, observational or surveyor, using qualitative methods. A common study design

involves longitudinal, cross-sectional, descriptive and comparative approaches (CIRT, 2017). Fraenkel and Wallen (2000) reported that associational research is related to examining relationship between the variables and further categorized it into correlational and causal comparative research. In correlational research, existence of relationship between variables is examined within a natural environment and no attempt is made to manipulate the environment and respondents. Whereas, causal comparative engages in careful selection of groups with known differences and attempts to control the extraneous variables that may cause the differences. Experimental or manipulation studies, suitable for examining causation and testing theoretical models, allow researchers to introduce changes in environment and participants which ultimately affect the outcomes of interest (Fraenkel & Wallen, 2000).

Summing up, several approaches are available in quantitative methods. So far, the goal of the study is to examine the relationship between tax compliance determinants (independent variable) and tax compliance behaviour (dependent variable) involving the mediating effects of tax morale and attitude towards compliance, the associational approach has been applied in the study as it is the most suitable in the given context of this study.

3.1.2 Employed methods

The ontological stance of this study is to make an objective causal prediction by testing proposed model of tax compliance determinants and tax compliance behaviour relationship with help of already established TPB. Creswell (2003) suggested that it is vital to decide on the strategy of inquiry to get specific directions for the procedures to be employed in research design. Experimental and survey research are two widely associated strategies in quantitative approach. Keppel (1991) proposed that

experiment research strategy includes “random assignment of subject to treatment conditions and includes quasi-experiment”. Only single-subject designs are addressed in experimental strategy.

Surveys are the most commonly used and oldest method of data collection in social sciences studies (Neuman, 1997; Ary *et al.*, 1996). Bryman (2011) stated that the general purpose of surveys is to collect first hand quantified data to test the hypotheses developed from research questions. McKerchar (2010) reported another benefit of surveys: in quantitative research surveys are useful for generalization about populations that are beyond limit of direct observations. Surveys are employed to explain cause and affect relationship between social concepts, explore population demographics and form a basis for explanatory study (Oats, 2012). For data collection, it involves a questionnaire and structured interview either in cross-sectional or longitudinal timeframes (Babbie, 1990). One of the main features of survey research is the description of specific aspects of a given population quantitatively (Kramer, 1991). As a method of inquiry, by considering the strength of survey research strategy, it has been widely used in tax studies (Zaidi *et al.*, 2017; Yucedogru, 2016; Mohamed, 2016; Pickhardt & Prinz, 2014; Saad, 2011; Benk *et al.*, 2011; Ramayah *et al.*, 2009; Jones, 2009.; Cummings *et al.*, 2009, 2006; Bobek *et al.*, 2007a; Bobek & Hatfield, 2003; Hansford *et al.*, 2003; Jackson & Milliron, 1986; Song & Yarbrough, 1978), the current study employed the survey method as it serves the goals of the present study best by enabling the researcher to collect data from a large sample.

Since the objective of this study is to test a theory, the epistemological position for this study is positivism in which I have used the survey method as the strategy of inquiry. Data collection is made through a self-administrated survey. It is a

cross-sectional study involving data collection from the population at specific point of time.

3.2 Design of questionnaire and pilot study

3.2.1 Measures of survey

Measures for nine constructs were adopted from the literature by considering the possible difficulties of building a questionnaire for a large number of constructs. However, while choosing measures from the literature, two particular precautions are to be observed (Yucedogru, 2016). Firstly, measures for the constructs should be preferably those which were used and verified in previous tax studies, although similar measures can be found in studies of other areas. Secondly, to ensure suitable measure for the constructs, definitions of the constructs were taken as a starting point so that the full domain of the constructs should be covered.

Total constructs used in the study were eleven out of which nine constructs were adopted by considering the literature and the remaining two constructs were conceptualized and operationalized. As the conceptual model of this study is based on the TBP, the constructs ‘intention to comply’, ‘subjective norms’, ‘attitude towards compliance’ and ‘PBC’ are based on guidelines given by Fishbein and Ajzen (2010) and adopted from Saad (2011). In construct ‘intention to comply’, there is some change of wording and in way of asking questions. ‘Deterrence’ adoption was based on the studies: Sapiei *et al.* (2014), Wenzel (2004) and Christensen and Hite (1997).

The construct ‘tax awareness’ was adopted from Rajmane (2014) and ‘tax complexity’ was taken as guidance from Christensen *et al.* (1994) adopted from Saad (2011). ‘Tax fairness’ was used as per guidance of Gilligan and Richardson (2005) and adopted. ‘Tax morale’ was taken and adopted from Samuel (2011) and Torgler (2003c).

Minor modifications to some scales were made with the objective to enhance their practicability for research's scope and to adapt them to the population. In survey research, modification of a survey is acceptable and common practice (Lavrakas, 2008; Sapsford, 2006; Fowler, 1993). Nevertheless, the minor modifications were limited to five constructs, it was ensured that reliability and validity of established scales must not be compromised. The first modification was made with respect to Likert scale which was modified to seven points with objective of uniformity and convenience of the respondents throughout the survey. The constructs, 'deterrence', 'tax awareness', 'tax fairness' and 'tax morale' were placed at seven-point Likert scale response format. Lastly, considering the way of asking questions is modified in the case of 'intention to comply', original items were placed in a scenario (Saad, 2011), but in this study, these items are asked in a general situation without changing their meaning.

Two constructs were conceptualized and operationalized by considering relevant literature on tax subject. Moral suasion is a technique used by policymakers to inspire the intrinsic motivation of individuals to generate prosocial behaviour (Ito *et al.*, 2017). It is defined as a strategy used by authorities to influence, but not pressure, individuals and institutions into adhering to their guidelines and policy (Omoregie, 2013). For instance, regulators have widely used moral suasion for law enforcement (Fellner *et al.*, 2013), discouraging tax evasion (Dwenger *et al.*, 2016), incentivizing workers (Dal-Bo & Dal-Bo, 2014), air quality preservation (Cutter & Neidell, 2009), and energy conservation (Costa & Gerard, 2015; Reiss & White, 2008). It is also defined as normative appeals to taxpayers informing taxpayers about personal consequences of noncompliance, whether legal, ethical, or social, and named as friendly persuasion (Chung & Trivedi, 2003). In this thesis, it is operationalized as

moral persuasion, which refers to influences and appeals to promote voluntary income tax compliance behaviour through informing citizens about personal consequences of noncompliance.

Corruption is referred to as the abuse of power for personal gain (Aguilera & Vadera, 2008). It is a form of unethical or dishonest conduct by an individual to acquire personal benefit. It may include various activities such as embezzlement and bribery (Kaufmann & Vicente, 2005). Alm *et al.* (2016) claimed that a society is more corrupt where officials seek income through bribes and characterized this activity as ‘corruption’. Senior (2006) defined corruption as an action to provide either goods or a service secretly to a third person in order to influence certain actions of a third party. In this thesis, corruption is termed as self-corruption perception which is an individual or taxpayer telling a lie to taxation officer regarding his/her income to pay less amount of tax by the use of networking or bribery to avoid official procedures of tax compliance or escape from any type of legal consequences if tax department caught him/her due to non-filing of income tax return.

3.2.2. The questionnaire

The questionnaire is divided into four parts. The first part consists of four screening questions developed on the basis of general requirements to be a taxpayer under the land laws (i.e. Income Tax Ordinance 2001). The population of the study is persons who fall the under the definition of taxpayer even though they do not file their annual income tax returns (non-filer). Income Tax Ordinance 2001, section 2(66) clearly specifies the conditions for taxpayers and hence for taxpayer it is mandatory to file his or her annual income tax return. The researcher’s concern in asking screening questions was to identify only taxpayers with non-filer status. The screening questions

were placed at the start of questionnaire to check that the respondent falls under the study population so that a decision to proceed further can be taken. The second part of questionnaire consisted of 44 items of constructs on seven-point Likert scale response format (see Appendix A – Survey measures). In the third portion of questionnaire, demographic items were placed. Demographic variables enlighten the understanding of sample structure and in the literature they are considered an important segment of surveys (Sapsford, 2006). The study included five demographic questions with the intention to cover more diversified information regarding the targeted population. Demographic items were placed after the constructs as a measure to reduce dropouts. The last part of the survey is two descriptive questions that were added after the pilot study that were highlighted by the respondents. These questions are related to assessment of tax department efficiency and enforceability.

Moreover, the survey also includes introductory information at the start of the survey stating the aims of the study and addressing confidentiality issues, which some participants might have. Along with introductory information, a cover letter was also attached providing brief information about the researcher and stating tentative time required completing the instrument (see Appendix B – cover letter). The questionnaire was originally framed in English language, but by considering respondent convenience, educational level, and native language, the instrument was translated in Urdu language by observing all related protocols. The English and Urdu language versions of the questionnaire are attached in Appendices C and D, respectively.

3.2.3 Instrument validity and reliability

Validity, in the broad sense of trustworthiness or credibility, is a fundamental concept for all research (Maxwell, 2016); it examines whether or not an indicator is measuring the same concept for which it was devised (Bryman & Bell, 2003). In other words,

validity refers to the accuracy of a scale or set of measures in representing the concept of interest (Hair *et al.*, 1998). This study ensured face, content and construct validity. The face and content validity of the constructs used in the instrument have already been established (Sapiei *et al.*, 2014; Rajmane, 2014; Omoregie, 2013; (Anti-Corruption Commission, 2012; Saad, 2011; Samuel, 2011; Fishbein & Ajzen, 2010; Gilligan & Richardson, 2005; Wenzel, 2004; Torgler, 2003c; Christensen & Hite, 1997; Christensen *et al.*, 1994).

Creswell (2014) described construct validity as, “do items measure hypothetical constructs or concepts?” Schwab (1980) defined it as “representing the correspondence between a construct (conceptual definition of a variable) and the operational procedure to measure the construct”. In quantitative research, construct validity (both discriminant and convergent) is important. Discriminant validity refers to the extent to which a construct differs from other constructs and to what extent it captures the intended phenomenon that is not represented by other constructs (Yucedogru, 2016). In simple words, it is the uniqueness of a construct (Hair *et al.*, 2011, 2014; Kline, 2011). Convergent validity examines to what extent items of a construct correlate with other items of a construct (Kline, 2011; Hair *et al.*, 2014). Straub *et al.* (2004) explained that construct validity (both discriminant and convergent) exists if latent root criterion (eigenvalue) is equal to or above 1, with a loading of at least 0.40 and no cross-loading of items above 0.4 (Straub *et al.*, 2004). To address issues related to construct validity (discriminant and convergent) and unidimensionality of the constructs, this study employed factor analysis utilizing principal component analysis (PCA) technique with varimax rotation.

Reliability refers to the consistency of a measure of a concept (Bryman & Bell, 2007). In other words, reliability is concerned with the extent the instrument is

consistent while measuring whatever it is supposed to measure (Ary *et al.*, 1996). Reliability occupies an important role to illustrate the consistency or the repeatability of the measures and determine the quality of the measurement.

For this study, internal reliability or internal consistency of items is measured to ensure the reliability of the instrument. For this purpose, the commonly used Cronbach's alpha method is employed to test reliability. Cronbach's alpha calculates the average of all possible split half reliability coefficients.

The reliability and validity of the constructs used in the instrument (except moral persuasion and self-corruption) have already been established (Sapiei *et al.*, 2014; Rajmane, 2014; Saad, 2011; Samuel, 2011; Fishbein & Ajzen, 2010; Gilligan & Richardson, 2005; Wenzel, 2004; Torgler, 2003c; Christensen & Hite, 1997; Christensen *et al.*, 1994). Moral persuasion was conceptualized from Omoregie (2013) and self-corruption was conceptualized from Anti-Corruption Commission, (2012) and operationalized in this study. Reliability and construct validity of both constructs were tested under the observed protocols.

3.2.4 Pilot testing

Pilot testing is a procedure to improve a survey instrument. Simmons (2008) suggested that a pilot study is commonly used to test preliminary version of a questionnaire and that it might provide an indication of whether a proposed instrument is appropriate. Furthermore, it indicates the surveying process and might give advance warning about potential problems during the actual fieldwork (Zikmund, 2003). In the process, some items may have to be rewritten and questionnaire may have to be restructured in order to meet the research objectives. The questionnaire was originally prepared in English language but it is an uncommon language amongst the targeted population. Therefore, the questionnaire was translated into the vernacular

language of the targeted population. In this process, to ensure that the validity of the items was not compromised during the translation process, more attention was given to the wording used in questions and the clarity of instructions. Three stages were followed. Firstly, the initial questionnaire was reviewed by two experts of taxation and research methodology. Secondly, the questionnaire was sent to a small group of taxpayers for feedback. Some items and the wording of the items were changed based on the feedback. Bryman (2011) and Lavrakas (2008) reported that feedback is necessary to assure that translation of the items is adequate, the items obtained the responses required, the wording is not ambiguous and is free of errors, the guidelines of the instrument are clear and the flow of questionnaire is appropriate. Finally, the pretested survey instrument was translated from English language to the Urdu language to aid respondents. The whole translation process was completed with the help of two experts of tax and language to ensure the wording and concepts of the instrument were identical and meaningful. In addition, the questionnaire was distributed amongst 48 potential respondents to validate the reliability of the Urdu version of the questionnaire.

For this sample, the values of Cronbach's coefficient alpha ranged from .547 to .948 which indicates the high reliability and internal consistency of the multi-item construct: intention to comply (alpha = .832), subjective norms (alpha = .746), attitude towards compliance (alpha = .773), PBC (alpha = .548), deterrence (alpha = .867), moral persuasion (alpha = .646), tax awareness (alpha = .948), tax complexity (alpha = .547), tax fairness (alpha = .915), self-corruption (alpha = .860) and tax morale (alpha = .605). High Cronbach's alpha values depict higher internal consistency and same content measurement universally of construct. Alpha value 0.3 is threshold point (Griffiee, 2012). Taber (2017) reported that low Cronbach's value is

acceptable in the studies used low number of items and .45 is acceptable and sufficient for further analysis. Nunnally (1967) recommends value 0.5 of Cronbach's coefficient alpha in case of preliminary research. Moreover, to examine the unidimensionality of constructs, PCA with varimax rotation method was conducted and all constructs were within acceptable range. Some items were rewritten on the basis of their recommendations. The final questionnaires in both English and Urdu versions are included in Appendices C and D, respectively.

3.3. Data sampling

Data sampling refers to the acquisition of empirical data (Malhotra, 2012; Selm & Jankowski, 2006). Designing the sampling process is important as it addresses the issues of sampling error and non-sampling errors (Bryman, 2011). For sampling process, a systematic approach is needed as it is one of the important considerations of the study (Yucedogru, 2016). For the purpose of this study, the sampling process used was suggested by Malhotra and Birks (2007) and employed by Yucedogru (2016); it proposes six phases in the sampling design involving:

- a. Defining target population
- b. Listing of sampling frame
- c. Selection of sampling technique
- d. Determining sample size
- e. Execution of sampling process and
- f. Validation of sample quality

3.3.1 Target population

Population is basically, "the universe of units from which the sample is to be selected" (Bryman & Bell, 2007). Sampling process starts with defining target population. Certain criteria are important for identification of target population. The

following criteria were created by bearing in mind the objectives of this study. The participant should be either employed or self-employed in Pakistan, fulfilling the following two conditions:

- i. Falls under the definition of ‘taxpayer’ under section 2(66) of Income Tax Ordinance 2001, and
- ii. Evades tax completely by non-filing his or her annual income tax return.

To be a participant, both the above-mentioned conditions must be met at the same time. For the purpose of condition (i), the said law provides a detailed definition of ‘taxpayer’. For the purpose of this study, and to avoid confusion among participants due to lengthy definition, the following generally prevailing three benchmarks have been used

- i. The individual person owns a motor vehicle having capacity more than 1000cc, or
- ii. The individual owns a certain size of immovable property in the rated area, or
- iii. The individual person, from all sources, earns annual taxable income more than PKR 400,000.

The above stated criteria were implanted through four screening questions asked in the instrument.

3.3.2 Sampling frame

Sampling frame is “the listing of all units in the population from which the sample will be selected” (Bryman & Bell, 2007). It is a detailed listing of units of population as it refers to a source of respondents like a telephone directory. However, although inclusion of all the population in a sampling frame is an ideal situation, it is very

unlikely to occur in real-life situations. Deming (1990) argued that sampling frame decision is a practical and theoretical consideration. In this study, sampling frame is unknown and even not available due to certain reasons. When precise extent of population is unknown, the sampling frame cannot be drawn (Yucedogru, 2016). Moreover, the data about population size and details are not available and inaccessible. A sampling frame might not be possible for some studies (Yucedogru, 2016). The population of this study are such individual persons who are liable to file their income tax returns but they do not file. Such type of population can be categorized into two broad categories.

Employed persons: Individual persons in this category include government and private sector employees having taxable income range with non-filer status. Most of the government sector employees and some of the private sector have other sources of income along with regular source of income (i.e. salary). When they receive salary from their employer, their total annual salary remains below the taxable limit and hence employer neither deducts tax at source and nor are they held liable to deduct tax at source in this case. But when this other income is added to salary income, they may fall under taxable income regime, but they avoid identification. Hence it becomes impossible for any government agency to trace their total income in this scenario when most of the economy is undocumented and hence evaders remain unattended.

Self-employed persons: Owners of small and medium business having taxable income range with non-filer status. Individual persons in this category include retailers, wholesalers, manufacturers, and own services business owners like doctors, lawyers, engineers, software developers, consultants and professionals. Such types of individuals are small or medium businessmen and are the main area of concern with

respect to tax compliance. Moreover, most of the professionals also take advantage of undocumented economy and remain out of reach of tax net.

3.3.3 Sampling technique

Selection of sampling technique is critical for the sampling procedure to obtain a representative sample (Bryman, 2011). Although the literature discusses a wide range of techniques, probability and non-probability sampling method is the most important decision in choosing the sampling technique (Malhotra & Birks, 2007). Babbie (2015) stated that probability sampling depends on random sampling while non-probability sampling depends on the personal judgement of the researcher. Non-probability sampling is an umbrella term under which all types of sampling techniques are covered which are not conducted under the cannons of probability sampling (Bryman & Bell, 2007). Non-probability sampling technique usually produces good elements because the researcher decides which elements to include in the sample. However, it does enable good evaluation of the sample results (Bryman, 2011; Malhotra & Birks, 2007). On the other hand, probability sampling technique depends on the units being selected randomly and each potential unit in the sampling frame has an equal chance to be in the selected sample. Therefore, generalizability of the results is possible and risk of sampling error is minimized (Mahotra & Birks, 2007). However, the probability sampling techniques require a sampling frame that might not be possible for some kinds of studies (Yucedogru, 2016), in such cases, non-probability sampling is suitable.

As the population of this study are annual tax return non-filer individual persons, no size and sampling frame for them are available, hence application of probability sampling becomes impossible in this case (Yucedogru, 2016). Probability

sampling is only applicable when sampling frame of population is available. Hence, researcher had no option except to employ non-probability sampling.

Tax evasion seems to be the norm in Pakistan, even though tax evaders are not easily available for data collection (Gangl, 2015). Moreover, the concept of tax officer is like 'police officer' and tax office like 'police station', reflecting an angry picture of tax officials and tax department in the mind of the general public in Pakistan. The behaviour of tax collector also enhances tax (non)compliance (Hallsworth *et al.*, 2017). When the researcher started data collection randomly, the researcher had to face a lot of non-response problems from respondents due to stated image of tax office, as most of the respondents considered me a tax official even though I told them that I am a researcher and collecting data only for academic purposes and assured confidentiality also. The respondents were uncomfortable responding to a survey as they might imagine it being sent to tax department to detect their tax evasion. It might have also raised suspicion of it being an undercover tax inspection (Yucedogru, 2016).

Some people were not ready to provide information and some persons filled in the questionnaire non-seriously by just ticking same Likert scale point throughout the instrument. The researcher discussed the situation with supervisor, who guided me to use the snowball sampling technique with coverage of diversification of population scope so the demerits of non-probability sampling can be reduced. Bryman and Bell (2007, p. 200) proposed that when there is no accessible sampling for the population, in such cases snowball sampling technique is feasible one. Moreover, even if one could make a tentative sampling frame, it would be inaccurate straight away (Bryman & Bell, 2007). Furthermore, Coleman (1958) suggested that when a researcher needs

to focus upon or to reflect relationships between people, tracing connections through snowball sampling may be a better approach than conventional probability sampling.

Bryman and Bell (2007) defined snowball sampling technique as “approach to sampling, the researcher makes initial contact with a small group of people who are relevant to the research topic and then uses these to establish contacts with others”. The research recruited by following four small groups who are related to research topic:

- a. Researcher’s classmates (university age) who are serving in various cities on executive posts.
- b. Researcher’s old students (researcher is a full-time teacher also) who are serving in various cities.
- c. Researcher’s current students.
- d. Researcher’s own network contacts

The above stated first three groups are directly related to the study as all have studied tax as a subject for at least one year and all persons have a good understanding of tax-related issues. Moreover, before data collection, the researcher briefed in details all participants of referral groups regarding each and every statement of the instrument personally or on the phone. All above stated four groups were recruited with the prime intention to deal with trust deficit between researcher and respondent as per scholar’s experience with respondents who were afraid that scholar was an official of the tax department and collecting data to take them into tax net. The first two groups were asked to collect data from their office colleagues and from their family. The third group was used as referral and the group members were asked to collect data from family members. They, themselves, were not asked to fill the questionnaire as

they were not employed. All the activities were closely administrated by researcher. The fourth group was also used for referral. The group consisted of friends, neighbours and relatives. All the data were collected manually in consideration of the ease of the respondents. Questionnaires to various cities were sent through postal mail to group members.

3.3.4 Sample size

For sufficient statistical power, it is necessary to determine the minimum sample size before data collection (McQuitty, 2004). The sample size has a direct impact on the generalizability of results and statistical power of the data analysis (Hair *et al.*, 1998). Saad (2011) claimed that the choice of sample size is made after considering the practical issues, statistical precision and available resources (e.g. time and cost). After going through the literature, some following benchmarks for sample size are presented below.

- i. Ten observations for each free-parameter to be estimated (Nunnally, 1967; Schreiber *et al.*, 2006).
- ii. Yamane (1967) presented the formula: $n=N/[1+N(e)^2]$ where 'n' represents sample size to be calculated, 'N' is population, 'e' for standard error depending upon the setting of confidence level by researcher.
- iii. Several to 50 (Barrett & Kline, 1981).
- iv. Several to 400 (Aleamoni, 1976).
- v. For exploratory factor analysis, 300 responses as threshold for unbiased factor solutions (Tabachnick & Fidell, 2013).
- vi. Sample size if 300 are good for exploratory factor analysis (Comrey & Lee, 2013).

- vii. In structural equation models, a critical sample size is 200 (Hoelter, 1983; Graver & Mentzer, 1999; Sivo *et al.*, 2006)
- viii. For PCA for obtaining reliable results, sample size should be above 300 (Stevens, 1996).
- ix. Hair (2010) proposed 100 sample size as adequate.
- x. Five responses for an item are sufficient (Field, 2013; Hair, 2010).
- xi. Krejcie and Morgan (1970) presented the following table (Table 4) for selection of sample size

Table 4: Required Sample Size, Given a Finite Population

N----n	N----n	N----n	N----n	N----n
10----10	100----80	280----162	800----260	2800----338
15----14	110----86	290----165	850----265	3000----341
20----19	120----92	300----169	900----269	3500----346
25----24	130----97	320----175	950----274	4000----351
30----28	140----103	340----181	1000----278	4500----354
35----32	150----108	360----186	1100----285	5000----357
40----36	160----113	380----191	1200----291	6000----361
45----40	170----118	400----196	1300----297	7000----364
50----44	180----123	420----201	1400----302	8000----367
55----48	190----127	440----205	1500----306	9000----368
60----52	200----132	460----210	1600----310	10000----370
65----56	210----136	480----214	1700----313	15000----375
70----59	220----140	500----217	1800----317	20000----377
75----63	230----144	550----226	1900----320	30000----379
80----66	240----148	600----234	2000----322	40000----380
85----70	250----152	650----242	2200----327	50000----381
90----73	260----155	700----248	2400----331	75000----382
95----76	270----159	750----254	2600----335	100000----384

Source: Krejcie and Morgan (1970, p. 608) in Hill (1998), Hashim (2010), Saad (2011)

Where N = population size, and n = sample size required.

Krejcie and Morgan (1970) further added that in case of population above 100,000 the sample increases with diminishing rate and eventually sample size remains constant at slightly above 380.

The researcher, by considering the possibility of low response rate as it is normal in tax-related studies (Mohamed, 2016; Smart, 2013; Saad, 2011; Tran-Nam & Karlinsky, 2008; Slemrod & Venkatesh, 2002), decided to consider a large sample size of 1400.

3.3.5 Data collection procedure

Malhotra and Birks (2007) described data collection procedure in terms of execution of sampling process which involves implementation of the decisions about sampling phase. Written printed survey forms were used for data collection due to the benefits of minimum resources, confidentiality (Dillman, 2000; Salant & Dillman, 1994) and for the convenience of potential respondents as some respondents might have lack of availability and use of appropriate internet resources. In the first attempt, the scholar himself tried to collect data from ordinary persons having non-filer status, but could not accomplish the task. There was trust deficit from respondent side as they thought that the scholar might be from tax department. To resolve the issue, the researcher has to apply snowball sampling technique.

The data collection process starts with detailed briefing about objectives and nature of study to recruit participants of small groups who are well equipped with tax knowledge. Written printed survey forms were distributed personally to group participants of local city and for participants of other cities, survey forms were sent through postal mail. Each questionnaire was accompanied with a cover letter stating the objectives and nature of study, brief introduction of researcher, assured anonymity and confidentiality of data, range time required for completion of survey form and thanks for their cooperation and time. Average time to complete survey form was 12 minutes. Group participants under snowball sampling were given two weeks for data gathering. Most of the survey forms were returned well in-time with plus/minus of four days. Some recruited group participants did not respond within time, and then the researcher had to make follow-up calls and personal contacts requesting them to complete the data collection process. In a very few cases, some questionnaires could

not be collected despite multiple reminders and requests. Data collection procedure was completed over a time period of 4 months.

Table 5 Detail of Survey Forms Distributed

Items	Quantity
Total survey forms distributed (initial sample size)	<u>1400</u>
(-) not usable	
Below taxable income	322
Set aside through manual screening. (Incomplete filing, extremely irregular responses etc.)	87
Detection of outliers (through Mahalanobis)	230
Not returned by respondents	<u>41</u>
Usable survey forms	720
*Response Rate	51.43%

*calculations based on the guidelines given by Bryman and Bell (2007, p. 196)

Tax compliance behavioural studies observe a low response rate. Saad (2011) reported a response rate of 10.32% of New Zealand respondents and 40.85% for Malaysia respondents. Mohamed (2016) had 42% response rate in Malaysian context tax study, whereas Yucedogru (2016) had response rate of only 7.2% and Smart (2013) attained 21% response rate only. The response rate of this study (51.43%) is quite appreciable (see Table 5) due to application of snowball sampling technique but is not comparable with studies of other disciplines that have a high response rate (92.92%; Rehman, 2013). The intention behind large sample size in this study was to compensate for the consequences of non-probability sampling through a more diversified coverage of the characteristics of the population.

3.3.6 Validating the sample: non-response bias

As a tax study is a sensitive subject, it is important to address non-response bias (Lignier, 2008; Larrimore *et al.*, 2017). Creswell (2003) explained that non-response bias may be present where “there are systematic differences in main characteristics of the respondents and testing for the non-response bias will establish whether or not the

results of the study would have substantially changed if the non-respondents had responded”.

There are two commonly used methods for detecting the non-response bias in the tax literature. The first method is ‘postcard’ method which is generally used in mail survey (Edwards *et al.*, 2007). A postcard, asking one straightforward question, invites those who do not wish to complete the questionnaire to answer it and return it; it is mailed to all respondents (Allers, 1994). The responses are matched with same question in the survey form. The second method is ‘wave analysis’ used by many researchers in the tax literature (Yucedogru, 2016; Lignier *et al.*, 2014; Saad, 2011; Jabbar & Pope, 2009; Evans, 2003; Tran-Nam *et al.*, 2000; Tan, 1999; Benke & Street, 1992). This method is based on the assumption that respondents who participated in the last wave of the data collection are more likely to be non-responders and closer to the profile of non-respondents (Creswell, 2003). The method requires comparison of (up to four) key questions of first and last wave along with minimum of 30 late responders with objective of a sound explanation with sufficient data statistically and practically (Lindner *et al.*, 2001). If there is no material or meaningful difference between the two waves, then it is assumed that non-response bias is not present for the sample. The assumption in wave method is that the reason for late reply may be illness or busy schedule and not that the respondents were avoiding.

Non-response bias was checked for this study with the help of wave analysis complete model, and it was concluded that non-response bias is not present in the study as there were no substantial changes in statistical and practical results after last wave check.

3.4 Ethical considerations

In practicing research, ethical considerations are cornerstones (Trimble & Fisher, 2006). Intense consideration has been given in this study to ensure ethical approach. It was ensured that participants had complete understanding and knowledge of the purpose of the study. This concern was addressed by mentioning stated points in cover letter accompanying the survey form. Moreover, participants were given right to withdraw at any time from the study and the element of voluntarism was maintained for data collection process. Privacy factor, anonymity and confidentiality of information were ensured and maintained.

3.5 Data analysis

Factor analysis with PCA is a commonly used method for unidimensionality of the constructs in data analysis. A principal component can be defined as a linear combination of optimally observed variables. Linear combination is known as the score on a component generated by adding scores together on the observed variable being analysed (Rehman, 2013). Principal components with maximum variance in data set are employed while using optimal weights in PCA; optimal weight means the fact that observed variables are weighted to account for maximum amount of variance in data set. Synder (1984) stated that PCA reduces information to the few common uncorrelated components or higher level relationships.

PCA provides multiple components equal to the observed variables. Kaiser criterion is used in this study, it is also known as eigenvalue-one criterion, to decide how many components should be retained out of total components. Researchers retain only principal components out of the total components and the Kaiser criterion suggests that we should retain those components whose eigenvalues are greater than 1.0 (Kaiser, 1960). The rationale for this criterion is that observed variable contribute

one unit of variance to the total variance in the data set. If the eigenvalue shows a value more than 1.00 it means the components have more variance and such types of components account for a meaningful amount of variance and should be retained (Rehman, 2013). Whereas components that show a value less than 1.00 have less variance and are less worthy to retain. The purpose of PCA is to reduce the number of variables to relatively smaller components which is achieved through eigenvalue. Individual item factor loading with its contribution to factor was reported in this study along with Cronbach's alpha values for internal reliability.

This study used PCA through SPSS to combine responses to different items on each construct into their respective reliable scales. This study employed a varimax rotation method in order to get uncorrelated components. Varimax Rotation is a method which decreases the dimensions generating results in uncorrelated components whereas Rotation made the factor solution easier and simpler. Afterwards, series of multiple regression analysis and Sobel test to check for mediating relationships.

3.6 Chapter summary

This chapter presented the paradigmatic philosophical position of the researcher and the available methodologies in quantitative research. Discussion on methodological preferences to examine the proposed hypotheses of the study is an outcome of well-informed logical decision of the research. After establishing the rationale of research approach adopted, data sampling based on six phases given by Malhotra and Birks (2007) is summarized. The chapter continues with pilot study, instrumentation, instrumentation validity and reliability, data collection and data analysis procedures. Analysis and results of the study are presented in next chapter.

CHAPTER 4: ANALYSIS AND RESULTS

This chapter presents data analysis to accept or reject the hypotheses developed in the literature review chapter, Chapter 2. Data analysis consists of two sections. First section discusses the screening questions, demographic profile of respondents, descriptive statistics, diagnostic statistics (collinearity, skewness, Kurtosis, correlation matrix), reliability and factor analysis. The second section includes regression and mediation analysis in order to test the hypothetical relationships posed in proposed conceptual framework.

4.1 Descriptive statistics

4.1.1 Screening questions for the identification of non-filers

A total of 1400 questionnaires were circulated among individual persons with non-filer status because a low response rate was expected as is normal practice in tax studies (Mohamed, 2016; Smart, 2013; Saad, 2011; Tran-Nam & Karlinsky, 2008; Slemrod & Venkatesh, 2002). A total of 322 questionnaires were set aside as they did not meet the criteria set by Income Tax Ordinance 2001 for eligibility to file annual income tax return. Some survey forms (84) were not considered due to incomplete filling or extremely irregular and non-serious responses. While detection of outliers, “Mahalanobis test” was used and 230 questionnaires were rejected. Another 41 survey forms were not returned back by respondents, and hence 720 questionnaires were usable for data analysis with a response rate of 51.43%.

Table 6 Screening Questions for Identification of Non-filers

Respondent demographic	Frequency	%
Motor car (N=708)		
Less than 1000cc	232	32.8
Above 1000cc	152	21.5
No Car	324	45.8
Residence Area and Nature (N=710)		
Less than 8.26 Marla	346	48.7
Above 8.26 Marla	202	28.5
Above 16.52 Marla	80	11.3

Rented Home	82	11.5
Other Property (N=703)		
Less than 8.26 Marla	120	17.1
Above 8.26 Marla	78	11.1
Above 16.52 Marla	108	15.4
No Property	397	56.5
Average Monthly Income (N=714)		
Below Rs.25000	12	1.7
Rs.25000–Rs.33333	102	14.3
Rs.33333–Rs.50000	406	56.9
Above Rs.50000	194	27.2

At the start of the questionnaire, screening questions are added for the identification of taxpayers with non-filing of annual income tax return with FBR (see Table 6). For this purpose, the definition of “taxpayer” is taken from the Income Tax Ordinance 2001 (amended up to December 15, 2016) Section 2(66) in the following words:

- (66) ‘taxpayer’ means any person who derives an amount chargeable to tax under this Ordinance, and includes —
- (a) any representative of a person who derives an amount chargeable to tax under this Ordinance;
 - (b) any person who is required to deduct or collect tax under Part V of Chapter X¹[and Chapter XII;] or
 - (c) any person required to furnish a return of income or pay tax under this Ordinance;”

As per definition of ‘Taxpayer’ point ‘c’, Chapter X, Part I (114) [1] explains the “114. Return of income. — (1) Subject to this Ordinance, the following persons are required to furnish a return of income for a tax year, namely: —

[(a) every company;]

[(ab) every person (other than a company) whose taxable income for the year exceeds the maximum amount that is not chargeable to tax under this Ordinance for the year; [or]]

[(ac) any non-profit organization as defined in clause (36) of section 2; ²[]]

[(ad) any welfare institution approved under clause (58) of Part I of the Second Schedule;]

[(b) any person not covered by clause [(a), (ab), (ac) or (ad)] who, —

- (i) has been charged to tax in respect of any of the two preceding tax years;
- (ii) claims a loss carried forward under this Ordinance for a tax year;
- (iii) owns immovable property with a land area of two hundred and fifty square yards or more or owns any flat located in areas falling within the municipal limits existing immediately before

1. Persons responsible to deduct tax at source and deposit in government

*the commencement of Local Government laws in the provinces;
or areas in a Cantonment; or the Islamabad Capital Territory
[;]*

[(iv) owns immovable property with a land area of five hundred square yards or more located in a rating area;]

[(v) owns a flat having covered area of two thousand square feet or more located in a rating area;]

[(vi) owns a motor vehicle having engine capacity above 1000 CC; []]

[(vii) has obtained National Tax Number [; or]]

[(viii) is the holder of commercial or industrial connection of electricity where the amount of annual bill exceeds rupees [five hundred thousand] [; or]]

[(ix) is [a resident person] registered with any chamber of commerce and industry or any trade or business association or any market committee or any professional body including Pakistan Engineering Council, Pakistan Medical and Dental Council, Pakistan Bar Council or any Provincial Bar Council, Institute of Chartered Accountants of Pakistan or Institute of Cost and Management Accountants of Pakistan.]

[(1A) Every individual whose income under the head 'Income from business' exceeds rupees three hundred thousand but does not exceed rupees [four hundred thousand] in a tax year is also required to furnish return of income from the tax year.]

On the rationale of common use, the following points of above stated definition are used to identify that the respondent is liable to file his or her income tax return and hence falls under the definition of "Taxpayer" as per section 2(66c) of Income Tax Ordinance 2001:

- i. [(ab) every person (other than a company) whose taxable income for the year exceeds the maximum amount that is not chargeable to tax under this Ordinance for the year; [or]]
- ii. [(iv) owns immovable property with a land area of five hundred square yards or more located in a rating area;]
- iii. [(v) owns a flat having covered area of two thousand square feet or more located in a rating area;]
- iv. [(1A) Every individual whose income under the head 'Income from business' exceeds rupees three hundred thousand but does not exceed rupees [four hundred thousand] in a tax year is also required to furnish return of income from the tax year.]
- v. [(vi) owns a motor vehicle having engine capacity above 1000 CC; []]

After going through the screening questions in filled questionnaires, 203 questionnaires did not match the requirements of filing tax return so were excluded.

Of the remaining, 950 questionnaires matched the requirement of furnishing a return under the definition of 'Taxpayer'. For detection of outliers, a screening test

“Mahalanobis distance” has been applied, as a result 230 questionnaires were rejected by the said test and 720 questionnaires were used for analysis. On the basis of above stated priority, screening was made. For example, the first screening point was ‘Income Level’ if a respondent falls under this heading then fine and the rest of the screening questions were not attended to, otherwise it has to go to next filter point that is ‘Property holding’ and so on. Of the respondents, 86.4% have income in taxable range and hence are liable to furnish a return due to their income level, whereas 3.1% are liable due to their immoveable property holding. Of the respondents, 10.6% are liable for filing a return as they are business executives and their income is between PKR 300,000–400,000 per annum (see Table 7).

Of the respondents, 56.9% have their average monthly income in range PKR 33,333–50,000, whereas 27.2% are in the range above PKR 50,000. The liability of these two segments to furnish their annual income tax return is straightforward. The third category range is PKR 25,000–33,333 for business executives which accounts for 14.3%. Fourth segment is income below PKR 25,000 which is 1.7%. This segment is liable for furnishing a return on some other basis (e.g. property or vehicle above 1000 cc).

The FBR has declared specified and rated areas and if a person has property in those areas, that person is required to furnish his or her annual income tax return. For this purpose, two particulars are important: one is size of property and second is location of property. For size of immoveable property, critical point is 250–500 squared yards in specified and rated areas. For this purpose, immoveable property holding by respondents has been divided into two segments by considering ground facts. First is ‘residential’ and second is ‘other immoveable property’. Size has been translated into the commonly known measurement “marla” and cut-off point starts

from 8.26 marla. For residential segment, 28.5% respondents hold immovable property above 8.26 marla whereas 11.3% respondents hold immovable property above 16.52 marla, which is second cut-off point. Of the respondents, 11.5% live in rented home and 48.7% respondents have immovable property less than 8.26 marla. While discussing second segment ‘other immovable property’, 43.5% responded that they own property other than their residential requirements which shows a sign of wealth, whereas 56.5% respondents did not have other property.

A total of 54.3% respondents own a motor car with 32.8% having cars of less than 1000cc and 21.5% having a motor car of more than 1000cc, whereas, 45.8% have no motor car. Again, as 54.3% own a motor car, this indicates wealthy tax non-filers as they have their own transport in a country where per capita income is far below the world average per capita.

4.1.2 Demographic profile of respondents

On the basis of gender, 94.1% respondents are male and 5.9% respondents are female. The question arises whether these numbers of respondents on the basis of gender are representative of the population. In Pakistan, the working woman concept is emerging. The ratio of women with a business is very low, whereas in services, the situation is better than in business. Overall, the female workforce in Pakistan society ranges about the same as the proportion stated.

Table 7 Demographic Profile of Respondents

Respondent demographic	Frequency	%
Gender (N=709)		
Male	667	94.1
Female	42	5.9
Taxpayer due to (N=720)		
Income	622	86.4
Property	22	3.1
Businessman with income 300,000–400,000	76	10.6
Age (N=710)		

	Below 20 Years	10	1.4
	20 Years – 30 Years	206	29.0
	31 Years – 40 Years	204	28.7
	Above 40 Years	290	40.8
Nature of Occupation (N=702)			
	Wholesaler	78	11.1
	Retailer	170	24.2
	Service	386	55.0
	Factory	68	9.7
Qualification (N=710)			
	Below Middle	60	8.5
	Middle	38	5.4
	Matric	124	17.5
	Intermediate	80	11.3
	Graduation	220	31.0
	Masters	116	16.3
	M.Phil.	48	6.8
	Ph.D.	4	.6
	Diploma	10	1.4
	Professional Certificate	10	1.4
Societal Class (N=707)			
	Lower Class	28	4.0
	Middle Class	657	92.9
	Upper Class	22	3.1

As the age increases, the earning of a person increases: 40.8% respondents are above the age of 40 years, 28.7% are between 31 and 40 years, from 20 to 30 years there are 29% and only 1.4% of respondents are below 20 years. For nature of occupation, 55% are service personnel and 45% are business executives. In the questionnaire, respondents are asked about their total income from all sources. It is strange that significant numbers of service personnel are also tax evaders along with business executives. In Pakistan, it is generally believed that business executives normally evade personal income tax and salaried persons are compelled to pay tax as employer deducts tax while paying monthly salary. Here salary tax evaders are may be of two categories

- i. Salary income is in taxable range and non-filer
- ii. Salary income is not in taxable range, but when income from all sources is included it falls into taxable range.

As far as the first category is concerned, small organizations or organizations with less documentation practice these types of activities (one informal interview). Public sector organizations do not get involved in such type of practices. As employer is concerned with salary income, a tax deduction is not made from an employee's monthly income if the salary income is less than the taxable range. When employee adds his/her total income including salary income, the total approaches taxable range. The employer does not treat employee as being in taxable range, and the employee takes this opportunity and does not file his or her return even though his/her total income falls into taxable range. No matter what category it is, it is a gap for the tax department.

In business group, 11.1% are wholesalers, 24.2% retailers and 9.7% are factory owners liable to furnish their personal income tax return but non-filers. What are the reasons for non-filing and how can they be turned into tax compliance? The conceptual model was composed to address these issues.

Qualifications of respondents are diverse. The most common qualification is 'Graduation' with 31%, matric with 17.5% is at 2nd rank while 16.3% respondents are 'Masters' degree holders at 3rd rank. On the other side, below middle is only 8.5% reflecting that a significant portion of the sample are educated persons, which endorses the view that there are certainly some other reasons for tax evasion apart from qualification or education.

In societal class, 92.9% respondents described themselves as middle level class. Pakistan is ranked as 18th largest middle class in the world (Global Wealth Report,

2015). Moreover, Pakistan is characterized as “Lower Middle Level” (World Bank, 2016). Pakistan was also listed by Asian Development Bank as having the fastest growing middle class during 1990–2008, which is among the top five countries in Asia Pacific region (Chun, 2010). Ghani (2014) reported 54.10% as middle class, 44.10% lower class and 1.80% upper class. Lower class is not liable to furnish a tax return, so middle and upper class will be discussed for tax matters for filing personal income tax. Significant dominant middle class composition in Pakistan rationalizes this study middle class respondent’s sample.

4.1.3 Efficiency and vigilance of tax department

To examine the efficiency and vigilance of the tax department, two questions were asked and very surprising results were found (see Table 8).

Table 8 Contact of Tax Authorities with Respondents

Last year, how many times tax department contacted you (N=702)		
Never	582	82.9
1	76	10.8
2	18	2.6
3	12	1.7
More than 5	14	2.0
Last contact with you of tax department (N=709)		
Less than 1 Month	16	2.3
1 Month – 6 Months	36	5.1
7 Months – 12 Months	30	4.2
1 Year before	46	6.5
2 Years before	22	3.1
3 Years before	2	.3
4 Years before	4	.6
5 Years before	4	.6
Never	549	77.4

Question: Last contact with you of tax department

Of the respondents, 77.4% replied that tax department had never contacted them and they remained unattended. Remember that all of the respondents of the study are liable to furnish a tax return under the tax laws of Pakistan. The rest (22.6%) had been contacted. Out of 22.6%, 11.6% were contacted within the past year and 11% were approached from one to five years ago but could not be turned to tax compliance.

Question: Last year how many times tax department contacted you

Of the respondents, 82.9% said that last year they had no contact from the tax department. All the respondents of this study are the individuals liable to file tax return but they do not file their personal tax return. Again, there is an issue of efficiency and vigilance of tax department.

4.1.4 Descriptive summary

The study was based on 41 items with response format of one to seven point Likert scale with minimum value of one and maximum of seven. Mean values remain in the range of 2.57 to 5.37 and value of standard deviation varies from 1.287 to 1.894 (see Appendix F).

4.1.5 Measures of distribution and data normality

To check the data distribution and normality, skewness and Kurtosis statistical analyses were conducted. Before undertaking further data analysis, abnormality in data should be checked. For normal distribution of data, an acceptable value of skewness and Kurtosis ranges from -2.00 to $+2.00$ (Gravetter & Wallnau, 2014; Trochim & Donnelly, 2006; Field, 2000, 2009). The values of this study for skewness statistic range from -1.058 to 0.834 whereas the value of Kurtosis statistic is -1.093 to 1.033 (see Appendix G). Kolmogorov-Smirnov test demonstrates that all the constructs indicated significant values (p-values) well within acceptable range. Furthermore, to confirm normal distribution of data, normal probability plot (QQ plot)

and PP-plot were applied. The graphs of PP-plot (see Appendix I) and QQ-plot (see Appendix J) reveal that the points follow the trend line and very small and negligible deviation has been observed from trend line in case of MP. So, it is evidenced that data of the study is normally distributed.

4.1.6 Multicollinearity

In the literature, various recommendations for acceptance of variance inflation factor (VIF) have been available. A maximum value of 10 seems to be most commonly recommended (Hair *et al.*, 1995; Neter *et al.*, 1989). The VIF maximum value of the study is 4.627, which is well within all benchmarks and hence there is no issue of multicollinearity in the data (see Appendix H).

For tolerance value, various recommendations are also available from past studies. The most commonly used acceptable tolerance value is 0.10 as minimum (Tabachnick & Fidell, 2001). The minimum value of tolerance of this study is 0.216 (see Appendix H) which is well within all the benchmarks and hence reinforces the findings of VIF (i.e. there is no issue of multicollinearity in the data).

4.1.7 Correlation

To confirm the mutual association among the items of the construct, correlation analysis has been applied. Correlation statistics indicates connection or relationship between two or more things. Results indicate that there is a significant positive association among the items of construct and values range as follows (see Appendix E): intention to comply (.675 to .823), subjective norms (.549 to .735), attitude towards compliance (.395 to .690), PBC (.422 to .471), deterrence (.738 to .807), moral persuasion (.561 to .765), tax awareness (.529 to .779), tax complexity (.362 to .657), tax fairness (.577 to .722), self-corruption (.593 to .598) and tax morale (.306 to .580). Moreover, there is no problem of multicollinearity as items are not inter-correlated.

4.1.8 Reliability and internal consistency analysis

Table 9 represents the estimated values of Cronbach's coefficient alpha to examine reliability and internal consistency. For this sample, the values of Cronbach's coefficient alpha range from .738 to .922 which indicates high reliability and internal consistency of multi-item construct (Hinton *et al.*, 2004). Intention to comply (alpha = .898), subjective norms (alpha = .830), attitude towards compliance (alpha = .755), PBC (alpha = .712), deterrence (alpha = .908), moral persuasion (alpha = .850), tax awareness (alpha = .922), tax complexity (alpha = .780), tax fairness (alpha = .907), self-corruption (alpha = .816) and tax morale (alpha = .754). High Cronbach's alpha values depict high internal consistency and same content measurement universally of construct.

Table 9 Reliability of Measurement

Constructs	Valid N	Number of Items	Cronbach's Alpha
Intention to Comply	720	3	.898
Subjective Norms	720	3	.830
Attitude towards Compliance	720	3	.755
Perceived Behavioural Control	720	3	.712
Deterrence	720	3	.908
Moral Persuasion	720	3	.850
Tax Awareness	720	7	.922
Tax Complexity	720	4	.780
Tax Fairness	720	5	.907
Self-Corruption	720	3	.816
Tax Morale	720	4	.754

4.1.9 Factor analysis

For construct validity (convergent and discriminant validity), factor analysis was applied by using PCA technique with varimax rotation method. The objective is to discover and reduce the dimensionality of data set. Before applying factor analysis, I also employed the Kaiser-Meyer-Olkin (KMO) measure of sample adequacy test and Bartlett's test of sphericity to check orthogonality of components of a construct.

These two tests provide confirmation whether it is worth proceeding with factor analysis or not.

4.1.9.1 KMO measure of sampling adequacy test and Bartlett's test of sphericity

The value of KMO measure of sampling adequacy indicates the suitability of application of factor analysis. The value ranges from 0 to 1. The value zero reveals that there is large dispersion in the pattern of correlation and likewise value of 1 depicts the pattern of correlation is compatible for application of factor analysis. A value near to one is desirable. Hinton *et al.* (2004) describes KMO value of 0.5 as poor, 0.6 as acceptable and value near to one is remarkable.

Hutcheson and Sofroniou (1999, p. 173) proposed values of 0.5 and 0.7 are mediocre, 0.7 and 0.8 are good, and values of 0.8 and 0.9 great, whereas value greater than 0.9 is superb. Results of Table 10 reveal that all the values of KMO are well above the acceptable range of 0.6: KMO=0.717 for intention to comply, KMO=.693 for subjective norms, KMO=0.632 for attitude towards compliance, KMO=0.676 for PBC, KMO=0.750 for deterrence, KMO=0.692 for moral persuasion, KMO=0.90 for tax awareness, KMO=0.742 for tax complexity, KMO=0.863 for tax fairness, KMO=0.718 for self-perceived and KMO=0.752 for tax morale. All the values provide input to proceed with factor analysis.

Bartlett's test of sphericity is to test the significance of relation among the items of construct. If there is relationship among the items, then factor analysis can be performed. The test assumes null hypothesis of no correlation. The significance value <0.05 is considered good for evidence of correlation among items of construct. This study reports significance level <0.01 of all the constructs so fails to accept the null hypothesis of no correlation. So, factor analysis can be performed.

Table 10 KMO and Bartlett's Test

Constructs	No. of Items	KMO Measure of sample adequacy	Bartlett's Test of Sphericity Chi-square	Bartlett's Test of Sphericity Sig.
Intention to Comply	03	.717	1442.047	.000
Subjective Norms	03	.693	881.608	.000
Attitude towards Compliance	03	.632	622.385	.000
Perceived Behavioural Control	03	.676	408.661	.000
Deterrence	03	.750	1451.355	.000
Moral Persuasion	03	.692	1010.949	.000
Tax Awareness	07	.900	3479.164	.000
Tax Complexity	04	.742	841.953	.000
Tax Fairness	05	.863	2317.745	.000
Self-Corruption	03	.718	737.738	.000
Tax Morale	04	.752	730.483	.000

4.1.9.2 Eigenvalues

For component extraction, generally those components of a construct are considered which have a value greater than 1. Table 11 contains eigenvalues, component extracted and percentage of variance explained. From each of 12 constructs, only one component is extracted and is used for further analysis by using PCA extraction method: intention to comply (consisted of three items explaining 83.56% variance), subjective norms (consisted of three items explaining 74.73% variance), attitude towards compliance (consisted of three items explaining 67.25% variance), PBC (consisted of three items explaining 63.65% variance), deterrence (consisted of three items explaining 84.55% variance), moral persuasion (consisted of three items explaining 76.91% variance), tax awareness (consisted of three items explaining 62.28% variance), tax complexity (consisted of three items explaining 60.42% variance), tax fairness (consisted of three items explaining 72.98% variance), self-corruption (consisted of three items explaining 73.08% variance) and tax morale (consisted of three items explaining 58.47% variance).

Table 11 Eigenvalues and Total Variance Explained

Constructs	No. of Items	Components	Total	% of variance explained	Cumulative % of variance explained
Intention to Comply	03	Component 1	2.507	83.559	83.559
Subjective Norms	03	Component 1	2.242	74.727	74.727
Attitude towards Compliance	03	Component 1	2.017	67.249	67.249
Perceived Behavioural Control	03	Component 1	1.909	63.648	63.648
Deterrence	03	Component 1	2.536	84.545	84.545
Moral Persuasion	03	Component 1	2.307	76.908	76.908
Tax Awareness	07	Component 1	4.780	62.281	62.281
Tax Complexity	04	Component 1	2.417	60.423	60.423
Tax Fairness	05	Component 1	3.649	72.982	72.982
Self-Corruption	03	Component 1	2.192	73.079	73.079
Tax Morale	04	Component 1	2.339	58.466	58.466

4.1.10 Factor loadings

Minimum level of loading of an item is 0.4 (Straub *et al.*, 2004, p. 175). For all the constructs (intention to comply, subjective norms, attitude towards compliance, PBC, deterrence, moral persuasion, tax awareness, tax complexity, tax fairness, self-corruption and tax morale); Table 12 shows the loading ranges from 0.885 to 0.912, 0.806 to 0.897, 0.701 to 0.879, 0.788 to 0.817, 0.904 to 0.923, 0.823 to 0.916, 0.797 to 0.853, 0.662 to 0.843, 0.854 to 0.856 and from 0.633 to 0.838 respectively.

The above stated results fulfil all the criteria of construct validity (discriminant and convergent validity) as loading of all the items is above 0.4 and eigenvalues are greater than one, which means that data collected, obtained from the instrument, are valid.

Table 12 Components Matrix

Items	Component
Intention to Comply	
I should file my annual income tax return.	.885
I will try to file my annual income tax return.	.944
I intend to file my annual income tax return.	.912
Subjective Norms	
My family & peers think that I should file my annual income tax return.	.887
My family & peers advise me that I should file my annual income tax return.	.897
Most people who are important to me would approve of my decision to file my annual	.806

income tax return.	
Attitude towards Compliance	
I would be upset if I did not file my annual income tax return.	.868
I would feel guilty if I did not file my annual income tax return.	.879
I would feel bad for me if I did not file my annual income tax return.	.701
Perceived Behavioural Control	
I am confident that I can file my annual income tax return.	.788
There are no barriers that can prevent me from filing my annual income tax return.	.817
With my tax knowledge, skills and resources, it would be very easy for me to file my annual income tax return.	.788
Deterrence	
I think that I will be get caught by Tax Department of Pakistan if I do not file my annual income tax return.	.904
If I get caught, there are many chances that I would have to face the legal consequences.	.931
If I get caught, there are many chances that legal consequences will be very severe.	.923
Moral Persuasion	
Tax officer meets with me and made clear the disadvantages of non-filing of annual income tax return.	.889
Tax officer comes to me and clarifies the benefits of filing of annual income tax return.	.916
Tax Department of Pakistan officially appeals to me to file annual income tax return.	.823
Tax Awareness	
I am aware of the all changes made every year in the income tax act.	.811
I know the various items of income that are exempted from tax.	.851
I can compute my accurate taxable income.	.818
I know when income of dependents will be included in my total income.	.809
I am aware about the deductions permissible under Income Tax Ordinance, 2001.	.843
I know how income tax is charged.	.853
I know at which rate income tax is to be charged.	.797
Tax Complexity	
The terms used in income tax publications and forms are difficult for people like me to understand.	.843
The sentences & wording in Individual Income Tax Return Guide are lengthy and not user-friendly.	.815
Most of the times I need to refer to others for assistance in dealing with my income tax matters.	.777
I have to make a lot of effort to understand the explanations given in income tax guide books and other similar explanatory material.	.662
Tax Fairness	
For the average taxpayer, I think that the income tax system is fair.	.823
For me personally, I believe that the income tax system is fair.	.860
Generally I believe that manner in which income tax burden is distributed across taxpayer is fair.	.855
Generally, I feel that income tax is a fair tax.	.885
On the whole, the burden of income tax is fairly distributed.	.848
Self-Corruption	
I escape from any type of legal consequences by using reference if Tax Department of Pakistan caught me due to non-filing of income tax return.	.854
I will not provide correct information to tax officials in order to escape from payment of tax.	.856
I escape from any type of legal consequences by using money and money worth if Tax Department of Pakistan caught me due to non-filing of income tax return.	.854
Tax Morale	
I should not cheat even if I have a chance to cheat.	.633

I feel it is wrong if I do not file my annual income tax return.	.806
I feel it is my moral responsibility to file my annual income tax return.	.838
Noncompliance with income tax law is never justifiable.	.766

4.2 Analysis

4.2.1 Regression analysis

Regression analysis has been used to examine the effects of independent variables on mediating variables (i.e. attitude towards compliance and tax morale) and mediating variables on dependent variable (intention to comply). Results show a significant positive impact on attitude towards compliance of subjective norms ($\beta = 0.422$, $p < 0.001$), PBC ($\beta = 0.370$, $p < 0.001$), deterrence ($\beta = 0.375$, $p < 0.001$), moral persuasion ($\beta = 0.301$, $p < 0.001$), tax awareness ($\beta = 0.269$, $p < 0.001$) and tax fairness ($\beta = 0.307$, $p < 0.001$). Moreover, when tax morale has been used as independent variable to attitude towards compliance it also produces significant positive effect ($\beta = 0.464$, $p < 0.001$). Whereas, self-corruption has significant negative effect on attitude towards compliance ($\beta = -0.212$, $p < 0.001$). On the other side, impact of tax complexity on attitude towards compliance is insignificant.

The results clearly illustrate that tax morale captures major effects on mediating variable whereas self-corruption captures least effects among the independent variables. While dealing with tax morale as next mediating variable, results show a significant positive effect on subjective norms ($\beta = 0.369$, $p < 0.001$), PBC ($\beta = 0.365$, $p < 0.001$), deterrence ($\beta = 0.205$, $p < 0.001$), moral persuasion ($\beta = 0.428$, $p < 0.001$), tax awareness ($\beta = 0.234$, $p < 0.001$) and tax fairness ($\beta = 0.312$, $p < 0.001$). Whereas, self-corruption has significant negative effect ($\beta = -0.1072$, $p < 0.05$) and tax complexity produces results ($\beta = -0.071$, $p < 0.058$) on tax morale.

The mediating variables have significant positive impact on dependent variable. Attitude towards compliance ($\beta = 0.538$, $p < 0.001$) and tax morale ($\beta = 0.524$, $p < 0.001$) have significant positive effect on intention to comply. Both

mediating variables pose approximately equal impact; anyway, attitude towards compliance has greater impact than tax morale on intention to comply.

4.2.2 Mediation analysis

Baron and Kenny (1986) and Kenny (2018) prescribed following three conditions

- i. Independent variable directly affects dependent variable
- ii. Independent variable has direct effect on mediating variable
- iii. Mediating variable has direct impact on dependent variable and

On fulfilment of above stated conditions, the mediation may be tested. When independent variable with mediating variable are entered in the same regression on dependent variable, and coefficient of both, independent and mediating variable, remains significant, it is said to be partial mediation.

Whereas, when independent variable with mediating variable are entered in the same regression on dependent variable, and coefficient of independent variable turns insignificant and the coefficient of mediating variable remains significant, it is said to be full mediation. In this study, Sobel, Aroian and Goodman (Preacher & Leonardelli, 2001) tests have been applied to determine the significance of mediation.

**Table 13 Mediation Analysis
Condition I: Direct effect of Independent Variables on Intention to Comply**

Dependent Variable	Independent Variables							
	SN	TD	MP	TA	TC	TF	SC	TM
ITC	0.495* (15.267)	0.211* (5.771)	0.387* (11.234)	0.253* (7.010)	-0.086** (-2.319)	0.314* (8.861)	-0.108* (-2.924)	0.524* (16.500)

Note *represents significance at less than 0.01

**represents significance at less than 0.05

Value in parentheses represents t-ratios

To test the compliance of first condition of mediation, the results of regression analysis are given in Table 13. Result shows all independent variables have a significant effect on intention to comply and hence first condition is fulfilled.

**Table 14 Mediation Analysis
Condition II: Effect of Independent Variables on Mediators**

Meditator as Dependent Variable	Independent Variables							
	SN	TD	MP	TA	TC	TF	SC	TM
ATC	0.422* (12.490)	0.375* (10.824)	0.301* (8.455)	0.269* (7.494)	0.040 (1.082)	0.307* (8.652)	-0.212* (-5.814)	0.464* (14.053)
TM	0.369* (10.646)	0.205* (5.624)	0.428* (12.694)	0.234* (6.452)	-0.071*** (-1.903)	0.312* (8.789)	-0.107** (-2.893)	----

Note *represents significance at less than 0.01

**represents significance at or less than 0.05

***represent significant at 0.057

Value in parentheses represents t-ratios

In Table 14 a regression analysis has been employed to test the second condition of mediation. In the case of mediator attitude towards compliance, all independent variables except tax complexity affect mediator, whereas in the case where tax morale is mediator, all independent variables including tax complexity have an effect on mediator variable, hence second condition is fulfilled provided that attitude towards compliance will not mediate between tax complexity and intention to comply.

**Table 15 Mediation Analysis
Condition III: Effect of Mediators on Dependent Variable (Intention to Comply)**

Dependent Variable	Mediator Variables	
	ATC	TM
ITC	0.538* (17.085)	0.524* (16.500)

Note *represents significance at less than 0.01

Value in parentheses represents t-ratios

To test the third condition of mediation, effect of mediating variable on dependent variable is examined in Table 15. Both mediator variables significantly impact on intention to comply and, hence, the third condition is fulfilled.

At this stage, all conditions for mediation analysis have been fulfilled, now mediation analysis can proceed.

Table 16 Multiple Regression Analysis for Mediation-I
When ATC is mediating variable, and used as IDV with another IDV to check partial or full mediation

Independent Variables	Dependent Variable							
	ITC							
ATC	0.400* (12.288)	0.534* (15.713)	0.463* (14.611)	0.506* (15.620)	0.542* (17.340)	0.487* (14.981)	0.539* (16.373)	0.375* (11.340)
SN	0.326* (10.023)							
TD		0.011 (.314)						
MP			0.247* (7.799)					
TA				0.117* (3.603)				
TC					-0.108* (-3.458)			
TF						0.164* (5.052)		
SC							0.006 (.180)	
TM								0.350* (10.591)
R square	0.376	0.289	0.345	0.302	0.301	0.313	0.289	0.385
Adjusted R2	0.375	0.287	0.343	0.300	0.299	0.312	0.287	0.383
F-statistics	216.389*	145.810*	188.515*	154.870*	154.152*	163.691*	145.763*	224.620*

Note *represents significance at less than 0.01

**represents significance at less than 0.05

Value in parentheses represents t-ratios

Table 16 shows that attitude towards compliance partially mediates between subjective norms and intention to comply (attitude towards compliance $\beta = 0.400$, $p < 0.001$). Attitude towards compliance ($\beta = 0.463$, $p < 0.001$) also partially mediates between moral persuasion and intention to comply. The relationship between tax awareness and intention to comply is evidenced by partial mediation by mediator (attitude towards compliance $\beta = 0.506$, $p < 0.001$), between tax fairness and intention to comply (attitude towards compliance $\beta = 0.487$, $p < 0.001$) and between tax morale and intention to comply (attitude towards compliance $\beta = 0.375$, $p < 0.001$).

Whereas, attitude towards compliance fully mediates between between deterrence and intention to comply (attitude towards compliance $\beta = 0.534$, $p < 0.001$) and between self-corruption and intention to comply (attitude towards compliance $\beta = 0.539$, $p < 0.001$).

Furthermore, attitude towards compliance could not mediate the relationship between tax complexity and intention to comply as second condition of mediation could not be met.

Table 17 Multiple Regression Analysis for Mediation-II
TM is mediating variable, and used as IDV with another IDV to check partial or full mediation

Independent Variables	Dependent Variable						
	ITC						
TM	0.395* (12.500)	0.502* (15.577)	0.439* (11.047)	0.492* (15.233)	0.521* (16.365)	0.472* (114.365)	0.519* (16.247)
SN	0.349* (11.032)						
TD		0.107* (3.329)					
MP			0.199* (5.772)				
TA				0.138* (4.269)			
TC					-0.049 (-1.549)		
TF						0.167* (5.070)	
SC							-0.053 (-1.654)
R square	0.380	0.286	0.307	0.293	0.277	0.300	0.278
Adjusted R2	0.378	0.284	0.305	0.291	0.275	0.298	0.276
F-statistics	219.863*	143.581*	158.911*	148.505*	137.592*	153.666*	137.823*

Note *represents significance at less than 0.01

**represents significance at less than 0.05

Value in parentheses represents t-ratios

Table 17 shows that tax morale partially mediates between subjective norms and intention to comply (tax morale $\beta = 0.395$, $p < 0.001$), between deterrence and intention to comply (tax morale $\beta = 0.502$, $p < 0.001$), between moral persuasion and intention to comply (tax morale $\beta = 0.439$, $p < 0.001$), between tax awareness and intention to comply (tax morale $\beta = 0.492$, $p < 0.001$) and between tax fairness and intention to comply (tax morale $\beta = 0.4472$, $p < 0.001$).

Whereas, tax morale fully mediates between between tax complexity and intention to comply (tax morale $\beta = 0.521$, $p < 0.001$) and between self-corruption and intention to comply (tax morale $\beta = 0.519$, $p < 0.001$).

Table 18 Multiple Regression Analysis

Dependent Variables	Independent Variable		
	ATC	TM	PBC
ITC	0.318* (9.625)	0.302* (9.210)	0.219* (7.032)
R square	.425		
Adjusted R2	0.423		
F-statistics	176.352*		

Note *represents significance at less than 0.01

**represents significance at less than 0.05

Value in parentheses represents t-ratios

Table 18 shows multiple regression analysis of independent variables (attitude towards compliance, tax morale and perceived behavioural control) and dependent variable (intention to comply). Results indicate that 42.3% variation in intention to comply is explained by attitude towards compliance, tax morale and perceived behavioural control. Moreover, the model is good fit and having the explanatory power as the value of *F*-statistics is significant at less than 0.001. Furthermore, attitude towards compliance, tax morale and perceived behavioural control have significant positive influence on intention to comply. All independent variables have contribution to the model for predicting intention to comply of non-filers.

Table 19 Sobel Test

Independent variable	Mediator variable	Dependent variable	Test statistics	Standard error	P-value
SN	ATC	ITC	8.672	0.019	0.000
TD	ATC	ITC	8.851	0.023	0.000
MP	ATC	ITC	7.239	0.019	0.000
TA	ATC	ITC	6.756	0.020	0.000
TC	ATC	ITC	1.079	0.020	0.281
TF	ATC	ITC	7.384	0.020	0.000
SC	ATC	ITC	-5.559	0.021	0.000
TM	ATC	ITC	8.838	0.020	0.000
SN	TM	ITC	8.017	0.018	0.000
TD	TM	ITC	5.224	0.020	0.000
MP	TM	ITC	9.013	0.021	0.000
TA	TM	ITC	5.987	0.019	0.000
TC	TM	ITC	-1.906	0.019	0.057
TF	TM	ITC	7.565	0.019	0.000

SC	TM	ITC	-2.847	0.020	0.004
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Legend: ITC = Intention to Comply
 ATC = Attitude towards compliance
 SN = Subjective norms
 TD = Deterrence
 MP = Moral persuasion
 TA = Tax awareness
 TC = Tax complexity
 TF = Tax fairness
 SC = Self-corruption

Table 20 Aroian Test

Independent variable	Mediator variable	Dependent variable	Test statistics	Standard error	P-value
SN	ATC	ITC	8.658	0.019	0.000
TD	ATC	ITC	8.839	0.023	0.000
MP	ATC	ITC	7.226	0.019	0.000
TA	ATC	ITC	6.745	0.020	0.000
TC	ATC	ITC	1.077	0.020	0.281
TF	ATC	ITC	7.371	0.020	0.000
SC	ATC	ITC	5.550	0.021	0.000
TM	ATC	ITC	8.825	0.020	0.000
SN	TM	ITC	8.002	0.018	0.000
TD	TM	ITC	5.215	0.020	0.000
MP	TM	ITC	9.000	0.021	0.000
TA	TM	ITC	5.976	0.019	0.000
TC	TM	ITC	-1.902	0.019	0.057
TF	TM	ITC	7.552	0.020	0.000
SC	TM	ITC	-2.842	0.020	0.004

Legend: ITC = Intention to Comply
 ATC = Attitude towards compliance
 SN = Subjective norms
 TD = Deterrence
 MP = Moral persuasion
 TA = Tax awareness
 TC = Tax complexity
 TF = Tax fairness
 SC = Self-corruption

Table 21 Goodman Test

Independent variable	Mediator variable	Dependent variable	Test statistics	Standard error	P-value
SN	ATC	ITC	8.686	0.019	0.000
TD	ATC	ITC	8.863	0.023	0.000
MP	ATC	ITC	7.252	0.019	0.000
TA	ATC	ITC	6.767	0.020	0.000
TC	ATC	ITC	1.081	0.020	0.280
TF	ATC	ITC	7.396	0.020	0.000
SC	ATC	ITC	-5.568	0.021	0.000
TM	ATC	ITC	8.852	0.020	0.000
SN	TM	ITC	8.032	0.018	0.000
TD	TM	ITC	5.234	0.020	0.000
MP	TM	ITC	9.027	0.021	0.000
TA	TM	ITC	5.998	0.019	0.000
TC	TM	ITC	-1.909	0.019	0.056
TF	TM	ITC	7.579	0.019	0.000
SC	TM	ITC	-2.852	0.019	0.004

Legend: ITC = Intention to Comply
 ATC = Attitude towards compliance
 SN = Subjective norms
 TD = Deterrence
 MP = Moral persuasion
 TA = Tax awareness
 TC = Tax complexity
 TF = Tax fairness
 SC = Self-corruption

To confirm the above estimated mediation, I apply Sobel, Aroian and Goodman Test and results are given in Tables 19, 20 and 21 respectively. All these three tests assume null hypothesis of no mediation of mediating variable between independent and dependent variable.

All these three tests produce similar results and confirm the mediation results.

All the null hypotheses of no mediation are rejected ($p < 0.01$) except

- i. attitude towards compliance mediates between tax complexity and intention to comply
- ii. tax morale mediates between tax complexity and intention to comply ($p < 0.058$)

Table 22 Summary of Results of the Hypotheses

<i>Hypotheses</i>	<i>Results</i>	
H _{1a}	There is a positive relationship between subjective norms and attitude towards compliance	Accepted
H _{1b}	Attitude towards compliance mediates the relationship between subjective norms and intention to comply	Accepted
H _{1c}	There is a positive relationship between subjective norms and tax morale	Accepted
H _{1d}	Tax morale mediates the relationship between subjective norms and intention to comply	Accepted
H ₂	There is a positive relationship between attitude towards compliance and intention to comply	Accepted
H ₃	There is a positive relationship between tax morale and intention to comply	Accepted
H ₄	There is a positive relationship between perceived behavioural control and intention to comply	Accepted
H _{5a}	There is a positive relationship between deterrence and attitude towards compliance	Accepted
H _{5b}	Attitude towards compliance mediates the relationship between deterrence and intention to comply	Accepted
H _{5c}	There is a positive relationship between deterrence and tax morale	Accepted
H _{5d}	Tax morale mediates the relationship between deterrence and intention to comply	Accepted
H _{6a}	There is a positive relationship between moral persuasion and attitude towards compliance	Accepted
H _{6b}	Attitude towards compliance mediates the relationship between moral persuasion and intention to comply	Accepted
H _{6c}	There is a positive relationship between moral persuasion and tax morale	Accepted
H _{6d}	Tax morale mediates the relationship between moral persuasion and intention to comply	Accepted
H _{7a}	There is a positive relationship between tax awareness and attitude towards compliance	Accepted
H _{7b}	Attitude towards compliance mediates the relationship between tax awareness and intention to comply	Accepted
H _{7c}	There is a positive relationship between tax awareness and tax morale	Accepted
H _{7d}	Tax morale mediates the relationship between tax awareness and intention to comply	Accepted
H _{8a}	There is a negative relationship between tax complexity and attitude towards compliance	Rejected
H _{8b}	Attitude towards compliance mediates the relationship between tax complexity and intention to comply	Rejected
H _{8c}	There is a negative relationship between tax complexity and tax morale	Accepted
H _{8d}	Tax morale mediates the relationship between tax complexity and intention to comply	Accepted
H _{9a}	There is a positive relationship between tax fairness and attitude towards compliance	Accepted
H _{9b}	Attitude towards compliance mediates the relationship between tax fairness and intention to comply	Accepted
H _{9c}	There is a positive relationship between tax fairness and tax morale	Accepted
H _{9d}	Tax morale mediates the relationship between tax fairness and intention to comply	Accepted
H _{10a}	There is a negative relationship between self-corruption and attitude towards compliance	Accepted
H _{10b}	Attitude towards compliance mediates the relationship between self-corruption and intention to comply	Accepted
H _{10c}	There is a negative relationship between self-perceived corruption and tax morale	Accepted
H _{10d}	Tax morale mediates the relationship between self-perceived corruption and intention to comply	Accepted
H _{11a}	There is a positive relationship between tax morale and attitude towards compliance	Accepted
H _{11b}	Attitude towards compliance mediates the relationship between tax morale and intention to comply	Accepted

CHAPTER 5: DISCUSSION

The main objective of this study is to uncover the fact that tax noncompliance issue in Pakistan is behavioural. To achieve this object, this study proposes a conceptual model based on behavioural approach for transforming noncompliance behaviour into tax compliance behaviour of tax evaders who never file annual income tax returns (non-filers). In the proposed model, the mediators' role is very important. Attitude, being the first mediator, attitude and intention to comply, the two main variables, are already well acknowledged in the tax literature (Mohamed, 2016; Cyan *et al.*, 2016; Onu, 2016; Abdul-Razak & Adafula, 2013; Hamid, 2014; Smart, 2012; Shaharuddin, 2012; Saad, 2011; Benk *et al.*, 2011; Jones, 2009; Kirchler *et al.*, 2008; Trivedi *et al.*, 2004; Bobek & Hatfield, 2003). The second mediator is tax morale with intention to comply (Mohamed, 2016; Alasfour *et al.*, 2016; Helhel & Varshalomidze, 2015; Lisi, 2015; Luttmer & Singhal, 2014; Fakile, 2011; Alm & Torgler, 2011; Siahaan, 2005; Trivedi *et al.*, 2004; Bobek & Hatfield, 2003; Frey & Feld, 2002; Torgler, 2002). The proposed model is examined by utilizing the lens of TPB and it is applied to the case of tax non-filers in Pakistan. Deterrence and Moral persuasion theories are also used for extension in TPB. This chapter presents discussion of findings of the study and attempts to explain consistencies of results in relation to past empirical and theoretical arguments.

The structure of the chapter is as follows: Section 5.1 discusses the findings regarding tax morale, attitude towards compliance and intention to comply. Section 5.2 presents discussion on tax fairness and intention to comply with mediating role of attitude and tax morale. Section 5.3 discusses the results of deterrence and intention to comply with mediating role of attitude and tax morale. Section 5.4 discusses the findings of moral persuasion and intention to comply with mediating role of attitude

and tax morale. Section 5.5 presents discussion on tax complexity and intention to comply with mediating role of attitude and tax morale. Section 5.6 discusses the findings of self-corruption and intention to comply with mediating role of attitude and tax morale. Section 5.7 presents discussion on tax awareness and intention to comply with mediating role of attitude and tax morale. Section 5.8 discusses findings on subjective norms and intention to comply with mediating role of attitude and tax morale. Section 5.9 discusses the results of PBC and intention to comply and 5.10 present a chapter summary.

5.1 Tax morale, attitude towards compliance and intention to comply

To test the direct and mediating relationship of tax morale, attitude and intention to comply, two hypotheses are developed in the study. The findings reveal significant positive relationship between tax morale and tax compliance behaviour in Pakistan. Attitude partially mediates the relationship between tax morale and intention to comply.

The decision to include tax morale in the conceptual framework is inspired by Bobek and Hatfield (2003) who strongly recommended the inclusion of tax morale in the TPB in the case of tax studies. In tax compliance context, feeling of moral responsibility exists which is not explicitly considered by TPB (Bobek & Hatfield, 2003). Awang *et al.* (2018) also asserted the importance of non-economic factors for tax compliance. Moreover, Beck and Ajzen (1991) reported that by adding a new variable, moral obligation, the predictive power of their model increased. Both the variables are separate and distinct and they have their own influencing power on intention to comply (Bobek & Hatfield, 2003). This study confirms the extended TPB model of Beck and Ajzen (1991) and contribution of Bobek and Hatfield (2003).

This study suggests significant positive relationship between tax morale and tax compliance and the findings are in line with the tax literature (Mohamed, 2016; Alasfour *et al.*, 2016; Helhel & Varshalomidze, 2015; Lisi, 2015; Luttmer & Singhal, 2014; Fakile, 2011; Alm & Torgler, 2011; Siahaan, 2005; Trivedi *et al.*, 2004; Bobek & Hatfield, 2003; Torgler, 2002; Frey & Feld, 2002). Likewise, the relationship between tax morale and attitude was also witnessed in the literature (Mohamed, 2016; Ho & Wong, 2008, 2009; Torgler & Schneider, 2007). In addition, attitude relationship with tax compliance is well acknowledged from past tax studies (Onu, 2016; Mohamed, 2016; Cyan *et al.*, 2016; Hamid, 2014; Abdul-Razak & Adafula, 2013; Smart, 2012; Shaharuddin, 2012; Saad, 2011; Benk *et al.*, 2011; Marti *et al.*, 2010; Jones, 2009; Kirchler *et al.*, 2008; Trivedi *et al.*, 2004; Bobek & Hatfield, 2003). The mediating role of attitude is also already proven (Mohamed, 2016).

Not admitting tax payment as personal liability is common attitudinal phenomenon in Pakistan (Gangl, 2015). When a business executive earns an amount, he or she already considers that money to be theirs without considering the tax payment liability, as all income of taxpayer or eligible taxpayer is subject to tax. After deducting the tax amount, the remaining income can be used by the individual. This attitudinal phenomenon needs to be addressed. Tax morale can contribute to solving the issue as indicated by this study.

There are multiple strategies to handle attitudinal phenomena contributing to noncompliance of individual persons. Strategies would be needed regarding tax law abidance: filing of annual tax return from a sense of responsibility and not cheating tax authorities. In this context, the role of tax morale is important. Generating or enhancing intrinsic motivation is a long-term solution to tax noncompliance

behavioural issues. The contribution of tax awareness, moral persuasion, deterrence, tax complexity, self-corruption and tax fairness is already proposed in this study.

5.2 Tax fairness and intention to comply with mediating role of attitude and tax morale

To examine direct and indirect relationships among tax fairness, attitude, tax morale and tax compliance, four hypotheses were proposed in this study. The findings reveal that there is a significant positive relationship between tax fairness and intention to comply in Pakistan.

Furthermore, attitude partially and significantly mediates the relationship between tax fairness and intention to comply. Likewise, the tax literature confirms attitude towards compliance is influenced by tax fairness (Abdul-Razak & Adafula, 2013; Saad, 2011; Jones, 2009) and the relationship between attitude towards compliance and intention to comply is also well established (Smart, 2012; Saad, 2011; Benk *et al.*, 2011; Jones, 2009; Kirchler *et al.*, 2008; Trivedi *et al.*, 2004; Bobek & Hatfield, 2003). In addition, in the case of tax morale as a mediator, the findings suggest significant and partial relationship between tax fairness and intention to comply. Likewise, tax morale is influenced by general fairness of tax (Yucedogru, 2016; Siahaan, 2005; Torgler *et al.*, 2008). Tax morale also had a positive significant relationship with tax compliance (Alasfour *et al.*, 2016; Helhel & Varshalomidze, 2015; Lisi, 2015; Luttmer & Singhal, 2014; Alm & Torgler, 2011; Fakile, 2011; Siahaan, 2005; Trivedi *et al.*, 2004; Torgler, 2002; Frey & Feld, 2002). Tax fairness is a source of increasing positive attitude towards tax compliance and tax morale with ultimate improvement in intention to comply.

Tax fairness is an important variable in intention to comply. Past studies reported that tax fairness has a significant and positive relationship with tax

compliance (Alasfour *et al.*, 2016; Helhel & Varshalomidze, 2015; Geberegbe *et al.*, 2015; Sapici *et al.*, 2014; Abdul-Razak & Adafula, 2013; Alon & Hageman, 2012; Hofmann *et al.*, 2008; Khasawneh *et al.*, 2008; Siahaan, 2005; Richardson & Sawyer, 2001).

This study reports significant positive relationship between tax fairness and intention to comply. This means, to enhance intention to comply among people, the issue of perceived tax fairness needs to be addressed in Pakistan. Although the government and tax authorities generally claim that the tax system is fair, just and in accordance with the need of the society, the respondents are not satisfied with the fairness of system. The potential reason for this difference might be the lack of tax awareness regarding fairness of system. The findings reinforce the previous findings regarding tax awareness. There may be a genuine issue regarding the fairness of tax in the country and strategies to improve tax fairness scenario in Pakistan need to be adopted. Both stated situations might prevail. Whatever the situation may be, by utilizing the findings and proposed strategies of this study, the tax base can be broadened by improving tax fairness perceptions.

Furthermore, the structure of taxation in Pakistan is dominated by indirect taxation and tax deduction at source. The major and increasing portion of indirect taxation reflects the priorities of government regarding tax structure. In addition, tax deduction at source on items of personal use is a source of the opinion that the tax structure is unfair, along with rise in inflation, as business executives considers them to be business expenses and the tax increases the cost of product(ion). In Pakistan, tax deduction at source is deducted on items such as balance load of mobile, banking transactions, and payment of services and goods when exceeding certain limit.

Likewise, more focused and heavy indirect taxation is made through application of general sales tax on items of use of ordinary persons, like on petroleum products, use of airtime of mobile, electricity bills and so on, and reinforces the perception of unfair taxation. The government had to adopt these general sales taxes due to narrow tax base in Pakistan. This main concern of government is addressed with the objective of this study: to enhance tax base.

Multiple strategies can be adopted to combat the perception of unfair taxation. A cluster of strategies needs to be adopted such as regularly launching tax awareness campaigns, tax reforms, fairly administrated taxation system, utmost effort to avoid multiple taxation, capture wealthy tax non-filers into tax-net, more reliance on direct taxation rather on indirect taxation and so on would rationalize the perception of fairness of tax of non-filers and filers.

5.3 Deterrence and intention to comply with mediating role of attitude and tax morale

To investigate the relationship between deterrence and intention to comply with mediating role of attitude and tax morale, four hypotheses have been developed in this study. This study suggests direct significant positive relationship between deterrence and intention to comply in Pakistan. In addition to direct relationship, attitude towards tax compliance fully and significantly mediates the relationship between deterrence and intention to comply. The relationship between attitude towards compliance and intention to comply is well established (Smart, 2012; Saad, 2011; Benk *et al.*, 2011; Jones, 2009; Kirchler *et al.*, 2008; Trivedi *et al.*, 2004; Bobek & Hatfield, 2003).

In addition, in the case of tax morale as a mediator, the findings suggest partial and significant relationship between deterrence and intention to comply. Likewise, tax morale is influenced by deterrence (Daude *et al.*, 2013; Filippin *et al.*, 2013; D'Arcy,

2011; Levi & Sacks, 2009). The tax literature reports that tax morale has a positive significant relationship with tax compliance (Mohamed, 2016; Alasfour *et al.*, 2016; Helhel & Varshalomidze, 2015; Lisi, 2015; Luttmer & Singhal, 2014; Alm & Torgler, 2011; Fakile, 2011; Siahaan, 2005; Trivedi *et al.*, 2004; Bobek & Hatfield, 2003; Frey & Feld, 2002). This study indicates that deterrence is a vital source for increasing intention to comply with the mediating role of attitude and tax morale in Pakistan.

This study confirms the role of deterrence in compliance behaviour as stated in deterrence theory with contributions by Thomas Hobbes (1588–1678), Cesare Beccaria (1738–1794), and Jeremy Bentham (1748–1832). Likewise, in the tax literature, deterrence is an important variable towards intention to comply. Past studies reported significant positive relationship between deterrence and intention to comply (Loeffler *et al.*, 2016; Mohamed, 2016; Carvalho & Pacheco, 2014; Sapici *et al.*, 2014; Filippin *et al.*, 2013; Alm & Torgler, 2011; Davis *et al.*, 2003; Casey & Scholz, 1991).

This study reveals very interesting and practical findings. Attitude fully and significantly mediates the relationship between deterrence and intention to comply. It indicates the role of attitude for intention to comply with the use of deterrence. Furthermore, more focused efforts through deterrence are needed to change the attitude of people to achieve higher intention to comply. Much literature is available reporting direct relationship between deterrence and intention to comply (Mohamed, 2016; Loeffler *et al.*, 2016; Carvalho & Pacheco, 2014; Sapici *et al.*, 2014; Filippin *et al.*, 2013; Alm & Torgler, 2011; Davis *et al.*, 2003; Casey & Scholz, 1991) but studies based on mediating mechanism, which is termed as ‘black box’, of attitude and tax morale are rare in Eastern context. Likewise, mediating role of tax morale is also very important. The role of deterrence for improving tax morale is well acknowledged in

the literature. Tax morale, the intrinsic motivation, plays positive significant mediating role for intention to comply. The law enforcement general situation in Pakistan is situation based. Moreover, certainty, swiftness and severity of punishment depends on some other factors like honesty and commitment of official(s) of law enforcement agencies (Alm *et al.*, 2016), and the status and political or bureaucratic links or affiliations of guilty and aggrieved parties. A large number of eligible tax non-filers is available in Pakistan, even though tax authorities do not bother to ask them to file tax return or declare source of income unless he or she is unlucky.

Section 2(66) of Income Tax Ordinance clearly specifies the eligibility criteria for taxpayers and to file a tax return; a person who has an annual taxable income greater than PKR 400,000 is liable to file a tax return. In addition, a person who has a vehicle above 1000cc or immovable property in specified rated area is liable to furnish an annual tax return. There are huge numbers of persons throughout Pakistan, especially in big cities like Lahore, Karachi, Quetta, Peshawar, Faisalabad, Gujranwala, Sialkot, Gujrat, Hyderabad, Islamabad, Rawalpindi, who fall into these categories. Jang (2017b) stated that tax authorities have identified 6.5 million eligible taxpayers. At frequent intervals, such news is seen in newspapers but when will such persons be put into tax-net? There is no concrete answer to that even though taxpayer to population ratio is very low (i.e. about 0.59%, 1.185 million) in Pakistan. This scenario is a reflection of the deterrence situation in Pakistan.

There can be only one combating strategy: tax authorities should adopt clear-cut fair deterrence policy with full support of government. Adoption of clear deterrence policy would also improve other related aspects along with intention to comply. Fear of being caught, leading to swift and severe punishment, can result in higher tax compliance.

5.4 Moral persuasion and intention to comply with mediating role of attitude and tax morale

To examine direct and mediating relationship of tax morale persuasion, attitude, tax morale and intention to comply, four hypotheses are developed in this study. The results indicate direct positive relationship between moral persuasion and intention to comply in Pakistan. Moreover, attitude partially and significantly mediates between moral persuasion and intention to comply. However, in the case of tax morale as mediator, the findings suggest partial and significant relationship between moral persuasion and intention to comply. Tax morale is influenced by moral persuasion (Chung & Trivedi, 2003). Tax morale has a positive and significant relationship with tax compliance (Mohamed, 2016; Trivedi *et al.*, 2004; Bobek & Hatfield, 2003). Moral persuasion is also a source of enhancing tax morale, results in improving intention to comply.

This study confirms theoretical work of Chant and Acheson (1972, 1973a, 1973b), Courchene (1974), and Griffiths (1973). Moral persuasion has an important role in improving intention to comply. The findings of this study confirm the relationship with past studies (Chung & Trivedi, 2003; Richardson & Sawyer, 2001).

Moral persuasions are external motivation or appeals to others for compliance behaviour whereas tax morale is intrinsic motivation. An external motivation or appeal, moral persuasion, causes change in intrinsic motivation and in attitude too. Such types of appeals are made in the banking system. Little attention has been paid to moral persuasion or suasion in the tax literature but it is an important source of intention to comply (Chung & Trivedi, 2003; Richardson & Sawyer, 2001).

Moral persuasion appears in other fields of study, like in banking sector or health care institutions for their patients (Ito *et al.*, 2015, 2017; Omoregie, 2013;

Breton & Wintrobe, 1978). Persuasion is from the word persuade or to convince. Moral refers to ethical appeal, an ethical appeal to convince others for compliance of an activity. Companies effectively use persuasion for promotion of their product with linkage to moral message which hits the respondent for compliance. Normally, much focus is placed on a message which is the essence of the appeal. Message selection is made by considering the base of vulnerability of audience compliance behaviour. Such messages may be religious, social welfare or national cause oriented. Such appeals can be in written or in image form. Nowadays, electronic media is used for moral persuasion. The ultimate objective of corporations in such advertising campaigns is to convince the respondent to perform a specific behaviour. By adopting the same approach, tax-related moral persuasion campaigns are launched. But again, the issue is how effectively you can convey your message to hit the emotions of respondents for performance of desired behaviour. This involves marketing tactics. Tax authorities should adopt a marketing-oriented approach for moral persuasion. In Pakistan, very little attention has yet been paid to the adoption of moral persuasion as a strategical policy tool. It is necessary that the tax authorities should launch moral persuasion campaigns on print and electronic media regularly and frequently and acknowledge the role of moral persuasion as strategic policy tool.

Moreover, a mixed strategy based on a behavioural approach is also very important for improving intention to comply. Lisi (2015) proposed the adoption of optimal tax policy by involving hard (deterrence) and soft (morality) measures to attain a better intention to comply in society. For honest taxpayers, monitoring should be accompanied with morality whereas, for tax evaders, tighter monitoring should be accompanied by deterrence tools like higher penalty (Lisi, 2015). This study also proposes the adoption of a mixed tax strategy based on behavioural approach. The

inclusion of morality variables in this study (tax morale and moral persuasion) was inspired by the mixed strategy based on behavioural approach of Lisi (2015).

5.5 Tax complexity and intention to comply with mediating role of attitude and tax morale

To examine direct and indirect relationship among tax complexity, attitude, tax morale and tax compliance, four hypotheses are developed in this study. The findings suggest individual significant negative relationship between tax complexity and intention to comply in Pakistan. Furthermore, attitude does not mediate relationship between tax complexity and intention to comply. In addition, in the case of tax morale as mediator, the results show partial negative mediating relationship between tax complexity and intention to comply.

The level of tax complexity plays an important role in determination of intention to comply. Past studies reported that tax complexity has a negative relationship with tax compliance (Jugurnath & Ramen, 2018; Ayuba *et al.*, 2016; Mohamed, 2016; Sapici *et al.*, 2014; Saad, 2014; Alstadsæter & Jacob, 2013; Langham *et al.*, 2012; Saad, 2011; Richardson & Sawyer, 2001).

The study reveals very interesting findings. The direct relationship between tax complexity and intention to comply is significant and negative as reported in the literature. One possible reason for the insignificant relationship between tax complexity and attitude towards compliance is an attitudinal one. The attitude of non-filer respondents could be that they are not bothered by tax complexity as they do not file annual income tax returns. Whereas the relationship between tax complexity and tax morale is significant and negative; the potential reason might be high intrinsic motivation among respondents even of non-filer status. It means that in the case of tax

morale, people have the tendency to respond to tax complexity. Tax morale role is important and found to be unique in this study.

Multiple strategies can be adopted to combat the perception of unfair taxation. A cluster of strategies is needed to be adopted like regularly launching tax awareness campaigns, tax reforms, fairly administrated taxation system, utmost effort to avoid multiple taxation, capture of wealthy tax non-filers into tax-net, more reliance on direct taxation rather than on indirect taxation and so on, would rationalize the perception of fairness of non-filers and filers.

There are multiple reasons for tax complexity in Pakistan which may include, difficult and typical tax law English language, record collection and keeping issues, multiple explanations of tax laws, problems in submission of tax returns and very frequent amendments to tax laws. Even now, tax laws cannot be translated in the local language for better understating of the ordinary person. In addition, typical law language is not easily understandable even in English language. Moreover, difficult tax return pattern and submission procedure are the next barriers. Furthermore, the problem is intermingled with collection and keeping of records for a long period. By considering these problems, the individual taxpayer has to hire the service of a tax practitioner. The taxpayer has to pay the fee of a tax practitioner and pay tax liability. In such a situation, the eligible and even potential tax filers are discouraged and go for noncompliance behaviour.

Appropriate strategies are needed to address the tax complexity issues in Pakistan. The following strategies are proposed keeping in mind the tax complexity issues on the surface.

First: Frequent changes in tax laws should be avoided. Amendments in tax laws should be brought in after a specified interval of time (e.g. after every five

years). This would provide a state of certainty to tax stakeholders and would refine eligible and potential taxpayers' perceptions of tax complexity.

Second: All tax laws should be available in local language. For this purpose, all the tax laws and website of tax department should be translated into local language (i.e. in Urdu) for the understanding of eligible, potential and existing taxpayers. This would also result in more tax awareness.

Third: The language of law should be simple and self-explanatory. Difficult language should be avoided to ease the stakeholders.

Fourth: Tax return contents and filing procedure should be simplified. To achieve this strategy, a comprehensive plan can be worked out. Presently a person who intends to file a tax return first has subject to e-enrolment. As a next step he or she will be given a user-id and password after certain verifications. After login to own tax account, a difficult and confusing contents list is available as a common return form of various categories of individual. Putting entries into tax online tax return is also a challenging task. In addition, detailed record of financial transactions of the whole year is also needed to fill the tax return. After inputting entries, the next step is payment of tax by visiting specified branches of specified banks. On arrival at the specified bank, there are often problems of system link is down. After payment of tax in bank, a payment voucher number is required to be entered in online tax return. All this is discouraging and ultimately the taxpayer has to hire the services of a tax practitioner. The taxpayer has a double financial burden: pay tax and practitioner fee. This also endorses a message of tax complexity to eligible and potential taxpayers.

It is proposed that all the online systems of tax authority should be interlinked with all the financial, telecommunication, educational and employer systems so that any entry made by any institution should go straight into system of self-generated tax

account of eligible, potential and existing taxpayers. Through short message service (SMS) a message should be communicated to eligible or potential taxpayers that your tax account has been opened and you will have to submit your tax return by inputting some other data, if any. In such cases, all the data would already be available and taxpayer would not need to enter data to make a tax account and would be saved from confusion in form filling. Moreover, the form should be so simple that everyone can easily understand and submit it. The proposed model would enhance the tax base to a great extent. The taxpayer would also be facilitated a lot. For this purpose, amendments to tax laws may be necessary.

5.6 Self-corruption and intention to comply with mediating role of attitude and tax morale

Four hypotheses have been developed in this study to examine the direct and mediating relationship among self-corruption, attitude, tax morale and intention to comply. The results indicate that there is a direct significant negative relationship between self-corruption and intention to comply in Pakistan. In addition, attitude mediates fully and there is a significant relationship between self-corruption and intention to comply. The relationship between attitude towards compliance and intention to comply is well established (Smart, 2012; Saad, 2011; Benk *et al.*, 2011; Jones, 2009; Kirchler *et al.*, 2008; Trivedi *et al.*, 2004; Bobek & Hatfield, 2003). In addition, in the case of tax morale as a mediator, the findings suggest significant relationship with partial mediation between self-corruption and intention to comply. Likewise, tax morale is influenced by corruption (Daude *et al.*, 2013; Ali *et al.*, 2013; Daude & Melguizo, 2010; Levi & Sacks, 2009; Torgler, 2004). Tax morale also has a positive significant relationship with tax compliance (Alasfour *et al.*, 2016; Helhel & Varshalomidze, 2015; Frey & Feld, 2002; Lisi, 2015; Luttmer & Singhal, 2014;

Fakile, 2011; Alm & Torgler, 2011; Siahaan, 2005; Trivedi *et al.*, 2004; Torgler, 2002). Decline in corruption is a source of increasing positive attitude towards tax compliance and tax morale with ultimate improvement in intention to comply. In this study, corruption has negative relationship with intention to comply which supports the findings of Alm *et al.*, (2016), Alasfour *et al.* (2016), Carvalho and Pacheco (2014), Alon and Hageman (2012) and Wu and Teng, (2005).

Corruption and tax evasion are two distinct problems and can easily become entangled. Corruption contributes to tax evasion when taxpayers hide their income and tax evasion can make it easy for corruption by creating additional opportunities for corruption to thrive (Alm *et al.*, 2016). Larger bribe results in larger tax and it reinforces the finding of this study in regard to deterrence that in Pakistan, deterrence and corruption also depend on the law enforcement officer. Furthermore, Gangl *et al.* (2015) and Awan and Hannan (2014) suggested that corruption in Pakistan should be combatted so that tax compliance can be increased.

Strategies for combating corruption include law enforcement, honest tax administration, regular and surprise tax audits and penalties. There should be a focus on honest tax administration (Alm *et al.*, 2016). If the government is serious about increasing tax revenues, it must first ensure honest tax administration. Corrupt tax administration not only causes revenue shortfalls through tax evasion on the part of existing and eligible taxpayers but it also appropriates some portion due to government. Honest tax administration enforces law, effectively resulting in reduced corruption and increased tax compliance and tax revenues. Moreover, honest tax administration allows policymakers to work for tax reforms to reduce evasion with the full confidence that those reforms would be properly implemented.

5.7 Tax awareness and intention to comply with mediating role of attitude and tax morale

For direct and mediating relationship of tax awareness, attitude, tax morale and intention to comply, four hypotheses are developed in this study. The results confirm direct positive relationship between tax awareness and intention to comply in Pakistan. Moreover, attitude partially and significantly mediates between tax awareness and intention to comply. Awareness is an important tool to change human attitude towards voluntary compliance behaviour in the tax literature (Bidin *et al.*, 2016; Abdul-Razak & Adafula, 2013; Lewis, 1982). Whereas, relationship between attitude towards compliance and intention to comply are also well established (Onu, 2016; Mohamed, 2016; Cyan *et al.*, 2016; Hamid, 2014; Abdul-Razak & Adafula, 2013; Smart, 2012; Shaharuddin, 2012; Benk *et al.*, 2011). In the case of tax morale as mediator, the findings suggest significant and partial relationship between tax awareness and intention to comply. Tax morale is influenced by tax awareness (Kiow *et al.*, 2016). Tax morale also has a positive significant relationship with tax compliance (Mohamed, 2016; Trivedi *et al.*, 2004; Bobek & Hatfield, 2003). Tax awareness is also a source of enhancing tax morale and ultimately results in improving intention to comply.

Tax awareness occupies an important role in improving intention to comply. The findings of this study confirm the results of past studies (Savitri, 2015, 2016; Mustapha & Yahaya, 2015; Kamil, 2015; Hastuti, 2014; Gach, 2014; Abdul-Razak & Adafula, 2013; Rasak & Adafula, 2013; Kasum *et al.*, 2013; Vadde & Gundarapu 2012; Langham *et al.*, 2012; Propheter, 2012).

The results reveal very practical findings. Tax awareness has a significant positive relationship with intention to comply, which means there is a tendency to

change existing noncompliance behaviour in Pakistan into compliant one. By utilizing this finding, steps can be taken to broaden the tax base. In the present scenario, Pakistan has a very low tax base, about 0.55% taxpayers as to population, which indicates that hardly any tax awareness activities are available. The role of awareness to enhance tax compliance is well acknowledged in Pakistani context in past studies (Gangl *et al.*, 2015; Awan & Hannan, 2014; Khan & Ahmad, 2014).

Multiple strategies can be adopted to enhance tax awareness among the citizens. There is an emerging need to teach 'taxation' as a subject and part of syllabi at school, colleges and university levels (Anis Bariayah & Lai, 2009) rather just practiced or learned so that potential taxpayers are taught tax compliance behaviour at the right time. Moreover, a second option might be, when full taxation as a subject cannot be offered, basic information regarding annual changes in tax laws, exempt income, calculation of tax and taxable income, when to include income of dependents in own income, admissible expenses and tax rates must be part of mandatory subject 'civic liabilities'. The main objective should be to inculcate in the next generation a sense of responsibility towards state and indeed to society. Presently, taxation subject is taught at limited scale at business educational institutions only. The next strategy might be to establish a 24-hour free 'tax helpline' which should be easily accessible on a permanent basis so that people may be equipped with information without any barriers. At present, a tax helpline is available but just as a formality; it is hardly accessible and callers are charged for their calls, which discourages use among existing and potential taxpayers. The intention should be to facilitate people by reducing or eliminating barriers to awareness so that potential taxpayers can be encouraged. Unfortunately, the present situation is not encouraging as taxpayers pay charges to pay their tax and pay substantial call charges just for seeking awareness

about paying taxes. Moreover, steps towards tax socialization can be taken to enhance tax awareness level among the citizens of Pakistan. As the next strategy, frequent tax awareness campaigns might be launched through print and electronic media. SMS or SMS alerts can be launched so to enhance awareness level among people.

5.8 Subjective norms and intention to comply with mediating role of attitude and tax morale

To test the direct and mediating relationship among subjective norms, attitude, tax morale and intention to comply, six hypotheses are developed. The results reveal significant and positive relationship between subjective norms and intention to comply in Pakistan. The findings of this study are in line with past tax literature (Sukono & Djamaluddin, 2018; Mohamed, 2016; Ebimobower & Elizabeth, 2016; Hamid, 2014; Saad, 2011; Smart, 2012; Benk *et al.*, 2011; Shaharuddin, 2012; Jones, 2009; Hofmann *et al.*, 2008; Kirchler *et al.*, 2008; Trivedi *et al.*, 2004; Bobek & Hatfield, 2003; Richardson & Sawyer, 2001).

Attitude mediates partially and significantly the relationship between subjective norms and intention to comply. Furthermore, tax morale mediates partially and significantly the relationship between subjective norms and intention to comply. Moreover, the study indicates significant positive relationship between subjective norms and attitude. Likewise, the study indicates significant positive relationship between subjective norms and tax morale (Mohamed, 2016). In addition, attitude and intention to comply have significant positive relationship (Onu, 2016; Mohamed, 2016; Cyan *et al.*, 2016; Hamid, 2014; Abdul-Razak & Adafula, 2013; Smart, 2012; Shaharuddin, 2012; Saad, 2011; Benk *et al.*, 2011; Jones, 2009; Kirchler *et al.*, 2008; Trivedi *et al.*, 2004; Bobek & Hatfield, 2003). Moreover, tax morale and intention to comply have significant and positive relationship (Mohamed, 2016; Alasfour *et al.*,

2016; Helhel & Varshalomidze, 2015; Lisi, 2015; Luttmer & Singhal, 2014; Fakile, 2011; Alm & Torgler, 2011; Siahaan, 2005; Trivedi *et al.*, 2004; Bobek & Hatfield, 2003; Torgler, 2002; Frey & Feld, 2002).

Subjective norms and compliance behaviour are variables included in this study after inspiration from the TPB by Ajzen (1985). The TPB is the extended version of the TRA also developed by the same author (Ajzen & Fishbein, 1980). The refinement in theory was due to issues related to self-efficacy and behavioural control; however, subjective norms variable remained present in both the models. The findings of this study confirm both theories, TPB Ajzen (1985) and TRA Ajzen and Fishbein (1980), in the context of tax literature.

Being the second component of TPB, subjective norms influence the behavioural intentions of individual tax non-filers' compliance intention (whether to comply or not to comply). In this study, the referent group consists of friends and family. The study indicates the significant influence of friends and family's thinking on behavioural intentions to comply. In Pakistan, friends and family system is considered very strong. In most areas, joint family system prevails, which reflects the presence of family culture. Moreover, association with friends starts from childhood leading to school, college and university, work place goes on and on. In a society where such a system prevails, subjective norms would definitely influence respondents' behaviour.

The strategy that can best use the potential available in Pakistani society is in the form of subjective norms. Friends and family's perception about oneself has an impact on one's behavioural intentions to comply. A strategy to attain more compliance may be the publishing of names of tax evaders in the newspaper, which will definitely influence a tax evader's behavioural intention to comply or not to

comply as friends and family's perception could be changed after viewing his or her name as a cheat.

5.9 Perceived behavioural control and intention to comply

PBC is the third component that influences behavioural intentions to comply as theorized in TPB. PBC was the missing link in the TRA. PBC deals with the behavioural controllability aspects and self-efficacy issues of individuals and directly measures behaviour (Ajzen, 1985, 2002). Higher the PBC, higher the intention to comply. If individuals believe that they have controllability of resources and opportunities to evade, and they can evade with ease (self-efficacy), it is very likely that the individuals would evade tax. Likewise, when the PBC level is low, the chances to evade tax would be low (Mohamed, 2016). It is important that the tax department must ensure individuals' PBC should remain very low with regard to tax evasion. To test the direct relationship of PBC with intention to comply, one hypothesis is developed in this study.

This study finds significant positive relationship between PBC and intention to comply (predictor of tax compliance behaviour) which means that the respondents have a good tendency to respond to any change in PBC leading to tax (non)compliance. The results are in line with past studies (Ebimobower & Elizabeth, 2016; Hamid, 2014; Smart, 2012; Shaharuddin, 2012; Saad, 2011; Benk *et al.*, 2011; Jones, 2009; Bobek & Hatfield, 2003). In Pakistan, PBC plays an important role in determining tax evasion decisions. Although, a different impact of PBC in case of Trivedi *et al.* (2005), the PBC was insignificant. Likewise, Mohamed (2016) reported negative PBC impact on intention to comply but positive with compliance behaviour as the author measured these two variables separately. The main and important role lies with controllability and self-efficacy. Both phenomena depend on input from the

environment and, on the basis of inputs, individuals settle their controllability level based on their networking, personal skills and resources. Likewise, in the case of self-efficacy, the provided opportunities to evade tax give them a margin. Now it is on the tax authorities, which level to tune the PBC level of individuals in the society.

The use of PBC is not widely done either as a full model or as independent element with intention to comply or (and) with compliance behaviour in past tax studies. A possible reason may be the limited utilization of TPB as a theoretical model of tax compliance in tax studies. The reason behind an exploration of PBC is the variable results from the literature and important role of behavioural controllability and self-efficacy. Mohamed (2016) reported a positive result with intention to comply and negative with compliance behaviour. Mohamed (2016) did not use intention to comply as predictor of tax compliance behaviour as he measured behaviour separately. Likewise, Bobek and Hatfield (2003) revealed significant positive relationship with intention to comply, whereas Trivedi *et al.* (2005) reported insignificant relationship. This is possibly due to application of different measurements as their study incorporated elements of penalty and third party reporting.

This study finds significant positive relationship between PBC and tax compliance behaviour (intention to comply is predictor). This means that the respondents have a good tendency to respond to any change PBC leading to tax compliance. The tax authorities must use utilize the potential of PBC for tax compliance. The tax department must understand the controllability and self-efficacy issues related to PBC. Maintaining a high level of enforcement of tax laws would provide positive input to environment and ultimately the results would be low PBC with respect to tax evasion.

Moreover, it is concluded that this behavioural tax compliance model would help tax authorities to enhance tax base in Pakistan. In addition, the problem of non-filers is a major issue for the government which can be well managed. The carrot and stick approach is recommended in this behavioural mode. It is pertinent to mention here, while working with the carrot and stick approach, much attention should be paid to promote voluntarily compliance as it is a long-term solution to non-filing issue. The avoidance of excessive use of power by tax officers and promotion of voluntary compliance should be the first choice of the government.

5.10 Chapter summary

This chapter presented a discussion on the findings, presented in Chapter 4, of this study. Overall, tax awareness, tax complexity, corruption, tax fairness and tax morale contribute towards compliance behaviour in context of Pakistan. Likewise, attitude, subjective norms and PBC relationship with compliance behaviour findings are well in line with the relevant theory of TPB. Moreover, moral suasion relationship with compliance behaviour also supports the relevance of the theory of moral suasion. All the results of this behavioural approach model are consistent with tax literature.

CHAPTER 6: CONCLUSIONS AND POLICY IMPLICATIONS

This is the concluding chapter of the study; it summarizes findings and draws out their implications for tax authorities and literature. The key findings of the study are presented in Section 6.1. Contributions to literature are given in Section 6.2. Section 6.3 elaborates practical implications of the study and Section 6.4 describes the limitations. Section 6.5 proposes the area for future research. Lastly, chapter ends with Section 6.6 with concluding remarks.

6.1 Research summary

Since last five decades, tax compliance is an important area in tax literature in which researchers are still on a quest to uncover new horizons (Braithwaite, 2017; Allingham & Sandmo, 1972).

Furthermore, examination of human behavioural aspects of tax compliance is needed to enhance government revenues (Mohamed, 2016; Bobek & Hatfield, 2003). The inadequacy of the literature to provide sound theoretical understanding of behaviour of individual tax non-filer towards compliant behaviour in the case of developing countries led to the aims of this study (Gangl *et al.*, 2015). Considering the role of tax revenues in economic growth and development of a nation, a tax compliance conceptual framework with mediating role of attitude and tax morale based on the behavioural approach was designed in the case of tax non-filers. In order to achieve the objectives of the study, the theoretical lenses of TPB, deterrence and moral persuasion are utilized to develop a mediating model of tax compliance behaviour in the case of individual tax non-filers of Pakistan.

This study applied positivism paradigm. The data collection was the most difficult task of this study. As the first attempt, the researcher tried to collect data himself from tax non-filers, but could not succeed. The respondent had thought that

the scholar might be the employee of tax department. There was the trust deficit between researcher and responded. For the solution, snowball sampling was used to resolve the issue of trust deficit. The study had to face low response rate as it was expected. The instrument and data gone through pretesting, pilot study, validation process, reliability of data, correlation, diagnostic statistics, mediation and regression analysis.

The results of the direct relationships examined in this study reveal that moral persuasion, deterrence, tax awareness, tax morale, fairness and subjective norms positively affects attitude towards tax compliance, whereas, self-corruption negatively affects attitude towards compliance. In addition, insignificant relationship is reported between tax complexity and attitude towards compliance. There is a positive relationship between attitude and intention to comply (tax compliance behaviour). Likewise, results also indicate that deterrence, tax awareness, fairness and subjective norms positively affect tax morale. Furthermore, tax complexity and self-corruption negatively affect tax morale. Similarly, tax morale positively affects intention to comply. Moreover, PBC positively influences intention to comply. More specifically, these findings empirically answer the research questions 1, 2, 4 and 5.

The main research questions 3 and 6 are related to analysis of mediation results. Attitude towards compliance partially mediates the relationship between moral persuasion, tax awareness, tax morale, fairness and subjective norms with intention to comply. Moreover, attitude fully mediates the relationship between deterrence and self-corruption with intention to comply. In addition, tax complexity could not fulfil the conditions of mediation, which is why no mediation was found when attitude was placed as mediator between tax complexity and intention to comply. Likewise, in the case of tax morale as mediator, moral persuasion, tax

awareness, fairness, deterrence and subjective norms partially mediate with intention to comply. Furthermore, tax morale fully mediates the relationship between tax complexity and self-corruption with intention to comply in the case of tax non-filers in Pakistan.

It is clarified, in this study; intention to comply has been used as proxy of compliance behaviour. Intention to comply is the predictor of compliance behaviour as per original theory of the TPB presented by Ajzen (1985). Most of the studies, like this study, in the tax literature employ this protocol. However, some studies measured intention to comply and behaviour separately as a proxy for measuring compliance behaviour (Mohamed, 2016).

The findings of the study recommend the application of tax determinants in combination form rather in isolation (Lisi, 2015; Beck & Ajzen, 1991). To achieve this purpose, three theories; TPB, moral suasion and deterrence, have been utilized in the study. To cover behavioural aspects and compliance, the TPB is applied. By considering the importance of hard (Alm & Torgler, 2011) and soft measures (Lisi, 2015; Luttmer & Singhal, 2014), deterrence along with moral suasion theories are employed.

The findings of this study support the assertion of the TPB, moral suasion and deterrence theories. The goal of utilizing TPB was to uncover the fact that, in Pakistan, the issue of individual tax non-filing is purely behavioural and attitudinal in nature rather than based on economics approach. The results of the study have proven that; on the basis of novel data of individual tax non-filers, the way of tax evasion to tax compliance can be undertaken on the vehicle of behavioural model. Moreover, by considering recommendations from the literature and factual position in Pakistan scenario, where tax non-filing is a social norm (Gangl *et al.*, 2015), deterrence and

moral suasion (hard and soft measures) theories were made part of the conceptual model of this study. The findings of deterrence, moral persuasion and tax morale (soft measures) for compliance behaviour are in line with tax literature. Moreover, the role of attitude as mediator that fully mediates deterrence and compliance behaviour is novel and contributes to the tax literature as well in the case of individual tax non-filers in a developing country.

6.2 Contributions of this study

This study contributes to existing tax literature in several ways.

This study is among a handful of studies that attempts to understand tax compliance determinants in the case of individual persons in a developing country based on behavioural approach. To the best of scholar's knowledge, this is the first study that focuses on behavioural determinants based on TPB, which specifically and independently examines the compliance behaviour of tax return non-filers only. Much of the focus of prior studies remained on the behavioural determinants of existing taxpayers or existing and eligible taxpayers at the same time. The problem with such types of studies is that findings based on existing or existing taxpayer dominated samples, is generalized to tax non-filers even though the behavioural characteristics of taxpayers and tax evaders are different. Another potential problem with such types of study is that some studies based on econometric model predict compliance behaviour without considering or giving substantial weight to behavioural factors. Gangl *et al.* (2015) addressed the need to fill gap in literature in the case of tax compliance behavioural model for individual tax non-filers in developing and developed countries. This study aims at addressing this gap in the tax literature.

This study utilizes TPB, applied behavioural theory, to develop a conceptual framework. The TPB is proven behavioural theory which predicts human compliance

behaviour and this universal theory has been applied to interdisciplinary research contexts. Moreover, among a very few studies in the tax literature the TPB was utilized. Langham *et al.* (2012) suggested that more variables are needed while utilizing TPB in tax compliance strategies as TPB alone is not a strong predictor of compliance behaviour. Among these few, some studies applied all constructs of TPB as a full compliance model to understand the puzzle of tax compliance behaviour (Mohamed, 2016; Yucedogru, 2016; Hamid, 2014; Saad, 2014, 2011; Trivedi *et al.*, 2005; Bobek & Hatfield, 2003). Furthermore, in Pakistani context, no study can be traced which applied full model of TPB for tax compliance behaviour (Gangl *et al.*, 2015; Khan & Ahmad, 2014; Awan & Hannan, 2014; Chaudhry & Munir, 2010). In tax literature on compliance behaviour while using TPB, researchers extended TPB by inclusion of very limited variables; for example, Saad (2011) used knowledge, tax complexity and fairness. Likewise, Trivedi *et al.* (2005) added one additional construct, ethics in Canadian context, and Hamid (2014) included two additional constructs: culture and ethical sensitivity. Mohamed (2016) added more constructs to TPB for extension of model but in a different context (the case of Malaysian customs agents in indirect taxation). In contrast, this study extended the TPB by inclusion of multiple constructs by considering the study objectives and local dynamics. It is expected that the findings of this study could potentially contribute to a more integrated tax compliance behavioural model.

In the literature, some studies focused on deterrence use for enhancing tax compliance behaviour, while some studies highlighted the need for soft measures. A very few studies are available that focused on the need of the carrot and stick approach (hard and soft tools) for compliance behaviour (Frey & Feld, 2002; Lisi, 2015). Among the few studies, Mohamed (2016) combatted this problem but in a

different context (the case of Malaysian customs agents in indirect taxation). Likewise, Ebimobower and Elizabeth (2016) emphasized the desired approach but in different settings (target population was existing taxpayers). This study could potentially contribute to the literature on the carrot and stick approach along with TPB for tax compliance behaviour in the case of tax non-filers in a developing country. This could be a valuable contribution to the literature.

The study also conceptualized and operationalized two constructs: moral persuasion and self-corruption. Moral persuasion conceptualization is based on the guidelines of Omoregie, (2013) whereas self-corruption is conceptualized and operationalized from guidelines of Anti-Corruption Commission, (2012) and from the literature. The need of conceptualization and operationalization was felt due to novel data of tax non-filers and indigenous dynamics. The constructs were used after examining face, content, discriminant and convergent validity, and reliability. This effort could help researchers of taxation in future when utilizing moral persuasion and self-corruption.

Tax evaders or non-filers can be self-employed or employed persons. The general notion in past studies is that the phenomenon of tax evasion is most widespread among self-employed persons (Gangl *et al.*, 2015; Erard & Ho, 2001). In this study, the scenario is different. It was found that employed persons are also likely to evade tax. There is no tangible difference. An employer does not deduct tax at source from employees' salaries when they are below taxable limits, but when employees cumulate their total income from all sources they approach taxable range. In this situation, the onus is on the individual person to report that income through filing a return. The findings of this study reveal that they do not disclose full income as they have opportunity to evade and PBC as well. The actual issue is the degree of opportunity to evade tax. This opportunity to evade leads towards self-efficacy and

higher perceived control which results in higher tax evasion (Mohamed, 2016). Hence, tax evasion or non-filing is widespread among employed persons and self-employed persons. This notification would add to the literature, particularly in the case of developing countries.

This study also contributes to the literature by examining tax compliance determinants, which have been applied in tax filer case in direct taxation, and indirect taxation, to the extent of this study. The findings of this study reveal that tax compliance determinants between filer and non-filer in the case of direct and indirect taxation, share the same principles or have some similarities. Constructs such as subjective norms, PBC, moral persuasion, tax awareness and fairness have been found in line with results dominated in tax literature either in case of filer or indirect taxation environment. However, results of deterrence, tax complexity, tax morale, attitude and self-corruption reported in this study are interesting and were relevant in non-filer environment in the sense of mediation analysis conducted in this study. The findings are valuable contributions to tax and behavioural literature. Therefore, it is recommended for academicians to consider that deterrence, tax complexity, tax morale attitude and self-corruption can produce different results when using mediating model even for filer and non-filer settings.

As the conceptual model of this study is based on mediation analysis while using the carrot and stick approach with TPB in non-filer case, the results indicate interesting implications for the tax literature. In this context, this study will contribute to the tax literature in two ways. Firstly, a handful of studies in the tax literature utilized mediation analysis with TPB (Mohamed, 2016; Saad, 2011) but in different settings. Secondly, little attention has been paid to the mediating role of attitude in the tax literature. Individual person cases are primarily of a behavioural nature, as in this

study, by acknowledging this fact, attitudinal factor has been observed as main focal point in this case as mediator role. In this study, attitude has been found to be very important and has a mediating role towards tax compliance behaviour to tune noncompliant behaviour of non-filers into compliant one.

6.3 Practical implications of the study

This section provides practical implications for practitioners.

SME sector is 90% of all business and is the largest business sector in Pakistan, but its share in tax revenues is very low of persons associated with SMEs. With the help of proposed behavioural model for tax compliance, a large number of individuals can be brought into tax net. The low tax base is among core issues in Pakistan as only 0.55% Pakistani pays their personal income tax (Jang, 2017a). With the increase in tax base, tax collection will be increased and taxation system can pave the strong way. Increased tax revenues will reduce budget deficits and can enhance the availability of public goods for the welfare of society in Pakistan. With increased revenues, the Government of Pakistan can spend more funds on the development of different industrial and business sectors leading to higher economic growth. Thus, tax compliance by non-tax filers can lead towards economic growth in Pakistan.

The findings of this study reveal that the way to tax compliance from tax evasion is to apply hard and soft measures (the carrot and stick approach) along with other variables. Deterrence, tax morale and moral persuasion have a significant and positive influence on tax compliance behaviour of tax return non-filers as indicated by the results of the present study. The use of soft or hard measures in isolation has its own consequences. Therefore, it is recommended to policymakers to adopt the carrot and stick approach for switching behaviour from noncompliance to compliance. The

optimal combination of hard and soft measures should be developed with the preference of maximum use of soft measures.

As individuals take inputs for mind making from the environment and develop their mind and perception based on prevailing practices. This study reveals that as non-filers are involved in noncompliance act and they further know they have easy space for such practices, such phenomenon generates self-corruption among them. To deal with this problem, policymakers must take initiative to combat the issue of self-corruption.

A general understanding reported by literature that self-employed individuals are more engaged in tax evasion as compared to employed persons (Erard & Ho, 2001; Gangl *et al.*, 2015); hence, requiring more work on tax evasion of self-employed. This study indicates interesting results in this context.

In the case of this study, the scenario is different. It is found that employed persons are also likely to evade tax. There is no material difference between self-employed and employed persons in Pakistan with regard to tax evasion. In this study, all the respondents are eligible for return filing but are non-filers, which mean they are tax evaders. Out of the total, 55% respondents are employed whereas 45% are self-employed or small business owners. It reflects that employed persons are as likely to evade tax as small business owners. Based on this result, I recommend a policy shift for tax department, with special attention also be paid to employed persons which presently are ignorant segment. Furthermore, tax department must also work to trace total income sources of salaried persons of either filer or non-filer status.

Attitude fully mediates the relationship of deterrence and self-corruption with tax compliance behaviour. No mediation was found when the attitude is a mediator of

tax complexity with tax compliance behaviour, which means tax complexity has nothing to do with attitude. However, in the case of deterrence and self-corruption, the role of attitude is an important and influencing one. This main attitudinal mediating role for deterrence and self-corruption is a ‘black box’ which has not yet been identified in the tax literature. In this way, this study provides valuable implications for behavioural and tax compliance studies. Furthermore, this study tested and confirms TPB, as well as deterrence and moral persuasion theories. The study also recommends that policymakers accept attitude as a policy tool of tax compliance behaviour. Moreover, attitude is driven by soft and hard measures and should be adopted along with control variables to achieve optimal tax policy in Pakistan.

Tax complexity has nothing to do with attitude towards tax compliance as indicated by insignificant results. However, tax complexity has a negative impact on tax morale and hence leads towards low compliance behaviour. To enhance tax morale among tax evaders, tax department should focus to reduce tax complexity by making tax laws easy, so that compliance can be increased

The results reveal very practical findings for educational policymakers. It is reported in the literature that tax awareness has a significant positive relationship with tax compliance behaviour which means there is a tendency to change existing noncompliance behaviour in Pakistan into compliant behaviour. By utilizing this finding, steps can be taken to broaden the tax base. In the present scenario, Pakistan has a very low tax base, about 0.55% taxpayers as to population, which indicates that hardly any tax awareness activities are available.

Multiple strategies are recommended to enhance tax awareness among citizens. Besides print and electronic media awareness campaigns (Cyan *et al.*, 2017), there is an emerging need to teach ‘taxation’ as a subject and part of syllabi at school,

colleges and university levels (Anis Barieyah & Lai, 2009) rather than just practiced or learned so that potential taxpayers are taught tax compliance behaviour at the right time. Moreover, a second option might be that when full taxation subject cannot be offered, at least basic information regarding annual changes in tax laws, exempt income, calculation of tax and taxable income, when to include income of dependents in own income, admissible expenses, and tax rates must be part of mandatory subject 'civic liabilities'. The main objective should be to inculcate in the next generation a sense of responsibility towards state and indeed to society. Presently, taxation subject is taught at a limited scale at business educational institutions only.

Lastly, liaisons between taxpayer and the tax department are very important to increase tax base and tax compliance. More vigilance from the tax department provides an environment that is conducive to tax compliance. Moreover, it is a source of tax awareness and facilitation to taxpayers.

When respondents were asked about their liaisons with a tax officer, the present study indicates unbelievable results (keep in mind that all the respondents fall under the definition of taxpayers and eligible to file tax returns but they do not file). They were asked how many times in the last year had the tax department contacted them. The answer of 82.90% respondents was 'never'. Furthermore, 17.10% of respondents were contacted, but unfortunately could not be turned to tax return filer status due to unknown reasons. Respondents were also asked to state when they last had contact with tax department. The answer of 77.40% respondents was again 'never'. Unfortunately, this is a very severe situation. It is recommended that the tax department in Pakistan must enhance contact with taxpayers.

6.4 Limitations of the study

This study has implications for the literature and tax authorities, but it has some limitations. The first acknowledged limitation is the unknown population size; hence, the sampling frame cannot be drawn. Tax return non-filers, whose total income is taxable, are the population of this study. A significant portion of Pakistan economy is undocumented, data about non-filers cannot be traced. The target population includes all individual non-filers (even those required to furnish a return under the law) like small traders, wholesalers, small factory owners, other self-employed salaried persons. There is no system of registration of small businesses and self-employed persons in Pakistan. A government agency named SMEDA is functioning in the country, but it does not have data on every small business as it is not mandatory to register every small business. Moreover, there is another non-filer segment interestingly: salaried persons. The employer is responsible for tax deduction at source when annual income of employee approaches taxable range; this is performing quite well in Pakistan. However, some employees have a salary income below taxable range and additional income that takes their total income above the taxable range, which makes them eligible to file a tax return but they do not file. There is no mechanism in the country to include them in the numbers of non-filers. Due to these reasons, the size of the target population is not known. In this scenario, probability sampling with randomization cannot be done due to unavailability of sampling frame. The researcher had to adopt available best sampling option: snowball sampling technique.

The next limitation is inherently found when using survey questionnaire in quantitative approach. Hessing *et al.* (1988) suggested that in questionnaire approach, self-reporting becomes less reliable in sensitive tax matters because of

embarrassment. For instance, while respondents report their perception regarding corruption, they may exaggerate the situation and denigrate the government because it is the fashion to do so. Moreover, non-response bias, respondents' representativeness and different understanding of respondents of the same question are other issues relevant to the questionnaire approach. This study ensured all reasonable measures to minimize non-response bias such as comparing results from early responses with the results of late responses and other stated issues.

Another limitation is that this study uses individual tax non-filers. Hence, caution should be considered while generalizing results to other persons (i.e. association of persons or companies). The characteristics of all persons are different so the results of a study of change in human behaviour cannot be generalized to corporate sector.

The use of specific facets of mediating variables (attitude towards behaviour and tax morale) leads towards limitation of results. Although, for measurement of these variables, items were selected on the basis of relevance to individual non-filer person and tax compliance behaviour, there is the possibility that use of other facets would produce different results.

The use of cross-sectional data also has its own inherent limitations. Cross-sectional data provide a snapshot of the outcomes of a situation at a particular point in time and may produce different results if studied in another timeframe. Caution is required while making causal inferences on the hypothetical relationship due to this limitation.

Availability of data by FBR on filers remained a big issue. There is no published data on gender, business nature or on related data of filers for the current as well as previous period. Even total number, amount of revenue generated and

classification of filers' data are not available. Only source remains the newspapers or internet pages.

It is pertinent to mention that most of the limitations are unavoidable and generally occur in most similar studies. Limitations are an important part of studies and they do not diminish the relevancy of findings or contributions to the literature and stakeholders.

6.5 Future research ambition

Mohamed (2016) reported positive result of PBC with intention to comply and negative with tax compliance behaviour. Mohamed (2016) did not use intention to comply as predictor of tax compliance behaviour as he measured construct behaviour separately from intention to comply. He was of the opinion that in the context of Malaysian customs agents, intention to comply is not a predictor of tax compliance behaviour. Inspired by this finding of Mohamed (2016), it is recommended that future research also measures both variables separately in the case of Pakistan.

Opportunity to evade should be used as a variable because self-efficacy and controllability are induced by opportunity to evade. There are many opportunities to evade tax in Pakistan. It is therefore recommended to use 'opportunity to evade' in the given settings of this study.

The current study employed a quantitative approach to investigate. This approach has its own strengths and weaknesses. There might be another way to work in future, that is, to utilize qualitative methods to gain and explore new insights and then validate the findings with quantitative approach. Mixed methods approach is recommended for future work within this study setting.

This study used principal components analysis, Cronbach's alpha, correlation, multiple regression and Sobel test. The use of other statistical tools might result in saving of time and improved results with variety of analysis.

As size of population is not known, a sampling frame cannot be drawn. An independent study is needed to determine population size with sampling frame in the case of tax non-filers in Pakistan. The recommended study would be a pioneer study in Pakistan and will also set new trends in the tax literature.

This study utilized various determinants of tax compliance to frame conceptual framework based on behavioural approach. In-depth exploration of all individual variables was not possible. It is recommended to select studies with one variable that is explored in-depth by utilizing TPB in context of individual non-filers in Pakistan.

A comparative study on big cities of Pakistan (like Karachi, Lahore, Faisalabad, Rawalpindi etc.) is recommended to know differences in compliance behaviour of tax non-filers. Likewise, the comparative study can also be taken on provinces to examiner either is there any difference between compliance behaviour of tax evaders. Furthermore, a comparative study on compliance behaviour of tax non-filers and tax filers in Pakistan is also recommended.

It is recommended that tax socialization and tax culture in Pakistan should be tested as variables by using TPB in the case of individual tax non-filers. These two variables are emerging in Pakistani context.

As 77.4% of respondents had never been contacted even though they are liable to furnish tax return, a study is needed to find out the reasons why they were not approached. Of the respondents, 11% were approached within the last one to five years but they could not be turned to tax compliance, which means that some

phenomenon exists in which persons liable to pay tax who are approached by tax departments do not switch to tax compliance. It is urged that reasons for this are found.

The compliance behaviour of employed and self-employed individuals may be different. This study provides a direction that a comparative study is recommended on tax compliance behaviour of employed and self-employed individuals.

This study utilizes TPB as predictor of compliance behaviour. It is recommended that further research be undertaken by applying other theories of human behaviour change for tax compliance behaviour in given settings.

A comparative study based on income level, education, educational level, employed individuals, self-employed business individuals etc., is recommended for future research.

A detailed study on fairness covering all dimension of fairness with respect to tax compliance behaviour should be undertaken with special focus on evaluation of taxation structure in Pakistan and its capacity to deliver to stakeholders.

6.6 Concluding remarks

Understanding the puzzle of tax compliance behaviour is indeed challenging not only from academic viewpoint but also for government institutions. The optimum level of compliance depends on targeting the appropriate tax evader group. Moreover, the issue of low tax base in Pakistan highlights the importance of tax compliance behaviour. Tax non-filing of individuals is a fashion and is becoming a culture in Pakistan. Therefore, it is important to understand how individual tax non-filers take decision for compliance. This individual level study into tax compliance behaviour has made important theoretical and practical contributions to the literature by using novel data in the form of tax non-filers. In addition, the researcher tried to unlock the

‘black box’ for Eastern context. The empirical findings for non-filers in the context of Pakistan show that tax determinants influence tax compliance behaviour through their impact on attitude and tax morale. The findings suggest that the carrot and stick approach be adopted to switch behaviour from tax evasion to tax compliance. Moreover, the mediating impact of tax determinants on compliance behaviour of non-filers emphasizes the importance behavioural aspects. The utilization of TPB, moral persuasion and deterrence provide a sound theoretical backing to understand the causal relationship. Despite several cultural differences, this study provides support for the applicability of TPB to Eastern and developing countries’ context. Lastly, even though the carrot and stick approach for compliance is proposed to the government and tax authorities, the prime objective to promote voluntary compliance to attain long-term benefits should remain.

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Appendix A

Survey Measures

Survey Measures

All the variables were measured by the taxpayer non-filers status based on a seven-point Likert-type scale: To what extent do you agree with the following statements? (1=strongly disagree to 7=strongly agree)

Intention to comply

1. I should file my annual income tax return.
2. I will try to file my annual income tax return.
3. I intend to file my annual income tax return.

Subjective norms

1. My family & peers think that I should file my annual income tax return.
2. My family & peers advise me that I should file my annual income tax return.
3. Most people who are important to me would approve of my decision to file my annual income tax return.

Attitude towards compliance

1. I would be upset if I did not file my annual income tax return.
2. I would feel guilty if I did not file my annual income tax return
3. I would feel bad for me if I did not file my annual income tax return.

Perceived behavioural control

1. I am confident that I can file my annual income tax return.
2. There are no barriers that can prevent me from filing my annual income tax return.
3. With my tax knowledge, skills and resources, it would be very easy for me to file my annual income tax return.

Tax deterrence

1. I think that I will be get caught by Tax Department of Pakistan if I do not file my annual income tax return.
2. If I get caught, there are many chances that I would have to face the legal consequences.

3. If I get caught, there are many chances that legal consequences will be very severe.

Moral persuasion

1. Tax officer meets with me and made clear the disadvantages of non-filing of annual income tax return.
2. Tax officer comes to me and clarifies the benefits of filing of annual income tax return.
3. Tax Department of Pakistan officially appeals to me to file annual income tax return.

Tax awareness

1. I am aware of the all changes made every year in the income tax act.
2. I know the various items of income that are exempted from tax.
3. I can compute my accurate taxable income.
4. I know when income of dependents will be included in my total income.
5. I am aware about the deductions permissible under Income Tax Ordinance, 2001.
6. I know how income tax is charged.
7. I know at which rate income tax is to be charged.

Tax complexity

1. The terms used in income tax publications and forms are difficult for people like me to understand.
2. The sentences & wording in Individual Income Tax Return Guide are lengthy and not user-
3. Most of the times I need to refer to others for assistance in dealing with my income tax matters.
4. I have to make a lot of effort to understand the explanations given in income tax guide books and other similar explanatory material.

Tax fairness

1. For the average taxpayer, I think that the income tax system is fair.
2. For me personally, I believe that the income tax system is fair.
3. Generally, I believe that manner in which income tax burden is distributed across taxpayer is fair.
4. Generally, I feel that income tax is a fair tax.
5. On the whole, the burden of income tax is fairly distributed.

Self-corruption

1. I escape from any type of legal consequences by using reference if Tax Department of Pakistan caught me due to non-filing of income tax return.
2. I will not provide correct information to tax officials in order to escape from payment of tax.
3. I escape from any type of legal consequences by using money and money worth if Tax Department of Pakistan caught me due to non-filing of income tax return.

Tax morale

1. I should not cheat even if I have a chance to cheat.
2. I feel it is wrong if I do not file my annual income tax return.
3. I feel it is my moral responsibility to file my annual income tax return.
4. Noncompliance with income tax law is never justifiable.

Appendix B

Cover Letter

A Survey on Income Tax Return Non-filing Behaviour of Individuals Person in Pakistan

Dear Participants,

This survey is aimed to analyze how Income Tax Payment Behaviour of Taxpayers (Non-Filers) in Pakistan can be changed either through deterrence or moral persuasion. This survey is being conducted for the purpose of fulfilling the partial requirement of Ph.D. study at Superior University, Lahore.

If you take part voluntarily in the survey, it would only require 10 - 15 minutes to fill out the questionnaire. All of the information provided by you will be kept strictly confidential and anonymous. Your participation in the research and your candid answers to all the questions are important to make this survey an overall success. The overall results of this study can be shared with you on your request.

Thank you for your participation.

Muhammad Akram
PhD Scholar
The Superior College, Lahore

Appendix C

Questionnaire (English Version)

QUESTIONNAIRE

FILTER QUESTIONS

<p>1. Motor Car:</p> <p>1) Less than 1000cc.....</p> <p>2) Above 1000cc.....</p> <p>3) No Car.....</p>	<p>2. Residential Owned Home Area/Flat:</p> <p>1) Less than 8.26 Marla.....</p> <p>2) Above 8.26 Marla.....</p> <p>3) Above 16.52 Marla.....</p> <p>4) Rented Home.....</p> <p>Location:</p>
<p>3. Other Property (Plot/Home/Flat):</p> <p>1) Less than 8.26 Marla.....</p> <p>2) Above 8.26 Marla.....</p> <p>3) Above 16.52 Marla.....</p> <p>4) Rented Home.....</p> <p>Location:</p>	<p>4. Income (Monthly):</p> <p>1) Below Rs.25000.....</p> <p>2) Rs.25000 - Rs.33333.....</p> <p>3) Rs.33333 - Rs.50000.....</p> <p>4) Above Rs.50000.....</p>

Please indicate how strongly you agree or disagree with each statement using the scale provided. Check the corresponding number beside each statement:

1. Strongly Disagree
2. Disagree
3. Slightly Disagree
4. Neutral
5. Slightly Agree
6. Agree
7. Strongly Agree

	Questions	1	2	3	4	5	6	7
Q1	I should file my annual income tax return.							
Q2	I will try to file my annual income tax return.							
Q3	I intend to file my annual income tax return.							
Q4	My family & peers think that I should file my annual income tax return.							
Q5	My family & peers advise me that I should file my annual income tax return.							
Q6	Most people who are important to me would approve of my decision to file my annual income tax return.							
Q7	I would be upset if I did not file my annual income tax return.							
Q8	I would feel guilty if I did not file my annual income tax return.							
Q9	I would feel bad for me if I did not file my annual income tax return.							
Q10	I am confident that I can file my annual income tax return.							
Q11	There are no barriers that can prevent me from filing my annual income tax return.							
Q12	With my tax knowledge, skills and resources, it would be very easy for me to file my annual income tax return.							
Q13	I think that I will be get caught by Tax Department of Pakistan if I do not file my annual income tax return.							
Q14	If I get caught, there are many chances that I would have to face the legal consequences.							
Q15	If I get caught, there are many chances that legal consequences will be very severe.							
It is likely that I will file my annual income tax return if:								
Q16	.....Tax officer meets with me and made clear the disadvantages of non-filing of annual income tax return.							
Q17	.....Tax officer comes to me and clarifies the benefits of filing of annual income tax return.							
Q18	.....Tax Department of Pakistan officially appeals to me to file annual income tax return.							
I should file my income tax return because I think:								
Q19	.....I am aware of the all changes made every year in the income tax act.							
Q20	.....I know the various items of income that are exempted from tax.							
Q21	.....I can compute my accurate taxable income.							
Q22	.....I know when income of dependents will be included in my total income.							
Q23	.....I am aware about the deductions permissible under Income Tax Ordinance, 2001.							
Q24	.....I know how income tax is charged.							

Q25	.....I know at which rate income tax is to be charged.																			
I do not file my accurate income tax return because I think:																				
Q26	.....The terms used in income tax publications and forms are difficult for people like me to understand.																			
Q27	.....The sentences & wording in Individual Income Tax Return Guide are lengthy and not user-friendly.																			
Q28	.....Most of the time I need to refer to others for assistance in dealing with my income tax matters.																			
Q29	.....I have to make a lot of effort to understand the explanations given in income tax guide books and other similar explanatory material.																			
I should file my income tax return because:																				
Q30	.....For the average taxpayer, I think that the income tax system is fair.																			
Q31	.....For me personally, I believe that the income tax system is fair.																			
Q32	.....Generally I believe that manner in which income tax burden is distributed across taxpayer is fair.																			
Q33	.....Generally, I feel that income tax is a fair tax.																			
Q34	.....On the whole, the burden of income tax is fairly distributed.																			
I do not file my accurate income tax return because I think:																				
Q35	.....I escape from any type of legal consequences by using reference if Tax Department of Pakistan caught me due to non-filing of income tax return.																			
Q36	.....I will not provide correct information to tax officials in order to escape from payment of tax.																			
Q37	.....I escape from any type of legal consequences by using money and money worth if Tax Department of Pakistan caught me due to non-filing of income tax return.																			
Q38	I should not cheat even if I have a chance to cheat.																			
Q39	I feel it is wrong if I do not file my annual income tax return.																			
Q40	I feel it is my moral responsibility to file my annual income tax return.																			
Q41	Noncompliance with income tax law is never justifiable.																			

PERSONAL INFORMATION

1. Gender: 1) Male..... 2) Female.....	
2. Age: 1) Below 20 Years..... 2) 20 Years – 30 Years..... 3) 31 Years – 40 Years..... 4) Above 40 Years.....	3. Nature of Job: 1) Wholesaler..... 2) Retailer..... 3) Service..... 4) Industry.....
4. Qualification: <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> 1) Below Middle..... 3) Matric..... 5) Graduation..... 7) M.Phil. 9) Diploma..... </div> <div style="width: 48%;"> 2) Middle..... 4) Intermediate..... 6) Masters..... 8) Ph.D. 10) Professional Certificate..... </div> </div>	
5. Economic Class: 1) Lower Class..... 2) Middle Class..... 3) Upper Class.....	6. Tax Department contacted with you in previous years: 1) Never Contacted..... 2) 1 Time..... 3) 2 Times..... 4) 3 Times 5) 4 Times 6) 5 Times 7) More than 5 Times
7. Last contact of Tax Department with you: <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> 1) Less than 1 Month..... 3) 7 Months – 12 Months..... 5) 2 Years before..... 7) 4 Years before..... 9) Never..... </div> <div style="width: 48%;"> 2) 1 Month – 6 Months..... 4) 1 Year before..... 6) 3 Years before..... 8) 5 Years before..... </div> </div>	

THANKS FOR YOUR COOPERATION

Appendix D

Questionnaire (Urdu Version)

پاکستان میں ٹیکس دہندگان کے انکم ٹیکس کی ادائیگی سے متعلق روئے کی تحقیق

جناب محترم / محترمہ!

اس تحقیق کا بنیادی مقصد اس بات کا تجزیہ کرنا کہ پاکستان میں ٹیکس دہندگان کے انکم ٹیکس نہ ادا کرنے کی وجوہات کو اخلاقی ترغیب سے دور کیا جاسکتا ہے یا انکم ٹیکس نہ دینے پر ٹیکس ڈیپارٹمنٹ کی طرف سے پکڑے جانے اور سزا جرمانے کے ڈر سے انکم ٹیکس نہ دینے کی وجوہات کو دور کیا جاسکتا ہے۔ آپ سے یہ تحقیق اپنی پناہیج ڈی کی تعلیم کی تکمیل کے لئے کی جارہی ہے جو کے پیئر بیئر یونیورسٹی میں جمع کروانی ہے۔

اگر آپ رضا کارانہ طور پر اس تحقیق کا حصہ بننا چاہتے ہیں تو آپ کو اس سوالنامے کو پورا کرنے کے لئے ۱۰ سے ۱۵ منٹ درکار ہوں گے۔ آپ کو اس بات کا یقین دلایا جاتا ہے کہ آپ جو بھی معلومات ہمیں دیں گے اسے صرف اور صرف تعلیمی مقاصد کیلئے استعمال کیا جائے گا اور مکمل صیغہ راز میں رکھا جائے گا۔ براہ مہربانی اس تحقیق سے متعلق سوالات کا ایمانداری سے صحیح جواب دیں جو کہ اس تحقیق کے کامیابی سے مکمل کرنے کے لئے بہت ضروری ہیں اور اگر آپ چاہیں تو اس تحقیق کے مکمل ہونے پر اس تحقیق کے مجموعی نتائج آپ کو بتلائے جاسکتے ہیں۔

میں آپ کے اس تعاون کا تہ دل سے مشکور ہوں گا۔ شکریہ!!!

ضروری ہدایات: برائے مہربانی ہر سوال کے بارے میں اپنی رائے کا اظہار کریں اور سوال کے متعلقہ خانے میں () کا نشان لگائیں۔

1- غیر متفق (بہت زیادہ)

2- غیر متفق (کافی زیادہ)

3- غیر متفق (زیادہ)

4- غیر جانبدار

5- متفق (زیادہ)

6- متفق (کافی زیادہ)

7- متفق (بہت زیادہ)

سیریل نمبر	سوالات	1	2	3	4	5	6	7
1	مجھے اپنی سالانہ انکم ٹیکس ریٹرن ضرور جمع کروانی چاہئے۔							
2	میں اپنی سالانہ انکم ٹیکس ریٹرن جمع کروانے کی کوشش کروں گا۔							
3	میرا ارادہ ہے کہ میں اپنی سالانہ انکم ٹیکس ریٹرن جمع کرواؤں گا۔							
4	میری فیملی اور دوست و احباب یہ خیال کرتے ہیں کہ مجھے اپنی سالانہ انکم ٹیکس ریٹرن ضرور جمع کروانی چاہئے۔							
5	میری فیملی اور دوست و احباب مجھے نصیحت کرتے ہیں کہ مجھے اپنی سالانہ انکم ٹیکس ریٹرن ضرور جمع کروانی چاہئے۔							
6	وہ لوگ جو میرے لئے بہت اہم ہیں وہ میرے سالانہ انکم ٹیکس جمع کروانے کے فیصلے میں میری تائید کریں گے۔							
7	میں اپنی سالانہ انکم ٹیکس ریٹرن جمع نہ کروا کر خود کو پریشان محسوس کروں گا۔							
8	میں اپنی سالانہ انکم ٹیکس ریٹرن جمع نہ کروا کر خود کو مجرم محسوس کروں گا۔							
9	میں اپنی سالانہ انکم ٹیکس ریٹرن جمع نہ کروا کر اپنے لئے برا محسوس کروں گا۔							
10	میں بڑا محتما ہوں کہ میں اپنی سالانہ انکم ٹیکس ریٹرن جمع کروا سکتا ہوں۔							
11	ایسی کوئی بھی ٹیکس کا دیکھنا ہے جو مجھے اپنی سالانہ انکم ٹیکس ریٹرن جمع کروانے سے روک سکتی ہے۔							
12	اپنے علم، مہارت اور ذرائع کا استعمال کر کے اپنی سالانہ انکم ٹیکس ریٹرن جمع کروانا میرے لئے بہت آسان ہے۔							
13	مجھے لگتا ہے اپنی سالانہ انکم ٹیکس ریٹرن جمع نہ کروانے پر ٹیکس ڈیپارٹمنٹ مجھے پکڑ لے گا۔							
14	سالانہ انکم ٹیکس ریٹرن جمع نہ کروانے پر پکڑے جانے سے میرے خلاف قانونی کارروائی ہوگی۔							
15	سالانہ انکم ٹیکس ریٹرن جمع نہ کروانے پر پکڑے جانے سے مجھے شدید سزا جرمانہ ہوگا۔							
16	مجھے لگتا ہے کہ اگر ٹیکس ڈیپارٹمنٹ کی طرف سے کوئی آفیسر مجھے آ کر ملے اور اپنی سالانہ انکم ٹیکس ریٹرن جمع نہ کروانے کی وجہ سے ہونے والے نقصانات سے مجھے آگاہ کرے تو میں ضرور اپنی سالانہ انکم ٹیکس ریٹرن جمع کرواؤں گا۔							
17	مجھے لگتا ہے کہ اگر ٹیکس ڈیپارٹمنٹ کی طرف سے کوئی آفیسر مجھے آ کر ملے اور اپنی سالانہ انکم ٹیکس ریٹرن جمع نہ کروانے کی وجہ سے ہونے والے فوائد سے مجھے آگاہ کرے تو میں ضرور اپنی سالانہ انکم ٹیکس ریٹرن جمع کرواؤں گا۔							
18	مجھے لگتا ہے کہ اگر ٹیکس ڈیپارٹمنٹ آفس پاکستان سرکاری طور پر مجھے اپنی سالانہ انکم ٹیکس ریٹرن جمع نہ کروانے کی اطلاع کرے تو میں ضرور اپنی سالانہ انکم ٹیکس ریٹرن جمع کرواؤں گا۔							
---	میں اپنی جمع انکم ٹیکس ریٹرن جمع کرواؤں گا کیونکہ مجھے لگتا ہے کہ:							
19	--- میں انکم ٹیکس قوانین میں ہر سال ہونے والی تبدیلیوں سے واقف ہوں۔							

سیریل نمبر	سوالات	1	2	3	4	5	6	7
20	-- میں ان تمام آمدنیوں سے واقف ہوں جو انکم ٹیکس سے مستثنیٰ (معاف) ہیں۔							
21	-- میں اپنی صحیح قابل ٹیکس آمدنی معلوم کر سکتا ہوں۔							
22	-- میں جانتا ہوں کب مجھ پر منحصر لوگوں کی آمدنی میری کل آمدنی میں شمار ہوتی ہے۔							
23	-- میں انکم ٹیکس کے قانون کے تحت ہونے والی جائز کوٹوتیوں کا علم رکھتا ہوں۔							
24	-- میں جانتا ہوں صحیح انکم ٹیکس کیسے معلوم کیا جاتا ہے۔							
25	-- میں انکم ٹیکس کے ریٹ سے واقف ہوں۔							
	میں اپنی صحیح انکم ٹیکس ریٹرن جمع نہیں کرواؤں گا کیونکہ مجھے لگتا ہے کہ:	---	---	---	---	---	---	---
26	-- انکم ٹیکس کی اشاعت اور فارم میں استعمال کی گئی اصطلاحات مجھ جیسے لوگوں کے سمجھنے کیلئے مشکل ہیں۔**							
27	-- انکم ٹیکس ریٹرن کی گائیڈ میں جملے اور الفاظ بہت طویل ہیں اور پڑھنے والوں کے لئے مشکل ہیں۔**							
28	-- زیادہ تر انکم ٹیکس کے معاملات سے نمٹنے کے لئے مجھے دوسروں کی مدد کی ضرورت پڑتی ہے۔**							
29	-- مجھے انکم ٹیکس ڈیپارٹمنٹ کی گائیڈ اور دوسرے وضاحتی مواد کو سمجھنے کے لئے بہت کوشش کرنا پڑتی ہے۔**							
	میں اپنی صحیح انکم ٹیکس ریٹرن جمع کرواؤں گا کیونکہ:	---	---	---	---	---	---	---
30	-- مجھے لگتا ہے کہ ایک عام ٹیکس دہندہ کیلئے انکم ٹیکس کا نظام ایک مناسب نظام ہے۔							
31	-- میں یقین سے کر سکتا ہوں کہ انکم ٹیکس کا نظام میرے سامنے لئے ایک مناسب نظام ہے۔							
32	-- میں یقین ہے کہ جس طریقہ سے انکم ٹیکس تمام ٹیکس دہندگان میں تقسیم کیا گیا ہے وہ مناسب طریقہ ہے۔							
33	-- عام طور پر میں یہ محسوس کرتا ہوں کہ انکم ٹیکس کا نظام ایک مناسب نظام ہے۔							
34	-- مجموعی طور پر انکم ٹیکس تمام ٹیکس دہندگان میں ایک مناسب نظام کے تحت تقسیم کیا گیا ہے۔							
	میں اپنی صحیح انکم ٹیکس ریٹرن جمع نہیں کرواؤں گا کیونکہ مجھے لگتا ہے کہ:	---	---	---	---	---	---	---
35	-- اگر انکم ٹیکس ڈیپارٹمنٹ انکم ٹیکس ریٹرن جمع نہ کروانے کی وجہ سے مجھے پکڑ لے تو قانونی کارروائی سے بچنے کیلئے میں تعلق واسطہ کے استعمال سے پھر بیچ جاؤں گا۔**							
36	-- اگر انکم ٹیکس ڈیپارٹمنٹ مجھ سے میری کل آمدن کے متعلق پوچھتو میں اپنی کل آمدن کے متعلق صحیح معلومات فراہم نہیں کروں گا کہ انکم ٹیکس ادا کرنے سے بچ جاؤں۔**							
37	-- اگر انکم ٹیکس ڈیپارٹمنٹ انکم ٹیکس ریٹرن جمع نہ کروانے کی وجہ سے مجھے پکڑ لے تو قانونی کارروائی سے بچنے کیلئے میں بیویوں کا استعمال کرتے ہوئے پھر بیچ جاؤں گا۔**							
38	اگر مجھے موقع ملتا تو پھر بھی میں اپنی سالانہ انکم ٹیکس ریٹرن جمع نہ کروا کے دھوکا دینے کی کوشش نہیں کروں گا۔							
39	اپنی سالانہ انکم ٹیکس ریٹرن جمع نہ کروانے کو میں ایک غلط کام تصور کرتا ہوں۔							
40	میں اپنی سالانہ انکم ٹیکس ریٹرن جمع نہ کروانے کو اپنی اخلاقی ذمہ داری سمجھتا ہوں۔							
41	میں انکم ٹیکس کے قانون کی تعمیل نہ کرنے کو کبھی بھی درست نہیں سمجھتا ہوں۔							

Appendix E

Correlation Matrices

Correlation Matrix for Intention to Comply

	1	2	3
Should file my annual income tax return.	1	.759**	.675**
Will try to file my annual income tax return.		1	.823**
Intend to file my annual income tax return.			1

Correlation Matrix for Subjective Norms

	1	2	3
Family & peers think that I should file my annual income tax return.	1	.735**	.549**
My family & peers advise me that I should file my annual income tax return.		1	.572**
People who are important to me would approve of my decision to file my annual income tax return.			1

Correlation Matrix for Attitude towards Compliance

	1	2	3
Would be upset if I did not file my annual income tax return.	1	.690 ^{**}	.395 ^{**}
Would feel guilty if I did not file my annual income tax return.		1	.421 ^{**}
Would feel bad for me if I did not file my annual income tax return.			1

Correlation Matrix for Perceived Behavioural Control

	1	2	3
Confident that I can file my annual income tax return.	1	.471 ^{**}	.422 ^{**}
No barriers that can prevent me from filing my annual income tax return.		1	.471 ^{**}
With my tax knowledge, skills and resources, it would be very easy for me to file my annual income tax return.			1

Correlation Matrix for Tax Deterrence

	1	2	3
Will be get caught by Tax Department of Pakistan if I do not file my annual income tax return.	1	.759**	.738**
If get caught, there are many chances that I would have to face the legal consequences.		1	.807**
If get caught, there are many chances that legal consequences will be very severe.			1

Correlation Matrix for Moral Persuasion

	1	2	3
Tax officer meets with me and made clear the disadvantages of non-filing of annual income tax return.	1	.765**	.561**
Tax officer comes to me and clarifies the benefits of filing of annual income tax return.		1	.630**
Tax Department of Pakistan officially appeals to me to file annual income tax return.			1

Correlation Matrix for Tax Awareness

	1	2	3	4	5	6	7
Aware with the all changes made every year in the income tax act.	1	.779**	.592**	.544**	.644**	.605**	.529**
Know the various items of income that are exempted from tax.		1	.688**	.613**	.656**	.612**	.564**
Can compute my accurate taxable income.			1	.639**	.602**	.622**	.592**
Know when income of dependents will be included in my total income.				1	.663**	.647**	.581**
Aware about the deductions permissible under Income Tax Ordinance, 2001					1	.694**	.607**
Know how income tax is charged.						1	.746**
Know at which rate income tax is to be charged.							1

Correlation Matrix for Tax Complexity

	1	2	3	4
The terms used in income tax publications and forms are difficult for people like me to understand	1	.657**	.526**	.377**
The sentences & wording in Individual Income Tax Return Guide are lengthy and not user-friendly		1	.465**	.362**
Most of the time I need to refer to others for assistance in dealing with my income tax matters			1	.419**
I have to make a lot of effort to understand the explanations given in income tax guide books and other similar explanatory material				1

Correlation Matrix for Tax Fairness

	1	2	3	4	5
For the average taxpayer, I think that the income tax system is fair.	1	.722**	.577**	.628**	.602**
For me personally, I believe that the income tax system is fair.		1	.646**	.703**	.600**
Generally I believe that manner in which income tax burden is distributed across taxpayer is fair.			1	.719**	.705**
Generally, I feel that income tax is a fair tax.				1	.717**
On the whole, the burden of income tax is fairly distributed.					1

Correlation Matrix for Self-Corruption

	1	2	3
Escape from any type of legal consequences by using reference if Tax Department of Pakistan caught me due to non-filing of income tax return	1	.597**	.593**
Will not provide correct information to tax officials in order to escape from payment of tax		1	.598**
Escape from any type of legal consequences by using money and money worth if Tax Department of Pakistan caught me due to non-filing of income tax return			1

Correlation Matrix for Tax Morale

	1	2	3	4
Should not cheat even if I have a chance to cheat.	1	.381**	.365**	.306**
Feel it is wrong if I do not file my annual income tax return.		1	.580**	.458**
Feel it is my moral responsibility to file my annual income tax return.			1	.552**
Noncompliance with income tax law is never justifiable.				1

Correlation Matrix of All Constructs

	1	2	3	4	5	6	7	8	9	10	11
ITC	1	.495**	.538**	.438**	.211**	.387**	.253**	-.086*	.314**	-.108**	.524**
SN		1	.422**	.304**	.267**	.162**	.359**	.080*	.368**	-.159**	.369**
ATC			1	.364**	.375**	.301**	.269**	.040	.307**	-.212**	.464**
PBC				1	.262**	.263**	.381**	.098**	.329**	-.079*	.343**
TD					1	.187**	.263**	.111**	.271**	-.183**	.205**
MP						1	.146**	-.203**	.217**	-.103**	.428**
TA							1	.232**	.463**	-.112**	.234**
TC								1	.112**	-.194**	-.071(*)
TF									1	-.126**	.312**
SC										1	-.107**
TM											1

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

(*)Correlation is significant at the 0.057 level (2-tailed)

Appendix F

Descriptive Statistics of Survey Items

Descriptive Statistics of Survey Items

Items	N	Min.	Max.	Mean	Std. D.
I should file my annual income tax return.	720	1	7	5.04	1.622
I will try to file my annual income tax return.	720	1	7	5.02	1.437
I intend to file my annual income tax return.	720	1	7	4.96	1.442
My family & peers think that I should file my annual income tax return.	720	1	7	4.15	1.583
My family & peers advise me that I should file my annual income tax return.	720	1	7	3.83	1.711
Most people who are important to me would approve of my decision to file my annual income tax return.	720	1	7	4.42	1.532
I would be upset if I did not file my annual income tax return.	720	1	7	4.09	1.575
I would feel guilty if I did not file my annual income tax return.	720	1	7	3.98	1.642
I would feel bad for me if I did not file my annual income tax return.	720	1	7	4.04	1.474
I am confident that I can file my annual income tax return.	720	1	7	4.79	1.412
There are no barriers that can prevent me from filing my annual income tax return.	720	1	7	4.39	1.608
With my tax knowledge, skills and resources, it would be very easy for me to file my annual income tax return.	720	1	7	4.22	1.665
I think that I will be get caught by Tax Department of Pakistan if I do not file my annual income tax return.	720	1	7	3.53	1.657
If I get caught, there are many chances that I would have to face the legal consequences.	720	1	7	3.82	1.619
If I get caught, there are many chances that legal consequences will be very severe.	720	1	7	3.79	1.685
Tax officer met with me and made clear the disadvantages of non-filing of annual income tax return.	720	1	7	5.14	1.421
Tax officer comes to me and clarifies the benefits of filing of annual income tax return.	720	1	7	5.37	1.429
Tax Department of Pakistan officially appeals to me to file annual income tax return.	720	1	7	5.09	1.287
I am aware of the all changes made every year in the income tax act.	720	1	7	3.15	1.726
I know the various items of income that are exempted from tax.	720	1	7	3.43	1.735
I can compute my accurate taxable income.	720	1	7	3.93	1.655
I know when income of dependents will be included in my total income.	720	1	7	3.85	1.593
I am aware about the deductions permissible under Income Tax Ordinance, 2001.	720	1	7	3.59	1.728
I know how income tax is charged.	720	1	7	3.52	1.779
I know at which rate income tax is to be charged.	720	1	7	3.77	1.826

The terms used in income tax publications and forms are difficult for people like me to understand.	720	1	7	3.97	1.894
The sentences & wording in Individual Income Tax Return Guide are lengthy and not user-friendly.	720	1	7	3.63	1.563
Most of the times, I need to refer to others for assistance in dealing with my income tax matters.	720	1	7	3.50	1.641
I have to make a lot of effort to understand the explanations given in income tax guide books and other similar explanatory material.	720	1	7	3.46	1.501
For the average taxpayer, I think that the income tax system is fair.	720	1	7	3.89	1.661
For me personally, I believe that the income tax system is fair.	720	1	7	3.99	1.583
Generally I believe that manner in which income tax burden is distributed across taxpayers is fair.	720	1	7	3.54	1.598
Generally, I feel that income tax is a fair tax.	720	1	7	3.91	1.565
On the whole, the burden of income tax is fairly distributed.	720	1	7	3.48	1.643
I escape from any type of legal consequences by using reference if Tax Department of Pakistan caught me due to non-filing of income tax return.	720	1	7	3.93	1.740
I will not provide correct information to tax officials in order to escape from payment of tax.	720	1	7	3.64	1.664
I escape from any type of legal consequences by using money and money worth if Tax Department of Pakistan caught me due to non-filing of income tax return.	720	1	7	3.78	1.701
I should not cheat even if I have a chance to cheat.	720	1	7	4.40	1.525
I feel it is wrong if I do not file my annual income tax return.	720	1	7	4.63	1.503
I feel it is my moral responsibility to file my annual income tax return.	720	1	7	5.06	1.317
Noncompliance with income tax law is never justifiable.	720	1	7	4.83	1.418
Valid N (listwise)	720				

Appendix G

Diagnostic Statistics – Skewness and Kurtosis

Diagnostic Statistics – Skewness and Kurtosis

	N	Skewness	Kurtosis
		Value	Value
I should file my annual income tax return.	720	-.734	.032
I will try to file my annual income tax return.	720	-.769	.459
I intend to file my annual income tax return.	720	-.641	.210
My family & peers think that I should file my annual income tax return.	720	-.361	-.532
My family & peers advise me that I should file my annual income tax return.	720	-.179	-.860
Most people who are important to me would approve of my decision to file my annual income tax return.	720	-.559	-.222
I would be upset if I did not file my annual income tax return.	720	-.275	-.558
I would feel guilty if I did not file my annual income tax return.	720	-.100	-.667
I would feel bad for me if I did not file my annual income tax return.	720	-.270	-.461
I am confident that I can file my annual income tax return.	720	-.743	.416
There are no barriers that can prevent me from filing my annual income tax return.	720	-.414	-.465
With my tax knowledge, skills and resources, it would be very easy for me to file my annual income tax return.	720	-.285	-.693
I think that I will be get caught by Tax Department of Pakistan if I do not file my annual income tax return.	720	.090	-.850
If I get caught, there are many chances that I would have to face the legal consequences.	720	-.096	-.744
If I get caught, there are many chances that legal consequences will be very severe.	720	-.067	-.795
Tax officer meet with me and clear me up the disadvantages of non-filing of annual income tax return.	720	-.794	.583
Tax officer comes to me and clarifies the benefits of filing of annual income tax return.	720	-1.058	1.033
Tax Department of Pakistan officially appeals to me to file annual income tax return.	720	-.661	.419
I am aware of the all changes made every year in the income tax act.	720	.303	-1.013
I know the various items of income that are exempted from tax.	720	.229	-1.007
I can compute my accurate taxable income.	720	-.333	-.898
I know when income of dependents will be included in my total income.	720	-.220	-.747
I am aware about the deductions permissible under Income Tax Ordinance, 2001.	720	.081	-1.008
I know how income tax is charged.	720	.057	-1.093
I know at which rate income tax is to be charged.	720	-.084	-1.069

The terms used in income tax publications and forms are difficult for people like me to understand.	720	.068	-1.065
The sentences & wording in Individual Income Tax Return Guide are lengthy and not user-friendly.	720	.268	-.663
Most of the times I need to refer to others for assistance in dealing with my income tax matters.	720	.426	-.539
I have to make a lot of effort to understand the explanations given in income tax guide books and other similar explanatory material.	720	.432	-.370
For the average taxpayer, I think that the income tax system is fair.	720	-.158	-.787
For me personally, I believe that the income tax system is fair.	720	-.273	-.633
Generally I believe that manner in which income tax burden is distributed across taxpayer is fair.	720	.127	-.690
Generally, I feel that income tax is a fair tax.	720	-.258	-.614
On the whole, the burden of income tax is fairly distributed.	720	.098	-.858
I escape from any type of legal consequences by using reference if Tax Department of Pakistan caught me due to non-filing of income tax return.	720	-.073	-.798
I will not provide correct information to tax officials in order to escape from payment of tax.	720	-.017	-.875
I escape from any type of legal consequences by using money and money worth if Tax Department of Pakistan caught me due to non-filing of income tax return.	720	-.044	-.812
I should not cheat even if I have a chance to cheat.	720	-.336	-.375
I feel it is wrong if I do not file my annual income tax return.	720	-.430	-.215
I feel it is my moral responsibility to file my annual income tax return.	720	-.360	-.259
Noncompliance with income tax law is never justifiable.	720	-.409	-.066
Valid N (listwise)	720		

Appendix H

Diagnostic Statistics – Collinearity

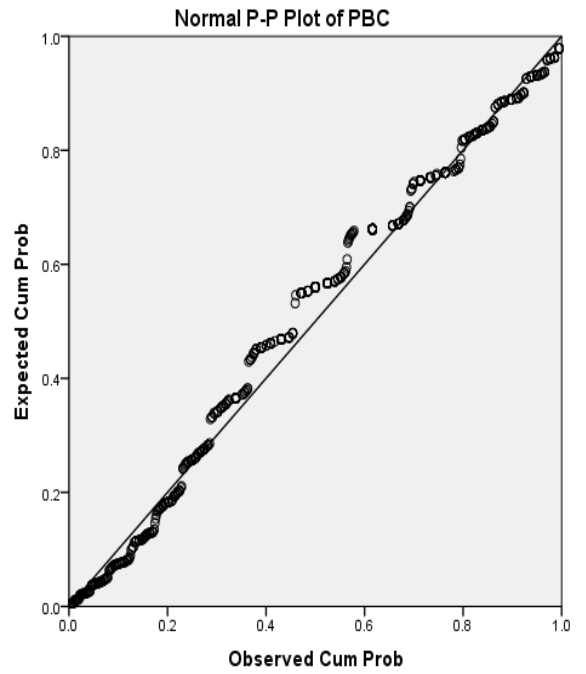
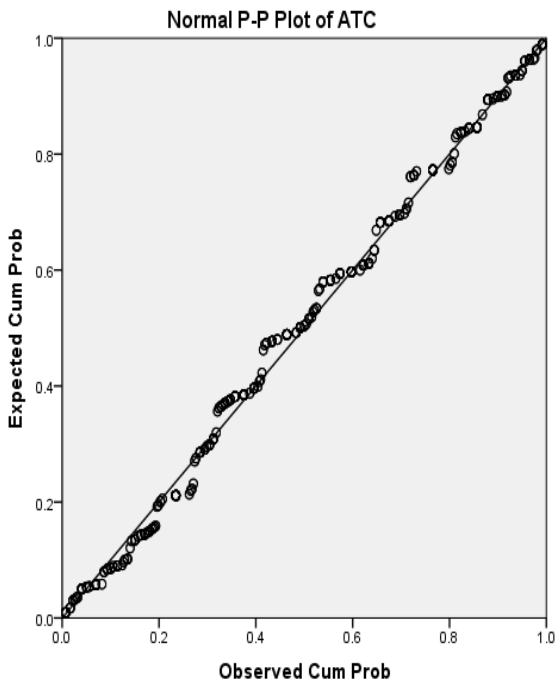
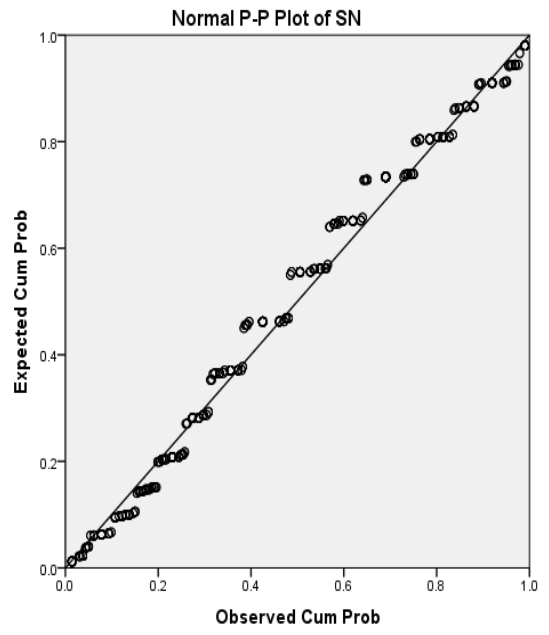
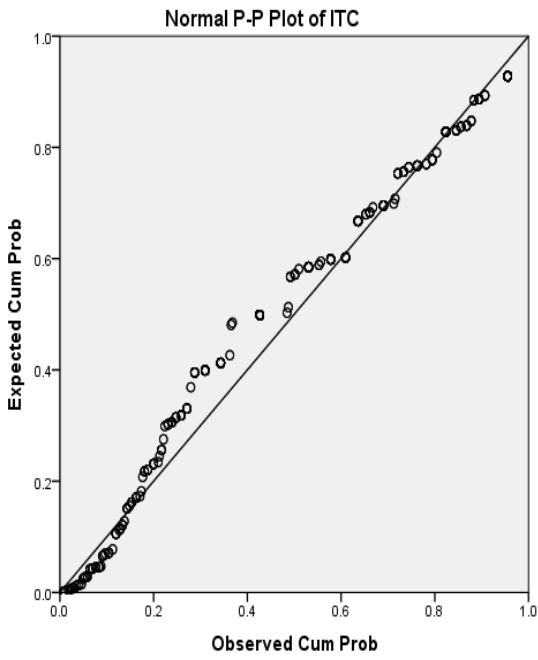
Diagnostic Statistics – Collinearity

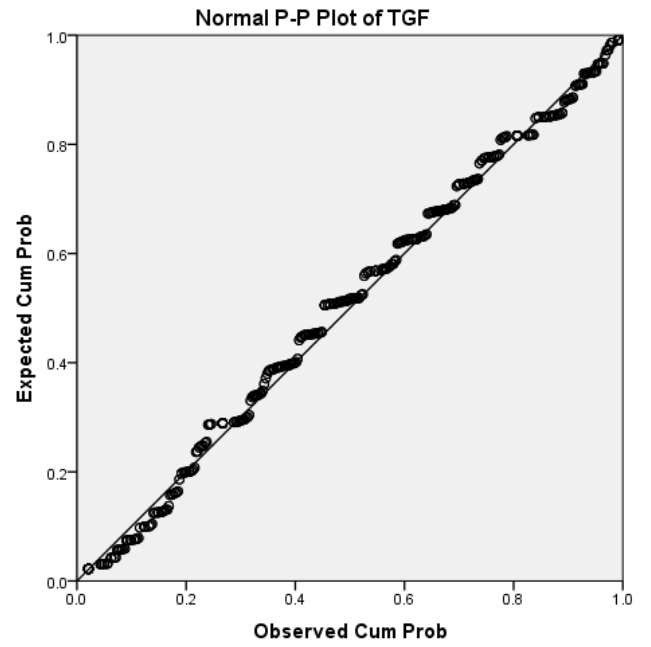
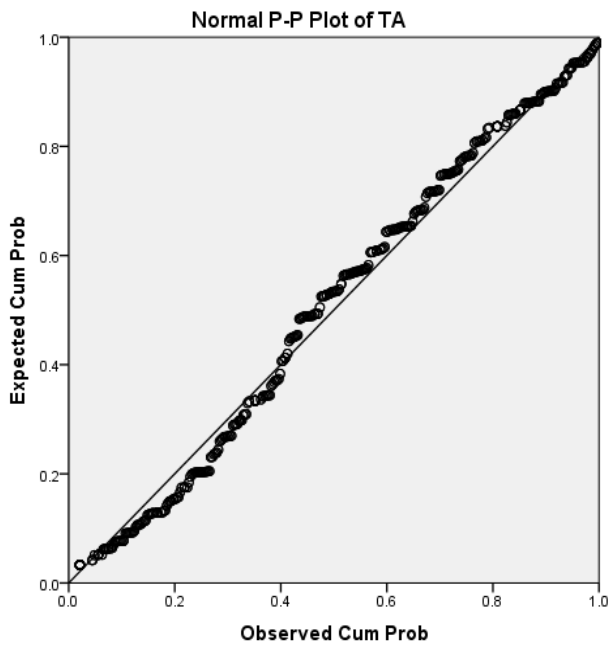
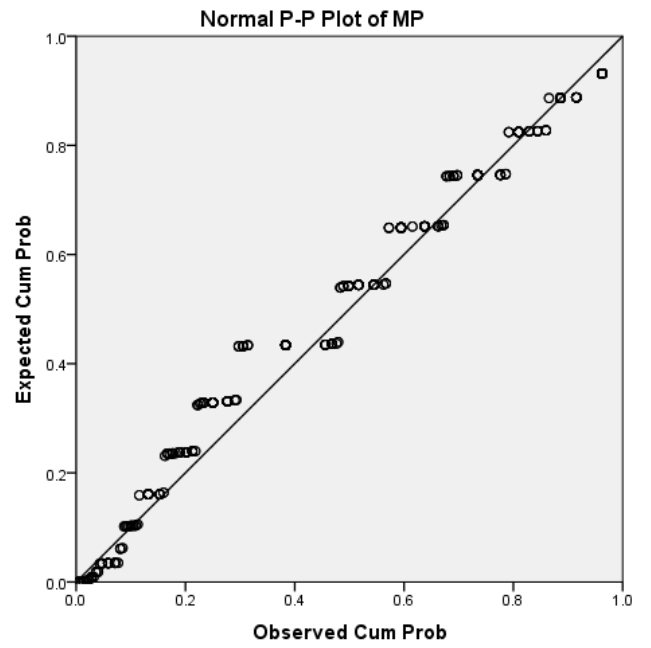
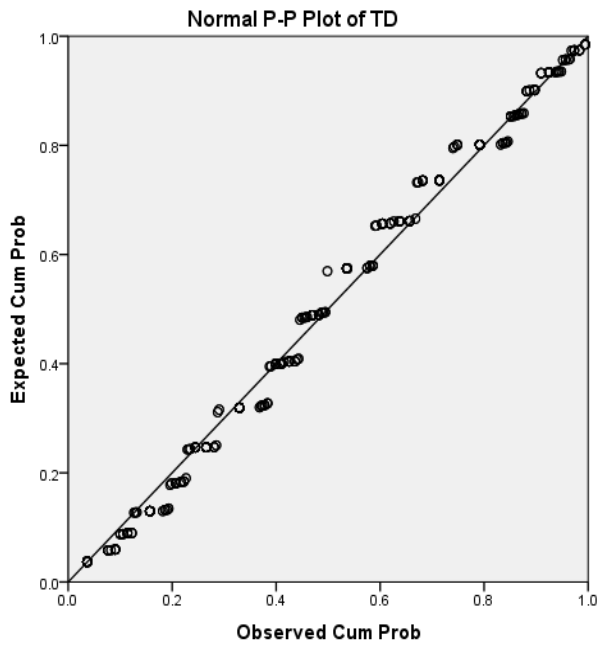
Items	Tolerance	VIF
I should file my annual income tax return.	.308	3.245
I will try to file my annual income tax return.	.216	4.627
I intend to file my annual income tax return.	.256	3.907
My family & peers think that I should file my annual income tax return.	.352	2.845
My family & peers advise me that I should file my annual income tax return.	.345	2.896
Most people who are important to me would approve of my decision to file my annual income tax return.	.484	2.066
I would be upset if I did not file my annual income tax return.	.409	2.445
I would feel guilty if I did not file my annual income tax return.	.394	2.539
I would feel bad for me if I did not file my annual income tax return.	.669	1.495
I am confident that I can file my annual income tax return.	.602	1.662
There are no barriers that can prevent me from filing my annual income tax return.	.582	1.717
With my tax knowledge, skills and resources, it would be very easy for me to file my annual income tax return.	.545	1.836
I think that I will be get caught by Tax Department of Pakistan if I do not file my annual income tax return.	.301	3.327
If I get caught, there are many chances that I would have to face the legal consequences.	.261	3.838
If I get caught, there are many chances that legal consequences will be very severe.	.273	3.660
Tax officer met with me and made clear the disadvantages of non-filing of annual income tax return.	.326	3.067
Tax officer comes to me and clarifies the benefits of filing of annual income tax return.	.292	3.427
Tax Department of Pakistan officially appeals to me to file annual income tax return.	.477	2.095
I am aware of the all changes made every year in the income tax act.	.297	3.364
I know the various items of income that are exempted from tax.	.254	3.936
I can compute my accurate taxable income.	.351	2.852
I know when income of dependents will be included in my total income.	.361	2.771
I am aware about the deductions permissible under Income Tax Ordinance, 2001.	.308	3.251
I know how income tax is charged.	.282	3.541
I know at which rate income tax is to be charged.	.339	2.950
The terms used in income tax publications and forms are difficult for people like me to understand.	.384	2.604
The sentences & wording in Individual Income Tax Return Guide are lengthy and not user-friendly.	.482	2.073

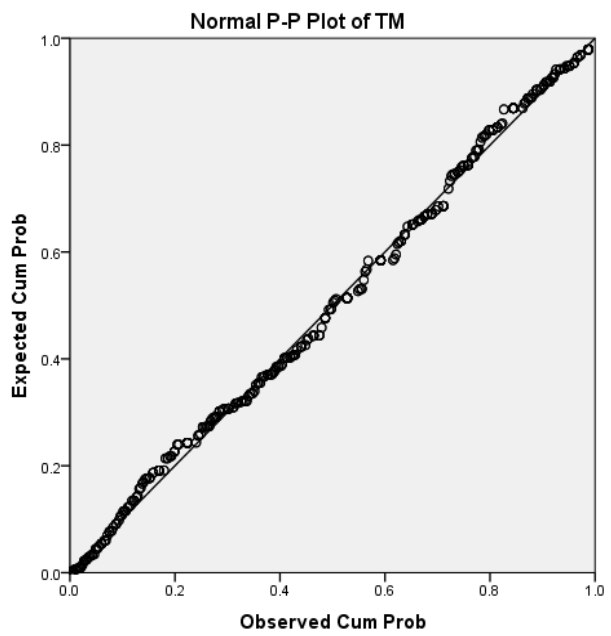
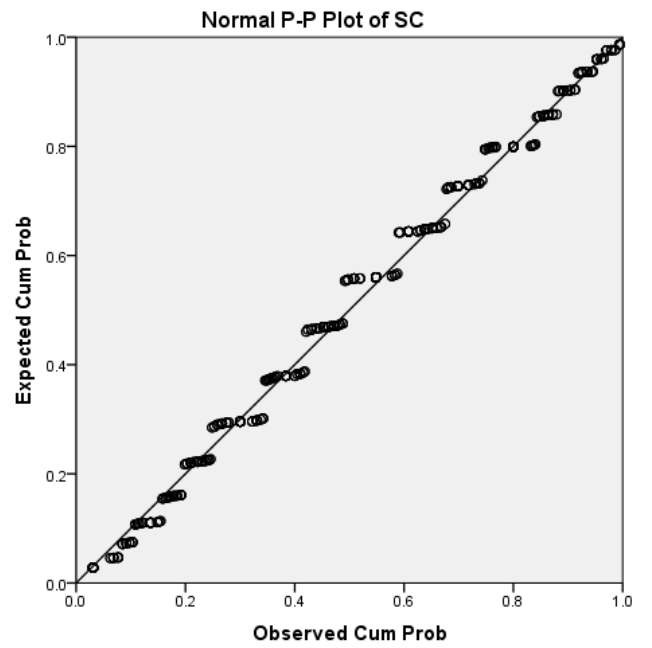
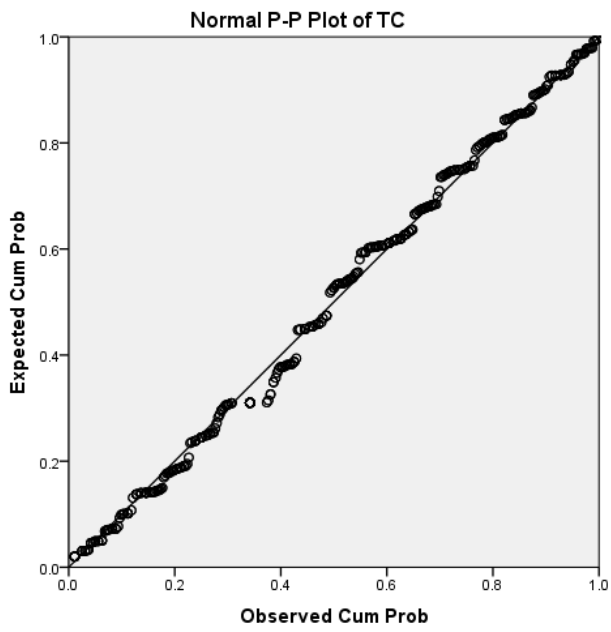
Most of the times, I need to refer to others for assistance in dealing with my income tax matters.	.525	1.904
I have to make a lot of effort to understand the explanations given in income tax guide books and other similar explanatory material.	.612	1.634
For the average taxpayer, I think that the income tax system is fair.	.360	2.778
For me personally, I believe that the income tax system is fair.	.303	3.304
Generally I believe that manner in which income tax burden is distributed across taxpayer is fair.	.301	3.325
Generally, I feel that income tax is a fair tax.	.287	3.490
On the whole, the burden of income tax is fairly distributed.	.331	3.022
I escape from any type of legal consequences by using reference if Tax Department of Pakistan caught me due to non-filing of income tax return.	.456	2.191
I will not provide correct information to tax officials in order to escape from payment of tax.	.429	2.332
I escape from any type of legal consequences by using money and money worth if Tax Department of Pakistan caught me due to non-filing of income tax return.	.463	2.162
I should not cheat even if I have a chance to cheat.	.702	1.425
I feel it is wrong if I do not file my annual income tax return.	.491	2.035
I feel it is my moral responsibility to file my annual income tax return.	.413	2.422
Noncompliance with income tax law is never justifiable.	.555	1.801

Appendix I

PP-plot







Appendix J

QQ-plot

