

The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.



**DETERMINANTS OF TAX NON-COMPLIANCE
BEHAVIOUR OF YEMENI SMEs: A MODERATING
ROLE OF ISLAMIC RELIGIOUS PERSPECTIVE**

LUTFI HASSEN ALI AL-TTAFI



**DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA
July 2017**

**DETERMINANTS OF TAX NON-COMPLIANCE BEHAVIOUR OF
YEMENI SMEs: A MODERATING ROLE OF ISLAMIC RELIGIOUS
PERSPECTIVE**



By
LUTFI HASSEN ALI AL-TTAFI

UUM
Universiti Utara Malaysia

**Thesis Submitted to
Tunku Puteri Intan Safinaz School of Accountancy,
Universiti Utara Malaysia,
in Fulfillment of the Requirement for the Degree of Doctor of Philosophy**



**TUNKU PUTERI INTAN SAFINAZ
SCHOOL OF ACCOUNTANCY
COLLEGE OF BUSINESS
Universiti Utara Malaysia**

**PERAKUAN KERJA TESIS / DISERTASI
(Certification of thesis / dissertation)**

Kami, yang bertandatangan, memperakukan bahawa
(We, the undersigned, certify that)

LUTFI HASSEN ALI AL-TTAFI

calon untuk Ijazah

DOCTOR OF PHILOSOPHY

(candidate for the degree of)

**DETERMINANTS OF TAX NON-COMPLIANCE BEHAVIOUR OF YEMENI SMEs: A MODERATING ROLE
OF ISLAMIC RELIGIOUS PERSPECTIVE**

seperti yang tercatat di muka surat tajuk dan kulit tesis / disertasi.
(as it appears on the title page and front cover of the thesis / dissertation).

Bahawa tesis/disertasi tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan, sebagaimana yang ditunjukkan oleh calon dalam ujian lisan yang diadakan pada:

26 Februari 2017.

(That the said thesis/dissertation is acceptable in form and content and displays a satisfactory knowledge of the field of study as demonstrated by the candidate through an oral examination held on:

26 February 2017.

Pengerusi Viva
(Chairman for Viva)

: **Prof. Madya Dr. Engku Ismail Engku Ali**

Tandatangan
(Signature)

Pemeriksa Luar
(External Examiner)

: **Prof. Dato' Dr. Mustafa Mohd Hanefah**

Tandatangan
(Signature)

Pemeriksa Dalam
(Internal Examiner)

: **Prof. Madya Dr. Zainol Bidin**

Tandatangan
(Signature)

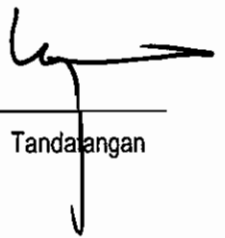
Tarikh: **26 Februari 2017**
(Date)

Nama Pelajar
(Name of Student) : **Lutfi Hassen Ali Al-Taffi**

Tajuk Tesis / Disertasi
(Title of the Thesis / Dissertation) : **DETERMINANTS OF TAX NON-COMPLIANCE BEHAVIOUR OF
YEMENI SMEs: A MODERATING ROLE OF ISLAMIC RELIGIOUS
PERSPECTIVE**

Program Pengajian
(Programme of Study) : **Doctor of Philosophy**

Nama Penyelia/Penyelia-penyelia
(Name of Supervisor/Supervisors) : **Prof. Madya Dr. Hijattulah Abdul Jabbar**



Tandatangan

Nama Penyelia/Penyelia-penyelia
(Name of Supervisor/Supervisors) :

Universiti Utara Malaysia

Tandatangan

PERMISSION TO USE

In presenting this thesis in fulfillment of the requirements for a Post Graduate degree from the Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copying this thesis in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor or in his absence, by the Dean of Dean of Tunku Puteri Intan Safinaz School of Accountancy, where I did my thesis. It is understood that any copying or publication or use of this thesis or parts of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the Universiti Utara Malaysia (UUM) in any scholarly use which may be made of any material in my thesis.

Request for permission to copy or to make other use of materials in this thesis in whole or in part should be addressed to:

Dean of Tunku Puteri Intan Safinaz School of Accountancy
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman



UUM
Universiti Utara Malaysia

ABSTRACT

Tax non-compliance behaviour has been addressed as a continuous serious concern globally. However, empirical research on tax non-compliance in Yemen is still scarce. The major purpose of this study was to investigate the issue of income tax non-compliance behaviour in Yemeni SMEs from two theoretical perspectives, namely social psychology and economy. It aimed to empirically investigate the influence of the Islamic religious perspective, geopolitical differences, tax service quality, public governance quality, tax rate and penalties on taxpayers' behaviour. As a new contribution to tax non-compliance knowledge, the moderating effect of Islamic religious perspective on the relationship between tax non-compliance behaviour and its determinants was also examined. Data was collected using the survey method, whereby a total of 500 questionnaires yielded a 66% response rate. Hierarchical regression analysis was employed to test the hypotheses. The findings show that Islamic religious perspective and geopolitical differences have significant influences on taxpayers' behaviour. The results also indicate that tax service quality and public governance quality have significant negative influences on the level of tax non-compliance, and tax rate positively influences the level of tax non-compliance but the influence of penalties on the level of tax non-compliance is statistically non-significant. Additionally, this study provides evidence that integrating the Islamic religious perspective, as a moderator, strengthens the ability of the model to explain the issue of tax non-compliance, and significantly moderates the influence of geopolitical differences and penalties. This study concluded with the theoretical and methodological contributions, and practical implications for the tax authority and the government of Yemen.

Keywords: tax non-compliance behaviour, Islamic religious perspective, geopolitical differences, SMEs.

ABSTRAK

Gelagat ketidakpatuhan cukai dilihat sebagai masalah berterusan yang serius di peringkat global. Walau bagaimanapun, kajian empirikal ke atas aspek ketidakpatuhan cukai di Yaman amat terhad. Tujuan utama kajian ini dijalankan adalah untuk mengkaji tentang isu ketidakpatuhan cukai pendapatan dari dua perspektif, iaitu psikologi sosial dan ekonomi. Kajian ini mengkaji secara empirikal tentang pengaruh perspektif agama Islam, perbezaan geopolitik, kualiti perkhidmatan cukai, kualiti tadbir urus awam, kadar cukai, dan penalti ke atas gelagat pembayar cukai. Kesan penyederhana perspektif agama Islam ke atas hubungan faktor-faktor yang mempengaruhi gelagat ketidakpatuhan cukai turut dikaji sebagai satu sumbangan baharu dalam bidang pencukaian. Pengumpulan data dilaksanakan menerusi kaedah tinjauan dengan edaran 500 borang soal selidik yang menghasilkan kadar respon sebanyak 66%. Analisis hierarki regresi digunakan dalam menguji semua hipotesis kajian. Hasil kajian menunjukkan bahawa perspektif agama Islam dan perbezaan geopolitik mempunyai pengaruh yang signifikan ke atas gelagat pembayar cukai. Hasil kajian juga menunjukkan bahawa kualiti perkhidmatan cukai dan kualiti tadbir urus awam mempunyai pengaruh yang negatif ke atas tahap ketidakpatuhan cukai. Manakala kadar cukai pula mempunyai pengaruh positif ke atas tahap ketidakpatuhan cukai, namun pengaruh penalti ke atas gelagat pembayar cukai adalah tidak signifikan. Kajian ini juga membuktikan bahawa peranan perspektif agama Islam sebagai penyederhana telah mengukuhkan keupayaan model dalam menjelaskan isu ketidakpatuhan cukai dan perspektif agama Islam juga bertindak sebagai penyederhana terhadap perbezaan geopolitik dan penalti. Kajian ini menyumbang dari aspek teori, kaedah kajian dan implikasi praktikal kepada pihak berkuasa cukai dan kerajaan Yaman.

Kata kunci: gelagat ketidakpatuhan cukai, perspektif agama Islam, perbezaan geopolitik, industri kecil dan sederhana.

ACKNOWLEDGEMENTS

In the name of ALLAH, the most Gracious, the most Merciful. All praises and thanks to His Almighty throughout time up to the Day of Judgment. Peace and prayers be upon our Prophet Muhammad, his family members, companions and followers.

First and foremost, I give my whole hearted gratefulness and gratitude to Allah S.W.T for His blessings and for giving me the will, capability and patience to complete this thesis. I am also grateful to many people who contributed substantially to my PhD journey, including my supervisor, friends and colleagues since it is impossible to identify all of them by name.

Specifically, my foremost gratitude goes to my supervisor, Associate Professor. Dr. Hijattulah Abdul-Jabbar for his professional guidance, continuous support, encouragement and kindness during the writing of this thesis. He devoted his expertise and precious times to guide me to reach this level. Without his contributions, this project would have been impossible to accomplish. Thank you very much, all your endeavors and efforts will be appreciated forever.

Also, I would like to thank all the academic and administrative staff in UUM and in Tunku Puteri Intan Safinaz School of Accountancy, especially the internal reviewers of my proposal defense, Associate Professor. Dr. Zainol Bidin and Associate Professor Dr. Natrah Saad for their valuable comments, which enabled me to improve my work. Also, I would like to thank the external examiner of my thesis Professor Dato Dr. Mustafa Mohammed Hanefah for his assistance and good dealing, which left an unforgettable positive impact on me.

I would also like to express my special thanks and my never ending appreciation and gratitude to my father Hassen Ali, my mother Khadeja Ahmed, my brothers, sisters, my lovely wife Abeer Ba-wazir and my beloved daughters, Khadeja and Jamilah, for their spiritual supports and encouragement. Their belief in me and their encouragement gave me the motivation for this work and I would never have finished it without their love and support. Last but not least, I greatly appreciate the contribution of Hadhramout University for sponsoring my study.

The author of this thesis has jointly published articles during his doctoral study. Additionally, several conferences papers were presented and co-published in the relevant proceedings. These publications are listed below:

Journals

Al-Ttaffi, L. H. A. & Abdul-Jabbar, H. (2016). Service quality and income tax non-compliance among small and medium enterprises in Yemen. *Journal of Advanced Research in Business and Management Studies*, 4(1), 12-21.

Al-Ttaffi, L. H. A. & Abdul-Jabbar, H. (2015). A conceptual framework for tax non-compliance studies in a Muslim country: A proposed framework for the case of Yemen. *International Postgraduate Business Journal*, 7 (2), 1-16.

Conferences

Al-Ttaffi, L. H. A. & Abdul-Jabbar, H. (2016). Geopolitics and its implications for tax administration. International Conference on Government & Public Affair (ICOGPA), Sintok, Malaysia, 05 – 06 October. School of Government, Universiti Utara Malaysia.

Al-Ttaffi, L. H. A. & Abdul-Jabbar, H. (2016). Religious perspective and tax non-compliance behaviour: An evidence from small and medium enterprises in Yemen. International Conference on Accounting Studies (ICAS), Langkawi, Malaysia, 15-18 August. Tunku Puteri Intan Safinaz School of Accountancy, Universiti Utara Malaysia.

Al-Ttaffi, L. H. A. & Abdul-Jabbar, H. (2015). Does Muslim view on tax influence compliance behaviour? International Conference on Accounting Studies (ICAS), Johor Bahru, Malaysia, 17-20 August. Tunku Puteri Intan Safinaz School of Accountancy, Universiti Utara Malaysia.



TABLE OF CONTENTS

TITLE PAGE	i
CERTIFICATION OF THESIS WORK	ii
PERMISSION TO USE	iv
ABSTRACT	v
ABSTRAK	vi
ACKNOWLEDGEMENTS	vii
TABLE OF CONTENTS	ix
LIST OF TABLES	xiii
LIST OF FIGURES	xiv
LIST OF APPENDICES	xv
LIST OF ABBREVIATIONS	xvi
 CHAPTER ONE: INTRODUCTION	
1.1 Background of the Study	1
1.2 Tax Non-compliance in Yemen	2
1.2.1 Islamic Religious Perspective and Tax Non-compliance	5
1.2.2 Geopolitical Differences and Tax Non-compliance	7
1.3 Small and Medium Enterprises in Yemen	8
1.4 Problem Statement	10
1.5 Research Questions	13
1.6 Research Objectives	14
1.7 Significance of the Study	15
1.7.1 Theoretical Contributions	15
1.7.2 Practical Contributions	18
1.8 Scope of the Study	19
1.9 Organization of the Study	20
 CHAPTER TWO: INCOME TAX SYSTEM AND SMEs IN YEMEN	
2.1 Introduction	22
2.2 History and Development of Yemeni Income Tax System	22
2.3 The Income Tax Regulation (Law No. 17 of 2010)	27
2.3.1 Income Tax Rates	29
2.3.2 Penalties	30
2.3.3 Self-assessment System	31
2.3.4 Zakat Payment and Tax	32
2.4 Small and Medium Enterprises in Yemen	33
2.4.1 Definition of Small and Medium Enterprises	35
2.4.2 Classification of Small and Medium Enterprises	37
2.5 Summary	38
 CHAPTER THREE: LITERATURE REVIEW	
3.1 Introduction	39
3.2 Concepts of Tax Compliance and Tax Non-compliance	39
3.3 Taxpayers' Behaviour	42
3.4 Reasons for Non-compliance	43
3.5 Underpinning Theory and Supporting Theories	45

3.5.1	Social Influence Theory	46
3.5.2	Social Exchange Theory	50
3.5.3	Deterrence Theory	53
3.6	A Review of Tax Compliance and Non-compliance Studies	55
3.6.1	Earlier Studies of Tax Compliance and Non-compliance	56
3.6.2	Recent Studies of Tax Compliance and Non-compliance	65
3.6.3	Tax Compliance and Non-compliance Studies of Yemen	73
3.7	Determinants of Tax Non-compliance Behaviour	76
3.7.1	Islamic Religious Perspective	77
3.7.2	Geopolitical Differences	82
3.7.3	Tax Service Quality	88
3.7.4	Public Governance Quality	93
3.7.5	Tax System Structure	97
3.8	Summary	106

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1	Introduction	107
4.2	Research Framework	107
4.3	Hypotheses Development	111
4.3.1	Islamic Religious Perspective	111
4.3.2	Geopolitical Differences	113
4.3.3	Tax Service Quality	115
4.3.4	Public Governance Quality	117
4.3.5	Tax Rate	119
4.3.6	Penalties	121
4.4	Research Design	122
4.5	Population and Sampling	125
4.5.1	Sample Size	125
4.5.2	Sampling Technique and Selection	127
4.5.3	Unit of Analysis	131
4.6	Operational Definitions of Variables	131
4.6.1	Tax Non-compliance Behaviour	132
4.6.2	Islamic Religious Perspective	134
4.6.3	Geopolitical Differences	134
4.6.4	Tax Service Quality	135
4.6.5	Public Governance Quality	137
4.6.6	Tax System Structure	139
4.7	Measurement of Variables	141
4.7.1	Tax Non-compliance Behaviour	142
4.7.2	Islamic Religious Perspective	143
4.7.3	Geopolitical Differences	144
4.7.4	Tax Service Quality	144
4.7.5	Public Governance Quality	145
4.7.6	Tax System Structure	146
4.8	Questionnaire Design	146
4.9	Pilot Study	150
4.10	Data Collection Procedures	153
4.11	Techniques of Data Analysis	156
4.11.1	Descriptive Statistics	156
4.11.2	Cross-tabulation Analysis	157

4.11.3	Goodness of Measure	157
4.11.4	Correlation Analysis	159
4.11.5	Multiple Regression Analysis	159
4.12	Summary	161

CHAPTER FIVE: DATA ANALYSIS AND RESEARCH FINDINGS

5.1	Introduction	162
5.2	Response Rates	162
5.3	Data Screening and Inspection	163
5.3.1	Missing Data Treatment	163
5.3.2	Removing Outliers	164
5.3.3	Non-response Bias	165
5.4	Respondents Profile	167
5.5	Descriptive Statistics	170
5.5.1	Tax Non-compliance Behaviour	170
5.5.2	Tax Service Quality	172
5.5.3	Public Governance Quality	174
5.5.4	Tax System Structure	176
5.6	Cross-tabulation Analysis	178
5.6.1	Islamic Religious Perspective and Tax Non-compliance	178
5.6.2	Geopolitical Differences and Tax Non-compliance	179
5.7	Correlation Analysis	181
5.8	Factor Analysis	182
5.8.1	Factors Analysis of Tax Service Quality	184
5.8.2	Factors Analysis of Public Governance Quality	186
5.8.3	Factors Analysis of Tax System Structure	187
5.9	Multiple Regression	189
5.9.1	Assumptions of Multiple Regression	190
5.9.2	Regression Models	194
5.9.3	Multiple Regression Results	196
5.10	Hypotheses Testing	200
5.10.1	The Hypotheses of Independent Variables	201
5.10.2	The Hypotheses of Moderating Effect of Islamic Religious Perspective	204
5.11	Summary	207

CHAPTER SIX: DISCUSSION AND CONCLUSION

6.1	Introduction	208
6.2	Summary of Findings	208
6.3	Discussion of Results	209
6.3.1	Research Question 1	210
6.3.2	Research Question 2	214
6.3.3	Research Question 3	217
6.3.4	Research Question 4	219
6.3.5	Research Question 5	221
6.3.6	Research Question 6	222
6.3.7	Research Question 7	223
6.4	Implications of the Study	229
6.4.1	Theoretical Implications	229
6.4.2	Methodological Implications	232

6.4.3	Practical Implications	233
6.5	Limitations and Recommendations for Future Research	235
6.6	Conclusion	239
REFERENCES		241
APPENDICES		272



LIST OF TABLES

Table 2.1	Number of SMEs in Yemen 1996 – 2010	33
Table 2.2	Distribution of SMEs among Yemeni cities in 2010	34
Table 2.3	Definition of SMEs in selected Arab Countries	37
Table 2.4	SMEs sectors in Yemen in 2010	38
Table 3.1	Summary of earlier studies of tax compliance and non-compliance for the period 1990 - 2009	63
Table 3.2	Summary of recent studies of tax compliance and non-compliance for the period 2010 - 2016	71
Table 3.3	Summary of tax compliance and non-compliance studies of Yemen	75
Table 4.1	Determining the number of subjects in the sample for the largest 7 cities in Yemen	130
Table 4.2	Measurement items of tax non-compliance behaviour	133
Table 4.3	Measurements of Islamic religious perspective towards tax	134
Table 4.4	Dimensions and items of tax service quality	137
Table 4.5	Dimensions and items of public governance quality	139
Table 4.6	Items of tax system structure	141
Table 4.7	Summary of structure of the questionnaire	149
Table 4.8	Reliability analysis of pilot study	152
Table 5.1	Summary of the questionnaire response rate	163
Table 5.2	Summary of the missing values	164
Table 5.3	Test of non-response bias	167
Table 5.4	Summary of the respondents' demographic characteristics	168
Table 5.5	Summary of the respondents' business characteristics	169
Table 5.6	Summary of tax compliance/non-compliance behaviour by situations	171
Table 5.7	Summary of overall tax compliance/non-compliance behaviour	172
Table 5.8	Descriptive statistics of tax service quality	173
Table 5.9	Descriptive statistics of public governance quality	175
Table 5.10	Descriptive statistics of tax rate	176
Table 5.11	Descriptive statistics of penalties	177
Table 5.12	Cross-tabulation: Islamic religious perspective and tax non-compliance behaviour	179
Table 5.13	Cross-tabulation: Geopolitical differences and tax non-compliance behaviour	180
Table 5.14	Correlation strength: Tolmie <i>et al.</i> , (2011) rule of thumb	181
Table 5.15	Inter - correlation Matrix	181
Table 5.16	Factor analysis for tax service quality	185
Table 5.17	Factor analysis for public governance quality	186
Table 5.18	Factor analysis for tax rate	188
Table 5.19	Factor analysis for penalties	189
Table 5.20	Results of skewness and kurtosis for normality test	191
Table 5.21	Multicollinearity Test	193
Table 5.22	Multiple regression results	197
Table 6.1	Summary of hypotheses findings	208

LIST OF FIGURES

Figure 2.1	The structure of revenues sector in Yemen	24
Figure 4.1	The research framework	110



LIST OF APPENDICES

Appendix A	Table for Determining Sample Size for a known Population Size	273
Appendix B	The Questionnaire- English Version	274
Appendix C	The Questionnaire- Arabic Version	280
Appendix D	Outliers Results	284
Appendix E	Homogenounity Test of Geopolitics Groups	286
Appendix F	Matrix Scatter for Variables	287
Appendix G	Scatter Plots & Histogram	288
Appendix H	Hierarchical Multiple Regression Outputs	289



UUM
Universiti Utara Malaysia

LIST OF ABBREVIATIONS

AFFT	Americans For Fair Taxation
ATO	Australian Taxation Office
BRIC	Brazil, Russia, India, and China
CFA	Confirmatory Factor Analysis
COCA	Central Organization of Control & Audit, Yemen
COS	Central Organization of Statistic, Yemen
EFA	Exploratory Factor Analysis
GDP	Gross Domestic Product
GST	Goods and Services Tax
IRB	Institutional Review Board
IRP	Islamic Religious Perspective
IRS	Internal Revenue Service
KMO	Kaiser- Meyer-Olkin Measure of Sampling Adequacy
MIT	Ministry of Industry & Trade, Yemen
MPIC	Ministry of Planning & International Cooperation, Yemen
NIS	National Information System, Yemen
OECD	Organization for Economic Cooperation and Development
PINE	Philippines, Indonesia, Nigeria and Ethiopia
PLS	Partial Least Square
SAS	Self Assessment System
SCSRF	Standing Committee for Scientific Research & Fatwa, Saudi Arabia
SEM	Structural Equation Modeling
SMEs	Small and Medium Enterprises
SPSS	Statistical Package For Social Sciences
TIQN	Transparency International's Quarterly Newsletter
TPB	Theory of Planned Behaviour
UK	United Kingdom
UNDP	United Nations Development Program
USA	United States of America
USD	United States Dollars
UUM	Universiti Utara Malaysia
VAT	Value Added Tax
VIF	Variance Influence Factor
YR	Yemeni Rials

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Tax non-compliance is one of the several phenomena that seriously impact the global economy, and therefore it has attracted the awareness of tax researchers (Ross & McGee, 2012a). All economies in the world, whether developed or developing economies, are affected by this phenomenon (Hindriks & Myles, 2008). Mas'ud, Aliyu and Gambo (2014) related that the level of tax non-compliance in developing countries is much more than developed countries.

Globally, numerous studies on tax compliance employed the classic model of tax compliance (Gupta & McGee, 2010), which initially focused on the economic perspective (Becker, 1968; Allingham & Sandmo, 1972) and later on to some extent, integrating the social and psychological (Weigel, Hessing & Elffer, 1978; Fischer, Wartick & Mark, 1992; Hanefah, 1996; Edlund, & Aberg, 2002) and legal (Klepper, Mazur & Nagin, 1991; Riahi-Belkaoui, 2004) perspectives as well. The lack of empirical research on other aspects can be attributed to the reality that social effects are extremely difficult to identify (Gupta & McGee, 2010). In a related study, Crowe (1944, as cited Ross & McGee, 2012) proposed a broad study on the ethics of tax non-compliance from philosophical and religious aspects.

Internationally, many studies have been conducted to examine the issue of tax non-compliance covering different countries in South America, North America, Asia, Europe, Australia and New Zealand (McGee, 2006; McGee, 2007; McGee, Benk,

Ross & Kılıçaslan, 2009; McGee, Petrides & Ross, 2009; Gaventa & McGee, 2010). Although the existence of tax non-compliance in the Middle East region is reported (Central Organization for Control and Audit COCA, 2014), studies in this region are very rare (Aljaaidi, Manaf, & Karlinsky, 2011).

The Middle East region is one of the important areas that have contributed to the growth of the global economy (Carapico, 1998), therefore, it is important to determine the public views of these countries toward the international economic problems, such as tax non-compliance. The current study focuses on Yemen as one of the Middle East countries. Hanefah, Ariff and Kasipillai (2002) explained that several governments see SMEs as the vehicle for greater economic growth. Mwangi (2014) and Fararah (2014) suggested concentrating on the Small and Medium Enterprises sector (SMEs) because this sector often constitutes a very large segment of the economy of countries.

1.2 Tax Non-compliance in Yemen

Yemen, as one of the countries in the Middle East region, is classified as one of the least developing countries that suffer of a high volume of economic, financial and administrative corruption (Yemen Times, 2005). One of the most prominent economic and financial problems is tax non-compliance, which was recorded in high rates during the last few decades (COCA, 2014).

During the period from 1990 to 2010, the tax authority in Yemen has regulated many new tax laws and reforms¹ to overcome the weaknesses in the tax system in order to

¹ See Chapter Two for more details about all key reforms and modification of tax laws during the period from 1990 to 2010.

eliminate tax non-compliance, such as the modifications of the Income Tax Regulations (Law No. 17 of 2010), which is considered the newest reform concerning income tax, were introduced (Aljamaree & Algaylee, 2011; Helhel & Ahmed, 2014). Additionally, the modification of general sales tax according to Law No. 19 for the year 2001, which was expanded in 2001 to undergo base, and the emergence of many of the reforms, such as unification of the applicable rate of 10%, reduce exemptions under a specific list apply the rate of zero for exported goods. However, this law was introduced to be applied in 2005.

Despite these attempts by the tax authority, the phenomenon of tax non-compliance still exists in practice. During the period from 2004 to 2013, it was noted that the volume of tax non-compliance showed a steady increase, reaching in 2004 to the amount of USD164 million, only to increase in 2009 to USD2 billion, followed by in 2012 to USD2.5 billion and in 2013 to USD3 billion (Ministry of Planning & International Cooperation MPIC, 2009; Al-Saadi, 2014; COCA, 2014). Al-Saadi, who used to be the Minister of Planning and International Cooperation of Yemen, (2014) stated that the issue of low collection of tax in Yemen led to a serious financial problem. He explained that the low collection of tax places the country in a complicated situation as it needs more support for its general budget in order to meet the deficit, and that such low tax payment could threaten the economic stability.

In line with this statement, the Yemeni News Agency "Saba" (2012) reports revealed that the Yemen's cabinet approved a budget for year 2013, with a deficit of YR690 billion (USD3.2 billion). Thus, reducing the non-compliance of tax will actively contribute to financing the fiscal gap of the budget. Al-Mutawakel (2014) explained

that overcoming the phenomenon of tax non-compliance will cover a significant amount of the budget deficit, and will play an important role in supporting the government budget and inject sufficient funds to eliminate the deficit, which threatens the economy of the country. Furthermore, the government will be able to cut or reduce the foreign aids which were resorted to, to cover the budget deficit.

On the other hand, the Yemeni government provides subsidies for petroleum products, which created a deficit in the budget (The Yemeni News Agency, 2012), so the government is planning to remove these subsidies. However, the Yemeni economic expert, Abdul Majid Al-Batly (2014), indicated that even after the removal of subsidies on petroleum products, there will still be a deficit in the budget, therefore, the diversification of sources of public revenue is still required. One of the most important sources of the government budget is tax revenues, but it is still in a low level of contribution to Gross Domestic Product (GDP). Therefore, eliminating the amount of tax non-compliance is useful to finance the budget and reduce the deficit.

In this regard, researches should be conducted in order to discover the factors influencing the taxpayer's behaviour. Religion is considered to be a main factor that shapes the attitudes and thus may affect the behaviour of the individuals (Mohdali & Pope, 2014). As the population of Yemen is totally composed of Muslims, the measurement of the Islamic viewpoints of the taxpayers in Yemen is of great importance and is an essential factor that influence taxpayer's behaviour to overcome the phenomenon of tax non-compliance (Obaid, 2008; Mohdali & Pope, 2014). Furthermore, the geopolitical differences in Yemen are expected to be a key factor

influencing many issues such as tax non-compliance. While the attitudes of the Yemeni people towards the government differ based on their geographical location resulting from political issues, their behaviour is logically impacted by their geopolitics (Al-Naqeeb, 2011). Islamic religious perspective and geopolitical differences are briefly explained below.

1.2.1 Islamic Religious Perspective and Tax Non-compliance

Based on the social influence theory, attitudes are considered to be a very important factor that may affect the behaviour of individuals. The current study concentrates on the Islamic religious perspective, being as attitude of tax payers, may affect the behaviour of taxpayers in terms of compliance and non-compliance.

Islamic teachings are clear in many issues in terms of Halal and Haram, where there are explicit texts in the form of Quranic statements or Hadith of the Prophet (peace be upon him). However, in some issues, especially contemporary ones such as tax, there are no explicit texts clarifying whether it is Halal or Haram, because taxes did not exist at the time of the Prophet (peace be upon him). In such a case, Islam gave an opportunity for researchers to conduct their due diligence, and as such, Muslim scholars strive to provide Islamic provisions for these cases.

Generally, there are several opinions about taxes, since some scholars are viewing tax itself as forbidden, and others believing in its legitimacy and the government's right to impose taxes on its citizens. The difference in understanding the Islamic rules about taxes resulted in different views and perspectives about non-compliance. The Islamic perceptions on tax could be summarized as follows:

- 1) Totally permissible (Halal): therefore, non-compliance seems to be absolutely forbidden (Nabulsi, 2005).
- 2) Permissible under circumstances and conditions: accordingly, tax non-compliance seems permissible when the "conditions" are not met (Mawdudi, 2005; Al-Omari, 2009; Hasan, 2010; Al-Jibreen, 2012).
- 3) Totally forbidden (Haram): consequently, non-compliance could be seen as permissible when taxpayer found opportunity to do so without committing any forbidden act (Standing Committee for Scientific Research & Fatwa SCSRF, 1994)¹.

It is worth indicating that the four Islamic Mazhabs have different viewpoints towards tax. However, the three Islamic perspectives about tax are relevant to all Mazhabs, and do not refer to any specific Mazhab.

The current study incorporates Islamic religious perspective in the model of tax non-compliance. Baron and Kenny (1986) suggested that a moderator is introduced when the association between variables is inconsistent. Thus, the moderating effect of Islamic religious perspective on the relationship between tax non-compliance and its determinants is investigated.

It is worth mentioning in this regard that in the Islamic rules, specific individuals (Muslims) are required to pay Zakat as a religious duty imposed on them. In some countries, like Malaysia, the financial system connects between Zakat and tax, as the amount of Zakat paid is rebated from the due tax (Khamis, Mohd, Salleh&Nawi,

¹ SCSRF is the Fatwa Council of Saudi Arabia.

2014). Such regulation may enhance taxpayers to comply with tax rules, and thus, the level of tax compliance is improved. However, other countries, including Yemen, do not consider Zakat paid, and citizens are required to pay the full amount of Zakat and tax as well (Tax Authority of Yemen, 2011).

1.2.2 Geopolitical Differences and Tax Non-compliance

In a country like Yemen, the geographical affiliation plays a key role on the economic issues such as non-compliance of tax (Al-Yasani, 2005). The geographical differences are a result of political differences stemming from the previous division of the country before 1990. This diversity in affiliation did not exist at the beginning of the nineties (1990) of the last century, where the North and South Yemen united. The Yemeni unity continued until 1994 when a war between the two halves broke out and ended with the victory of the northern part of Yemen over southern part. Many Southerners considered this victory as an occupation, and therefore treated the government as the occupation government (Bahaj, 2000).

In 2007, the Southern Movement was founded in the country, and began calling for reforming the path of unity, then moved to claim the secession of the south from the central government in Sana'a (Al-Rabae, 2014). This view has led a lot of southerners to take a political character, and thus resulted in the evasion of the performance of the duties of the central government in Sana'a, especially as most Southerners believe that Sana'a has been plundering the wealth of the south, which represents 85% of the total wealth of the country (Al-Naqeeb, 2011).

In summary, the influence of geopolitics is a result of the geographical differences based on political division of the country. In other words, geopolitical differences are the combination of geographical with political aspects. As the geographical locations of taxpayers are used as a proxy to measure their geopolitics, therefore, it could be said that the geographical location of taxpayers may be used to measure the attitudes towards the government in Yemen, and in turn, this influences national issues, including compliance of tax rules.

In the literature, geopolitics has been examined in different environments other than Yemen. For instance, Oyelere (2007) investigated the disparities in labour market outcomes across geopolitical regions in Nigeria. The author classified the 36 states in Nigeria into 6 geopolitical regions. The basis of classification is the political aspect with geographical location, where each region has a political character towards the central government. The Nigerian case closely resembles the Yemeni case, as the geopolitical differences may affect the attitude of citizens towards the authority, and so may influence their behaviour on certain issues such as tax non-compliance.

1.3 Small and Medium Enterprises in Yemen

The Yemeni business law defined the SMEs based on 2 criteria. The first criterion is the number of employees and workers, and the second criterion is the capital of these enterprises. The enterprise employing from 1 to 4 workers and has capital of less than YR1.5 million [about 6,700 USD], is considered a small enterprise. Meanwhile, the medium enterprise is defined as the enterprise, which have from 5 to 10 employees and capital between YR1.5 million to YR20 million [about USD93,000] (MPIC, 2009; Tax Authority of Yemen, 2011).

Since the 1960s to date, SMEs have been given due recognitions for playing very important roles in fostering accelerated economic growth, development and stability within several economies (Pashev, 2008). The Yemeni economy relies heavily on SMEs sector, which represent 99.6% of business in Yemen (MPIC, 2009; Central Organization of Statistic COS, 2013). The number of SMEs is increasing, as it was about 32,649 in 1996, and in 2000 the number was 33,351, only to reach in 2004 to more than 41,000, and 45,483 in 2010 (COS, 2013; National Information System NIS, 2012; Ministry of Industry & Trade MIT, 2011). Despite the growing number of SMEs in Yemen, the tax revenues from this sector is still very low, as it does not represent more than 5% of total tax revenues (Al-Saqqaf, 2005; Huda, 2005; Abdulasiz, 2008).

The SMEs are represented by their owners and managers, as they are the final decision makers. Miller and Sardais (2011) pointed out that based on the agency theory, the owners always seek to maximize profits, and managers also have the same objective, and in return they get some concessions and incentives. However, the owners and managers of SMEs are normally affected by the surroundings, whether it is their social or economic environment (Alabede, Ariffin & Idris, 2011a). In other words, the social factors and economic factors are likely to influence the behaviour of taxpayers. Naturally, the positive perception of SMEs owners and managers towards tax would lead to a positive behaviour and hence, more compliance would be achieved.

1.4 Problem Statement

In Yemen, as many other developing countries, tax non-compliance is considered to be a serious challenge facing tax authority and preventing tax revenue performance. The tax authority in Yemen has regulated many reforms during the period from 1990 to 2010 to overcome the weaknesses in the tax system. Nevertheless, as highlighted in Section 1.2, data shows that the amount of tax non-compliance is on increasing trend and remains a serious concern (United Nations Development Program UNDP, 2005; MPIC, 2009; Al-Batly, 2014; COCA 2014), and also has led Yemen into a serious financial problem (MPIC, 2014). For example, the Yemeni cabinet approved a budget for the year 2013, with a deficit of YR690 billion or equivalent to USD3.2 billion. (Yemeni New Agency, 2012). By comparing the budget deficit of USD3.2 billion with the estimated amount of tax non-compliance for the same year 2013 (i.e. USD3 billion), it could be noted that minimizing the tax gap will lead to an increase in tax revenue, thus minimizes the budget deficit and its corresponding reliant on foreign aids respectively (Al-Mutawakel, 2014).

Contrastingly, the increasing amount of tax non-compliance would continually reduce the share of tax revenue over the total revenue of the government. For example, the average tax revenue for the period of between 2006 and 2013 is just almost 23% of the total revenue of the government, which is sufficient to cover only about 24.4% of the total current expenditure of the same period (COCA, 2014). Additionally, the average ratio of tax revenues amounted to only 6.4% of GDP during the same period, compared to 17% of GDP in similar economies such as Egypt and Syria, and more than 20% of GDP in Morocco, Tunisia, Lebanon and Jordan (Imam & Jacobs, 2014). An analysis by Bose, Haque and Osborn (2007)

pointed out that Yemen and Sudan had the lowest share of tax revenue on GDP among all developing countries. According to Tax Authority of Yemen (2011), income tax revenues represent the largest percentage of tax revenue in Yemen. Moreover, non-compliance frequently occurs in the income tax more than other types of tax, because the other indirect taxes are linked to the value of the goods or services, and so, the consumer has no option other than to pay the tax. For this reasons, the current study concentrated on the income tax non-compliance in Yemen.

The SMEs sector play very important roles in fostering accelerated economic growth (Pashev, 2008), and specifically in Yemen, SMEs sector is growing steadily, (COS, 2013; NIS, 2012; MIT, 2011) and it represents 99.6% of business establishment in Yemen (MPIC, 2009; Central Organization of Statistic COS, 2013). However, tax revenues contributed by this sector are still very low, as it does not exceed 5% of the total tax revenues (Al-Saqqaf, 2005; Huda, 2005; Abdulasiz, 2010). The low tax collection from SMEs is likely due to a very high non-compliance among SMEs in Yemen. For example, Gubran (2009) indicated that 60% of SMEs in Sana'a do not comply with tax laws at all, with the remaining 40% of SMEs displaying some sort of non-compliance offences.

Regarding theory, Allingham and Sandmo (1972) conducted an empirical study of factors affecting tax non-compliance by employing the deterrence theory of Becker (1968). The deterrence theory focus only on economic factors, while neglecting social, psychological and political aspects is considered as one of its weaknesses since it does not provide a complete explanation of factors affecting the tax non-compliance (Torgler, Schaffner & Macintyre, 2007). Generally, factors affecting the

phenomenon of tax non-compliance cannot be explained by a single theory (Alm, 1999). Other supporting theories are employed to give a better logical explanation of factors affecting this phenomenon. Thus, some studies extended their examination to include the social and legal perspectives (Jackson & Milliron, 1986; Klepper *et al.*, 1991; Fischer *et al.*, 1992; Hanefah, 1996) as well. Alabede (2012) argued that when non-compliance with the laws becomes a common phenomenon, it is often attributed to social factors and the lack of deterrence for non-compliance. As a result, the disturbing statistics about tax non-compliance in Yemen is an indication of the need for investigation into taxpayers' non-compliance behaviour in the country, and solving the problem requires a careful study of both the social and economic factors influencing tax compliance in Yemen. Therefore, the current study incorporated the social and psychological theories in the model of tax non-compliance along with the economic theories.

As discussed in Section 1.2.1, individual's views on tax itself are different based on their Islamic understanding and, as such perceptions about tax non-compliance may also be different. Islamic perception on tax seems have been ignored in tax studies and has been tested as an independent variable only in one unpublished Master research (Al-Ttaffi, 2009). However, Islamic perception may have a moderating effect on the factors affecting the tax non-compliance, because the religious attitude as internal value have a significant impact on the behaviour of taxpayers which may alter, strengthen or weaken the relationship between tax non-compliance and its determinants (Mohdali & Pope, 2014). Furthermore, geopolitical differences are expected to influence the issue of tax non-compliance in Yemen, because the viewpoints of Southerners and Northerners about the government differ (Al-Sabri,

2010). Moreover, tax service quality, public governance quality and tax system structure are considered to be relevant to understand tax non-compliance behaviour in developing countries such as Yemen (Manaf *et al.*, 2005; Egwaikhide, 2010; Al-Ttaffi *et al.*, 2011; Alabede, 2012). Consequently, this study is set to investigate the factors influencing income tax non-compliance behaviour among SMEs in Yemen by incorporating Islamic religious perspective as a moderator in the model of tax non-compliance. The impact of geopolitical differences on tax non-compliance behaviour in Yemen is also examined along with tax service quality, public governance quality and tax system structure.

1.5 Research Questions

The general question of the current study is: what are the factors which can explain the income tax non-compliance behaviour among SMEs in Yemen? This study also investigates the influence of the Islamic religious perspective in moderating the relationship between tax non-compliance behaviour and its determinants among SMEs in Yemen. Specifically, the research questions can be formulated as follows:

- 1) Is there a significant relationship between Islamic religious perspectives of taxpayers and tax non-compliance behaviour among SMEs in Yemen?
- 2) Is there a significant relationship between geopolitical differences and tax non-compliance behaviour among SMEs in Yemen?
- 3) Is there a significant relationship between tax service quality and tax non-compliance behaviour among SMEs in Yemen?
- 4) Is there a significant relationship between public governance quality and tax non-compliance behaviour among SMEs in Yemen?

- 5) Is there a significant relationship between tax rate and tax non-compliance behaviour among SMEs in Yemen?
- 6) Is there a significant relationship between penalties and tax non-compliance behaviour among SMEs in Yemen?
- 7) To what extent does Islamic religious perspective moderate the relationship between tax non-compliance and its determinants (investigated in the current study) among SMEs in Yemen?

1.6 Research Objectives

The current study primarily aims to understand how income tax non-compliance behaviour among SMEs in Yemen can be explained. Further, the moderating effect of Islamic religious perspective between tax non-compliance and its determinants is investigated as well. Particularly, the research objectives can be formulated as follows:

- 1) To determine the influence of Islamic religious perspectives on tax non-compliance behaviour among SMEs in Yemen.
- 2) To determine the influence of geopolitical differences on tax non-compliance behaviour among SMEs in Yemen.
- 3) To examine the influence of tax service quality on tax non-compliance behaviour among SMEs in Yemen.
- 4) To examine the influence of public governance quality on tax non-compliance behaviour among SMEs in Yemen.
- 5) To investigate the influence of tax rate on tax non-compliance behaviour among SMEs in Yemen.

- 6) To investigate the influence of penalties on tax non-compliance behaviour among SMEs in Yemen.
- 7) To determine the moderating effect of Islamic religious perspective on the relationship between tax non-compliance and its determinants (investigated in the current study) among Yemeni SMEs.

1.7 Significance of the Study

Many prior studies concentrated on measuring the influence of factors affecting tax non-compliance. However, the majority of the prior studies conducted regarding tax non-compliance focused on the classic model, which views the phenomenon mainly from the economic perspective (Allingham & Sandmo, 1972), and other studies concentrating on the social side of the phenomenon (Jackson & Milliron, 1986; Fischer *et al.*, 1992; Hanefah, 1996; Edlund & Aberg, 2002; Ratto, Thomas & Ulph, 2005; Wenzel, 2005; Tapia, Miguel, Llacer & Noguera, 2014). Meanwhile, some other studies focused on the legal perspectives of the phenomenon (Klepper *et al.*, 1991). The current study offers theoretical and practical contributions to the phenomenon of tax non-compliance by integrating new variables, from the social and economic approaches, in one single model.

1.7.1 Theoretical Contributions

The problem of non-compliance with tax is considered a serious problem that attracted the attention of the researchers around the world. Developed countries took their share of the research in this problem. However, most of the studies conducted about tax non-compliance focused on the issue from the economic perspective (Riahi-Belkaou, 2004; Gupta & McGee, 2010).

More specifically, Allingham and Sandmo (1972) conducted an empirical study of factors affecting tax non-compliance from the viewpoint of deterrence theory of Becker (1968). However, the deterrence theory focuses only on economic factors, while social, political and psychological aspects are ignored – this is considered as one of the weaknesses of the theory as it fails cover all factors that may affect the phenomenon of tax non-compliance (Torgler, Schaffner & Macintyre, 2007). Thus, some studies extended their examination to the social and legal perspectives (Jackson & Milliron, 1986; Klepper *et al.*, 1991; Fischer *et al.*, 1992).

Generally, the factors affecting the phenomenon of tax non-compliance cannot be explained by a single theory (Alm, 1999). Other supporting theories are studied to give a logical explanation of the factors affecting the phenomenon. Therefore, the current study incorporated variables from the social psychological theories and the economic theories in the model of tax non-compliance. Specifically, this study is underpinned by Social Influence Theory and supported by Social Exchange Theory and deterrence Theory. Furthermore, Kirchler, Muelbacher, Kastlunger and Wahl (2007) explained that the inconsistency in the research findings, concerning the relationship between tax non-compliance and its determinants, is an indication that the relationship may be moderated by certain variables. Thus, in this regard, the current study attempts to provide a model that incorporates the Islamic religious perspective as a moderator in the model of tax non-compliance, because even though the Yemeni community is entirely composed of Muslims, the understanding and opinions about some contemporary issues such as tax are still different (Obaid, 2008). Moreover, geopolitical differences was also incorporated in the model based

on the suggestions from the literature (Al-Yasani, 2005; Bird & Zolt, 2005; OECD, 2005; Akpo, 2009; Everest-Philip & Sandall, 2009; Egwaikhide, 2010; Al-Ttaffi *et al.*, 2011; Al-Rabaei, 2014).

Aside from the above, other variables are relevant to the context of Yemen, specifically, tax service quality, public governance quality and tax system structure. Therefore, by investigating six constructs (five independent variables and one moderator) from different approaches and theories, this study provides new evidence to the relevant literature of the factors influencing tax non-compliance as well as factors exerting moderating effects on tax non-compliance.

Additionally, most of the researches of the influence of religious aspects on tax non-compliance have been conducted in developed countries such as the USA and Europe (Mohdali, 2013). However, the literature showed that the previous studies concentrated on religious effect through broad cross religion context, such as Islam, Christianity and Judaism, while the current study focuses on the specific perceptions within Islam itself through the understanding of Muslims towards tax. Thus, by focusing on a developing country, the current study answers the call of many studies on tax non-compliance to bridge the gap between developing and developed countries (Andreoni, Erard & Feinstein, 1998; Chau & Leung, 2009; Feust & Riedel, 2009), and followed the suggestion of Alabede (2012) to identify other social, psychological and cultural factors that may influence taxpayers' compliance behaviour, particularly in developing countries. Therefore, this study provides valuable insight and more evidence on the influences of religious, social, political

and economic factors on the non-compliance behaviour of taxpayers, which may contribute to the literature of tax non-compliance in developing countries.

Finally, it is worth highlighting that the present study employed the hypothetical scenario in order to measure tax non-compliance behaviour. According to the literature, this study is likely to be the first study using this measurement in tax non-compliance in Middle East region. Furthermore, the current study establishes new measurements of two new variables in taxation, namely, Islamic religious perspective and geopolitical differences of the Yemeni context.

1.7.2 Practical Contributions

The current study could be used as a tool for a number of actors in the development of the performance of governmental agencies and departments. The Yemeni government in general and tax authority in particular are expected to benefit from the current study in the development of the necessary solutions to eliminate or minimize the problem of tax non-compliance. The Yemeni government is still suffering from a budget deficit and is thus very keen to improve its revenue, and one of the ways to do so is to increase tax revenues. Statistics show that deficit of budget could be reduced through avoiding the problem of tax non-compliance.

This study may be of great significance to Yemen, as empirical studies explaining the non-compliance behaviour of Yemeni taxpayers are rare. This study, therefore, is useful in providing information about the determinants of non-compliance behaviour in Yemen. Owing to the very poor quality of tax service and public governance in Yemen (Al-Yasani, 2005), this study assists by providing evidence of the influence

of low quality on the behaviour of taxpayers. Moreover, the attitudes of taxpayers, towards tax non-compliance or towards the authority, are investigated in the study to help the government take the correct action to resolve the matter. Further, the study may also serve as a source of useful information to tax authorities concerning the influence of the deterrent factors. Hence, the study could possibly be viewed as one of the sources of information in the formulation and amendment of laws and financial strategies in the future.

The current study focuses on carrying out research on perception of SMEs owners and managers towards tax non-compliance to take the correct actions to eliminate this phenomenon. As SMEs represent a large proportion in the Yemeni economy, overcoming the problem of tax non-compliance in this sector will help the government to finance its budget and remove the suffered deficit. Generally, many similar countries are also expected to benefit from the current study in several aspects, whether economic, political or social aspects.

1.8 Scope of the Study

The current study focuses on measuring the link between several variables with the phenomenon of tax non-compliance in Yemen. Some of these variables are included under the social theories, while others are covered under the economic theories. SMEs sector are chosen to be the study scope as the firms under this sector constitute a large number of enterprises in Yemen but contribute the lowest level of tax revenues. Also this study focuses on the income tax, because income tax represents the largest volume of tax revenues in Yemen.

The Republic of Yemen contains twenty one governorates. Thirteen of them are located in the north region, while the other eight governorates are located in the south region. The study is carried out in the main governorates throughout the country. More specifically, the focus is only on the largest 7 cities in Yemen, namely Sana'a, Aden, Mukall, Seiyun, Taiz, Ibb and Hudaidah, for 2 reasons. First, these cities contain a large number of SMEs, where businesses thrive. Second, the authorities in Yemen did not provide detailed information about the other cities in the country.

The research was conducted during the period from 2014 to 2016. The data of the study was collected in 2016. It is worth to mention that the data of the study was collected during the period in which the country was suffering from a political crisis which is still ongoing until the current date.

1.9 Organization of the Study

This study is organized into six chapters. Chapter one presents a background of the study, problem statement, research questions, research objectives, significance of the study, scope and assumptions of the study. Chapter two provides a synopsis of the Yemeni tax system and its amendments and an overview of the SMEs in Yemen. Chapter three begins with the concept of tax non-compliance and reviews its literature. Further, this chapter presents the underpinning theories and the literature related to determinants of tax non-compliance in Yemen.

Chapter four started with the research framework and the hypotheses development. Research methodology and design were presented in this chapter. Moreover, operational definition and measurement of variables are described in this chapter.

Also, data collection procedures, including population, sampling and design of the questionnaire, are explained in the same chapter. Furthermore, the chapter briefly describes the process of Arabic translation of the questionnaire, and presents the pilot test result. In the fifth chapter, data analysis is described, including data screening, descriptive analysis, cross tabulation analysis, correlation analysis, factor analysis, multiple regression results and, finally, hypotheses testing and findings. The sixth chapter is designed to discuss the findings of the study and indicates its theoretical, methodological and practical implications. Finally, the sixth chapter highlights the limitations of the study and the recommendations for future researches.



CHAPTER TWO

INCOME TAX SYSTEM AND SMEs IN YEMEN

2.1 Introduction

This chapter presents an overview of income tax system and SMEs in Yemen. It starts by providing the history and development of the Yemeni income tax system since the unity of North and South Yemen. The laws and its modifications during the period from 1990 to 2010 are briefly presented in this chapter. The Income Tax Regulations (Law No. 17 of 2010) is considered to be the most recent amendment to the income tax law, and thus, it is explained with some details in this chapter followed by an explanation of Yemeni SMEs definition and classification.

2.2 History and Development of Yemeni Income Tax System¹

The Republic of Yemen was initially 2 countries prior to 1990, known as People's Democratic Republic of Yemen in the south and Yemen Arab Republic in the north. After the unification of the North and South Yemen in 1990, all laws and regulations, including tax laws, of the two halves have been combined and reformulated (Abu-Tabel, 1998). Therefore, many of the tax laws changes and reforms have taken place to keep pace with the economic, social and political developments in Yemen after unification.

In terms of governance, the national revenue is administrated under the Ministry of Finance by way of 4 departments, namely, Department of Tax, Customs and Zakat

¹ This section and subsequence sub-sections, regarding tax laws reforms and modifications, have been derived from various reports published by the Yemeni Tax Authority and available at the official website www.tax.gov.ye

Duties, Department of Exemptions, Department of Oil Revenues and Department of Other Revenues. Specifically, the Department of Tax, Customs and Zakat Duties administers 3 types of revenues, namely, (1) customs revenues, which include import and export taxes imposed on international transactions administrated by the Customs Authority, (2) Zakat revenues, which are considered religious obligations, and administrated by the General Directorate of Zakat Obligations. Although Zakat revenues are included in the Department of Tax, Customs and Zakat Duties, these revenues are distributed locally to the people entitled to Zakat fund [Asnaf]. And (3) tax revenues, covering both direct and indirect taxes, which are administrated by Tax Authority.

The Income Tax falls under the direct tax, while indirect tax includes 4 types, particularly (1) General Sales Tax [GST], (2) Consumption of Qat, which is agricultural produce and consumed extensively by the people in Yemen and some African countries, (3) Tobacco and Cigarettes, and (4) Petroleum Products. As the current study concentrates on the income tax, related key reforms and changes are explained below. Figure 2.1 shows the organizational structure of the revenues sector in Yemen.

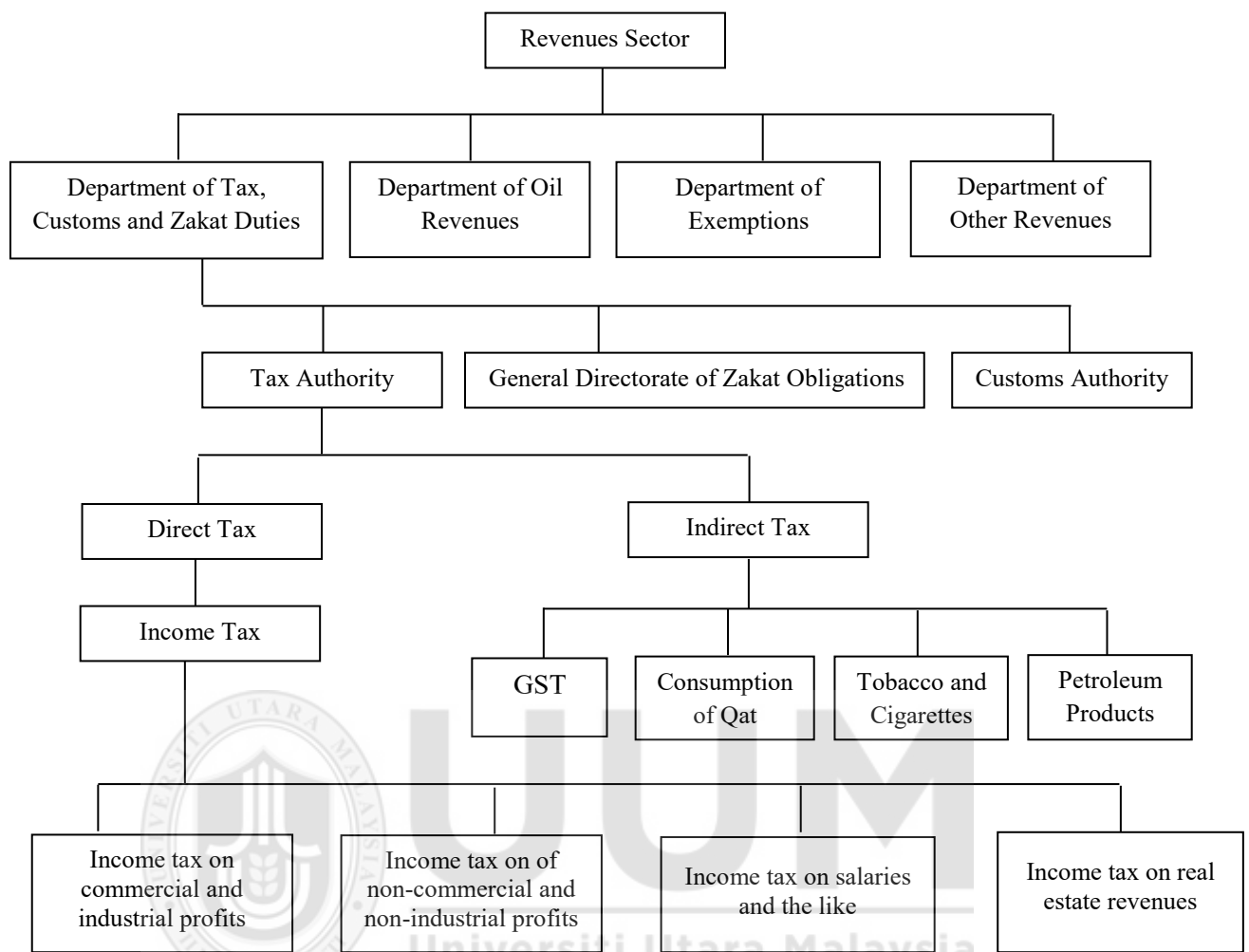


Figure 2.1
The structure of revenues sector in Yemen (Author's illustration)

Broadly, changes in tax system can be categorized into 4 phases. The first phase is re-establishment of the tax system during the period 1990- 1994, the second phase is the reforms of tax system during the period 1995-1997, the third phase is the reforms of tax system during the period 1998-1999 and the fourth phase is issuing the Income Tax Regulations (Law No. 17 of 2010).

The first phase was characterized by Yemeni unity that occurred in May 22, 1990 and the declaration of the Republic of Yemen. Generally, all laws have been re-legalized, including the Income Tax laws and many laws have been regulated and modified. In 1991, the Income Tax Regulation (Law No. 31) was legalized, with the most important features of this act being the unification of limited connectivity and collection of income taxes for various procedures. The law included the tax on dispositions and sales by 3% of the contract value. Also, the Act stated the adoption of the collection under the income tax expense, which made very significant progress in tax collection during this period and beyond, and the system has become a very important source of information for tax administration. Aside from this, the Act determined the categories to be taxed at the rate of 3% and 36% to stop the escalation in salaries and wages, and tax leased real estate tax rate at 16% and 22% for non-resident and for tax commercial and industrial profits respectively and 28% for individuals and 32% of the companies money and units of the economic sector.

The Income Tax Regulations (Law No. 164 of 1992) regarding Consular Fees was issued. This decision is concerned with the collected fees in the Yemeni diplomatic missions abroad and it gave exemption to the income of foreign ambassadors and consulates. In 1993, the Presidential Income Tax Decree (Law No. 29) was provided. This decree identifies the organizational structure of the tax authority, and the establishment of public administration of the income tax on companies and determines the range of competence in different types of corporations, bodies, public institutions, public sector and foreigners taxpayers, whatever their legal tendencies.

The second phase is regarding tax Reforms during the Period 1995-1997, which started by the proposal of an economic reform program by the government. This program aims to make adjustments during this period. Based on this program, some reforms related to the income tax were regulated. Particularly, the Personal Income Tax Regulation (Law No. 31 of 1991) was modified by the Presidential Decree (Law No. 3 of 1995), which authorized the lump-sum system. Also, the Income Tax Regulation (Law No. 13 of 1996) modified the income tax. Under this modification, the unification of the tax on the corporations and partnership companies ratio by 35% was established and tax rate on individuals at 28% was maintained.

The third phase of the changes in tax system is the tax reforms during the period 1998-1999. The main feature of this period is the political stability, which reflected the constancy of the financial and economic aspects of the country (Al-Rubaidi, 2004). Some important reforms in tax system took place during this period.

The Income Tax Regulation (Law No. 31 of 1991) was modified by the presidential Decree (Law No. 12 1999). Under this modification, a new restructuring of the tax calculation was applied, where taxes were increased to increase income of more than YR36,000, and the tax rate of salaries and wages was increased to 20% for residents and to 35% for non-residents. Also, this law determines a lump sum linkage system for individual business taxpayers, which relates does not apply taxpayers who do not hold regular accounts. Moreover, according to this law, number of income tax items were reformed, such as the development of the existing problems related to bad debts and provisions for technical insurance companies and other solutions, addressing the

existing problems and the unification of the rules concerning the allocation of the banks in exchange for bad debt and with the Central Bank Law, facilitating the scheduling process, selecting the depreciation percentage of fines, selecting the leased property tax by month's rent in a year, and selecting the ratio undergo in income taxes for all taxpayers by 35% for the various legal entities.

The fourth phase of changes in tax system is the Income Tax Regulation (Law No. 17 of 2010), which is to date, considered the most recent reform among the previous laws concerning income tax. All details of this act are explained in the next subsections.

2.3 The Income Tax Regulation (Law No. 17 of 2010)

This law is applicable to any resident in the Yemen, whether this resident is legal or natural person, and whether he gained his income inside or outside the country, and also, whether the income is gained by a legal or natural person inside the country, whether resident or non-resident. This act provided a clear division of the types of taxes, and explained them in a simple way. According to this act, the income tax is classified into 4 types, namely, income tax on commercial and industrial profits, income tax on of non-commercial and non-industrial professions, income tax on salaries and the like (payroll tax) and income tax on real estate revenues.

The first type of income tax is concerned with the taxable commercial and industrial profits, which is calculated on the basis of the revenues earned through all industrial, commercial and service operations of all types carried out by the taxpayers, including compensation and other revenues earned by the taxpayers as well as the profits

earned as a result of the liquidation conducted during the tax year, less all deductible expenses in accordance with the provision of the law. The net profit is determined on the basis of the income statement prepared in accordance with the accounting standards implemented in the Republic of Yemen.

The second type of income tax, relating to the taxable income of non-commercial and nonindustrial professions, is annually determined on the basis of the revenues recognized during the tax year. This revenue includes the income earned from non-commercial and nonindustrial professions, income generated through the use of the professional assets, or waiver of the place or offices of business in whole or part, and any other amounts resulting from the closure. The net revenue is calculated on the basis of the income generated from various operations in accordance with the provisions of the law, after deduction of all expenditures required to perform the profession.

The third type of income tax is the tax on the salaries, wages and other similar cash in kind benefits and advantages paid to the employee or worker, whether on the basis of an employment contract or not, whatsoever it is titled, way or causes of the paid amounts, and whether paid to employee or worker in consideration of the work performed whether inside or outside Yemen as long as the source of the payment is the republic. Also, all payments received by the taxpayer from foreign source in consideration of services performed inside Yemen are subjected to the income tax. Also, any salaries, bonuses and allowances paid to the chairman or members of boards and managers of capital companies and any amounts paid to any person other

than stakeholders in the units of the public and mixed sector are subjected to the income tax as well.

The fourth type of income tax is the tax related to real estate revenues. An annual tax is imposed on the revenues of real estate whatever the kind of revenues, whether the estate is ready, moveable buildings, and whether the land is vacant or rented for different purposes. Taxpayer here is the landlord of property, or owner of the right of use to the property and the legal representative of the taxpayer is legally responsible for resolution of the tax on behalf of taxpayer.

Lastly, it is worth highlighting that the Income Tax Act Regulation (Law No. 17 of 2010) and its modifications is still applicable until now since the government has not made any tax decisions related to income tax since 2010 to the present time. The next subsections discuss relevant key features of the current income tax law in details.

2.3.1 Income Tax Rates

The Income Tax Regulation (Law No. 17 of 2010) determines the tax rate, which are the bases of the collected tax from the resident natural persons on the annual earnings subject to the industrial and commercial profits tax, non-industrial and non-commercial professions tax, salary, wages and the like.

Furthermore, the act suggested that the enterprise that does not meet the criteria of SMEs definition is given an exemption from paying any tax. Also, SMEs are granted a grace from paying taxes for a period of 5 years from the date of the beginning of the business. However, SMEs are required to keep books and records in accordance

with the "Generally Acceptable Accounting Practices (GAAP)", prepare sufficient documents and records to determine the revenues of the business for tax purpose and submit tax return. The income tax due is calculated based on the tax base determined in accordance with the provisions of Income Tax at 20% of the annual income without giving any exemptions, except for the special agreement with the government, which is taxable at 35%, the cell phone service and networking operation taxable at 50%, and the international telecommunications services and production taxable at 35%.

Concerning the tax rates of salary, wages and the like, the Yemen Income Tax system did not take into account any social considerations such as, marital status of the individual and the number of family members. However, YR12,000 is given as an annual exemption limit to this type of income. The next YR120,000 is taxed at 10%, and any amount exceeding YR240,000 is taxed at 15%. As for the payroll of the irregular payments, it is taxed at 15%. Regarding the salary and wages of non-resident person, they are taxed at 20% without any exemption. Finally, income from real estate is taxed at the rate equivalent to one month income from real estate source, or approximately 8.33%.

2.3.2 Penalties

A delay penalty at 2% of the payable tax is administered for each month or a part thereof, on a taxpayer that delays the return submission until after the deadline. However, if the return is submitted after deadline showed that the transactions resulted in a loss, a penalty for the delay of submitting the tax return on time is applied at amount of YR5 million on the bank and financial institutions of various

types and names, petroleum, gas and mining companies, the companies having contracts with the government to provide telecommunication services, and those working in the field of international communication services and satellite channels. The other taxpayers other than those mentioned above, a delay penalty at an amount of YR1 million is applied. Concerning the medium taxpayers, a delay penalty amount of YR200,000 is applied.

In incomplete tax return, penalties are imposed on taxpayer in proportion to the rate and amount of the difference in the field tax return, which becomes payable. Specifically, 20% of the tax payable on the amount is not included if it is equal to 10% - 20% of the legally due tax, 50% of the tax payable on the amount is not included, if it is equal to more than 20% to 50% of the legally due tax and 100% of the tax payable on the amount is not included, if it is equal to more than 50% of the legally due tax.

In case the taxpayer fails to maintain regular accounting records, a penalty of 100% of the assessed tax is imposed. This penalty will be doubled in case of further non-compliance.

2.3.3 Self-assessment System

In 2004, Yemen introduced the Self-Assessment System (SAS) to be applicable to all taxpayers. Under SAS, taxpayers are required by law to determine their taxable incomes, compute their tax liabilities and submit their tax returns. Naturally, SAS is not easy to be fully implemented. Aljamaree and Algaylee (2007) pointed out that there are some difficulties preventing the full application of this system, with one of them being the large segment of taxpayers' unawareness and inability to estimate

their tax due. However, tax authority has started applying the SAS gradually in the last few years (Al- Batly, 2014).

2.3.4 Zakat Payment and Tax

In Yemen, both tax authority and Zakat authority are governed by a single department under the Ministry of Finance. However, both authorities are completely separated from each other as 2 separate authorities. The tax authority has different laws from Zakat authority and therefore, there is no direct administrative link between them. Accordingly, each authority collect amounts due from citizens quite individually from the other one, and so, there is no financial overlap between them. Hence, the tax authority collects full taxes from taxpayers, regardless of whether the taxpayer has paid or has not paid Zakat, and regardless of whether the amount of Zakat higher or lower than the amount of tax collected.

In some countries, such as Malaysia, tax authority rebates the amount of Zakat paid from the amount of tax payable, so the citizens are required to pay only the balance (Khamis *et al.*, 2014). Contrastingly, in Yemen, the tax authority does not consider the payment of Zakat, as the citizens have to pay the full amount of tax as well. The government argued that tax may be used in the work, which is not included in specific individuals (Asnaf) mentioned in the Qur'an. In summary, it is apparent that citizens of Yemen are legally required to pay both income tax and Zakat due under the income tax law and Zakat law, respectively. From the conceptual view point, the Yemeni citizen can be considered as paying double tax for the same income. From the Islamic religious perspective, obligation to pay Zakat is compulsory if conditions are met. The current study takes into consideration the Islamic religious view of individuals on taxation, as it may influence their tax compliance behaviour.

2.4 Small and Medium Enterprises in Yemen

SMEs are important for Yemen's economy, because such enterprises constitute about 99.6% of all businesses in the country, employing more than 485,000 workers equal to 11.9% of the Yemeni workforce (MOPIC, 2004). In addition, SMEs contribute in national economy by 69% in 2005, which evidences the importance of SMEs in Yemen (Alasrag & Hussien, 2010). The rapid growth of SMEs in Yemen gives a good indication of the expansion of commercial and industrial activities in the country, which will result, if exploited properly, to an increase in the GDP of the country and thus, eliminating many of the economic problems affecting the country. Table 2.1 shows the growing of SMEs in Yemen during the period from 1996 to 2010¹.

Table 2.1
Number of SMEs in Yemen 1996 – 2010

Year	Small enterprises	Medium enterprises	Total
1996	31,353	1,296	32,649
1997	31,487	1,277	32,764
1998	31,432	1,272	32,704
1999	32,056	1,295	33,351
2000	32,285	1,304	33,589
2001	32,480	1,323	33,803
2002	32,480	1,323	33,803
2003	34,383	2,661	37,044
2004	37,334	3,686	41,020
2005	38,112	3,954	42,066
2006	39,120	4,214	43,334
2007	40,198	4,277	44,475
2008	40,733	4,583	45,316
2009	40,519	4,575	45,094
2010	40,600	4,883	45,483

Source: Central Organization of Statistics (2013); National Information System (2012); Ministry of Industry and Trade (2011)

¹ This statistic is the most updated information that was taken from the annual reports of COS, NIS and MIT available at the websites. However, it is believed that the statistics of 2010 is the most valid information, because Yemen is one of the Arab Spring countries, wherein the revolution and political instability started at the beginning of 2011 until the current times. Therefore, the country is not expected to have established many SMEs during the period from 2010 up to the current date.

SMEs in Yemen are distributed in all the country's governorates. However, there are a number of cities, which contain the largest number of these enterprises (Al-Ahmadi, 2011). Sana'a, Aden, Taiz, Mukalla, Seiyun, Ibb and Hodeidah are considered to be the largest Yemeni cities, and the most active cities in terms of business and trade. Therefore, most of SMEs in Yemen are established in these cities (MIT, 2011). Table 2.2 shows the distribution of SMEs among the largest Yemeni cities.

Table 2.2
Distribution of SMEs among Yemeni cities in 2010

Governorates	Number	Percentage
Sana'a	11,371	25.0%
Aden	6,095	13.4%
Taiz	4,776	10.5%
Mukalla	3,548	7.8%
Hodeidah	3,548	7.8%
Ibb	3,457	7.6%
Seiyun	2,865	6.3%
Other Yemeni cities*	9,824	21.6%

Source: Ministry of Industry and Trade (2011)

* The report did not provide specific percentages by each city.

The table above shows that 78.4% of SMEs in Yemen are located in the largest seven cities, while only 21.6% of these enterprises are distributed in nearly 20 cities. Thus, this distribution of SMEs was considered in selecting the sample of this study.

The importance of SMEs, together with geographical distribution of SMEs in Yemen is highlighted above. The next 2 subsections provide the definition and classification of SMEs in Yemen.

2.4.1 Definition of Small and Medium Enterprises

Defining small and medium enterprises (SMEs) has always posed as a thorny problem facing researchers in the business field. It differs from country to country, region to region and there as such, no universal definition exists (Mwangi, 2014). The difference between the big companies and SMEs not only in terms of the number of staff, but there are several other considerations such as capital, turnover and technology. In this regard, the Arab countries vary from country to another in their definitions of SMEs. However, most Arab countries use the number of staff and capital as the basis to defining SMEs. Generally SMEs in developing countries have no more than 250 employees. Broadly, SMEs are similar in a large number of points, which are characterized by the numerous characteristics that distinguish them from other sectors. For example, SME has always been described by the manager who very often is also the owner, as simple businesses that can react quickly to changes in the environment. However, countries hold different features as the bases of their definition according to the local rules and laws of each country (Emine, 2012).

Yemen is one of the least developing countries in the Middle East region with more than 42% of its population living under poverty line - an average of USD45 per month. It is one of the poorest Arab countries and one of the least developing countries in the world, wherein it had been ranked as 149 out of 171 in terms of human resource development. Furthermore, it has a high unemployment rate that reached 35% in 2008 (Al-Swidi & Mahmood, 2011). Hanefah *et al.* (2002) explained that several governments see SMEs as the means to create more employment opportunities. So the number of staff was, essentially, taken into consideration in defining the SMEs.

SMEs play significant role in the economy in all countries by providing job opportunities and supplying for large organizations (MPIC, 2004). Based on the survey of the Ministry of Industry and Trade MIT (2011), the SMEs in Yemen are seen as one of the recommended solutions for many economic problems related to the increasing unemployment rate and one of the means of poverty reduction efforts. In this regard, the human factor in Yemen is of great importance in the commercial and industrial work performance and consequently, SMEs have been defined in Yemen based on the number of employees (MPIC, 2004).

According to the Ministry of Planning and International Cooperation (2004), the enterprise, which employs from 1 to 4 workers and has a capital less than YR1.5 million (about USD6,700) is considered as a small enterprise, while a medium enterprise is define as the enterprise, which have 5 to 9 employees and its capital falls between YR1.5 million to YR20 million (about USD93,000) (MPIC, 2004; Tax Authority, 2011). In other words, SME is defined as a business that employs 1 to 9 workers, with a capital of less than YR20 million. For comparative purposes, Table 2.3 shows the definition of SMEs in selected Arab countries.

Table: 2.3

Definition of SMEs in selected Arab Countries

Country	Small \ Medium enterprises	Staff headcount	Other creteria
Yemen	Small enterprise	1 to 4	Capital: Less than 1,500,000 Yemeni Rial
	Medium enterprise	5 to 9	Capital: From 1.5 million to 20 million Yemeni Rial
Jordan	Small enterprise	10 to 49	Capital: Less than 30,000 Jordanian Dinar
	Medium enterprise	50 to 249	Capital: More than 30,000 Jordanian Dinar
Sudan	Small enterprise	Less than 10	Capital: Less than 2 million Sudanese Dinar
	Medium enterprise	11 to 20	Capital: More than 2 million Sudanese Dinar
Oman	Small enterprise	1 to 10	Capital: Less than 50,000 Omani Rials
	Medium entrprise	11 to 100	Capital: From 50,000 to 100,000 Omani Rials
Egypt	Small and Medium enterprise	Less than 50	Capital: From 50,000 to 100,000 Egyption Pound
Saudi Arabia	Small enterprise	1 to 20	Capital: Less than 20 million Saudi Rials
	Medium enterprise	21 to 100	Capital: More than 20 million Saudi Rials
Kuwait	Small enterprise	1 to 10	Capital: Less than 200,000 Kuwaiti Dinars
	Medium enterprise	11 to 50	Capital: More than 200,000 Kuwaiti Dinars
Bahrain	Small enterprise	5 to 19	Capital: Less than 500,000 Bahraini Dinar
	Medium enterprise	20 to 100	Capital: From 500,000 to 3 million Bahraini Dinar
Iraq	Small enterprise	1 to 9	Capital: Less than 100,000 Iraqi Dinars
	Medium enterprise	10 to 29	Capital: More than 100,000 Iraqi Dinars
Emirates	Small enterprise	Less than 100	Annual turnover: Less than 50 million Emirati Dinars
	Medium enterprise	101 to 250	Annual turnover: Less than 250 million Emirati Dinars
Qatar	Small enterprise	6 to 50	Annual turnover: Less than 20 million Qatari Rials
	Medium enterprise	51 to 250	Annual turnover: Less than 100 million Qatari Rials

Source: Hamzah & Mustafa (2012); updated by the author.

2.4.2 Classification of Small and Medium Enterprises

Ministry of Industry and Trade (2011) classified SMEs according to its area of competence into 7 groups namely, (1) farmer, (2) retail trade, (3) wholesales trade, (4) industry sector, (5) service sector, (6) livestock and (7) others. A survey was conducted in 2010 to determine the proportion of operating enterprises in each competence. The survey results are shown in Table 2.4.

Table 2.4
SMEs sectors in Yemen in 2010

Sector	Number	Percentage
Farmer	7,277	16%
Retail trade	10,461	23%
Wholesales trade	7,732	17%
Industry sector	6,368	14%
Service sector	5,458	12%
Livestock	5,458	12%
Others	2,729	6%
Total	45,483	100%

Source: Ministry of Industry and Trade (2011)

2.5 Summary

In this chapter, the income tax system in Yemen was discussed. The history and re-establishment of the income tax system since 1990 to the current date was explained in brief. More details of the recent income tax law were also presented. Also, the chapter provided information about SMEs in Yemen, specifically in terms of growth, definition, and classifications of SMEs in Yemen.

CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

This chapter provides the literature review of tax non-compliance and presents the relevant factors investigated. The chapter starts by defining the concept of tax compliance and non-compliance, along with tax payers' behaviour and the reasons behind non-compliance. Moreover, underpinning theory and supporting theories employed in the current study are presented, and the relevant studies related to the independent variables and the moderator variable, are reviewed.

3.2 Concepts of Tax Compliance and Tax Non-compliance

The meaning of tax compliance and non-compliance has been defined in various ways (Kuria, Ngumi & Rugami, 2013). Jackson and Milliron (1986) defined tax compliance as reporting of tax liability to the relevant authority in compliance with applicable tax laws, regulation and court. Others defined tax compliance as behaviour of complying with tax laws, regulations and court decisions applicable by paying taxes at the right time (Roth, John & Witte, 1989; Abdul-Jabbar & Pope, 2008; Mohdali, 2013). Kirchler (2007) offered a simple definition in which tax compliance is defined as the most neutral idiom to describe taxpayers' willingness to pay their taxes. Another simple definition described tax compliance as the degree to which taxpayers comply with tax law and administration, which can be achieved without actual application of enforcement action (Andreoni, Erard & Feinstein, 1998).

Legally, tax non-compliance could be defined simply as an illegal behaviour done by taxpayers to defeat or reduce the payment of tax. Thus, it falls outside of the law and is considered a 'white-collar crime' or as a form of criminal behaviour (Al-rubaidi, 2004). Quadri (2010) defined tax non-compliance based on the concept of "tax gap". Therefore, tax non-compliance is the difference between the actual collected tax and the amount that would be collected if there is 100% compliance.

Furthermore, some authorities provided a clear definition of tax compliance. Internal Revenue Service (IRS), Australian Taxation Office (ATO) and Institutional Review Board (IRB) defined tax compliance as the ability and willingness of taxpayers to comply with tax laws, declare the correct income in each year and pay the right amount of taxes on time.

A number of researchers have pointed out that compliance is possible to have varying categories. Specifically, McBarnett (2006) related that compliance is of three types: committed compliance, capitulative compliance and creative compliance. Committed compliance is the willingness to release tax obligations by the taxpayer with no upset, while capitulative compliance is the reluctance in the discharging of tax obligations by the taxpayer, and finally creative compliance refers to any act by the taxpayer aimed at reducing taxes by redefining income and deductible expenditure within the confines of the law. This division has been tacitly supported by Kirchler (2007), who argued that since the degree of compliance varies, then certain non-compliance might not break the law.

By defining "tax avoidance" and comparing it with "creative compliance", the large extent of similarity between both of them is clearly illustrated. Tax avoidance could be described as the legal use of the tax rule to one's own advantage, in order to reduce the amount of tax within the law. In other words, tax avoidance is considered a moral escaping of one's duties to society, or alternatively the right of every citizen to structure one's affairs in a manner allowed by law, to pay no more tax than which is required (Manaf, 2004).

On the other hand, non-compliance is explained as failure to meet tax obligations. Khan and Ahmad (2014) stated that non-compliance is a process in which a taxpayer does not pay tax to the tax authorities. It can be described by other terms such as tax evasion, cheating, errors and misreporting (Abdul-Jabbar & Pope, 2008). Alabede (2012) explained the primary difference between tax evasion and tax non-compliance. He explained that evasion refers to an intentional act, while non-compliance includes both intentional and unintentional acts. Furthermore, he indicated the basic difference between intentional and unintentional non-compliance. He further pointed out that intentional non-compliance occurs when a taxpayer deliberately undermines the tax rules and regulations for his personal gain, while unintentional non-compliance occurs as a result of ignorance, oversight or mistake in the application of tax laws. However, other authors did not concern themselves whether non-compliance is intentional or unintentional (e.g., Abdul-Jabbar & Pope, 2008; Kirchler & Wahl, 2010). They defended their idea by arguing that the action of non-compliance, whether the taxpayer made an honest mistake or intentional omission, leads to the same result.

In summary, it could be stated that tax compliance and tax non-compliance are antonymous terms and thus, understanding any of them leads to understanding the other.

3.3 Taxpayers' Behaviour

Tax non-compliance of the whole country is a result of the behaviour of taxpayers, and therefore, it is very important to deal with taxpayers to resolve the issue. There are different levels of compliance by taxpayers, with some more cooperative than others (Torgler, 2003).

Kelman (1965), as cited in Torgler (2003), suggested that taxpayers are classified according to reasons behind complying with tax policies. He indicated three classifications:

- (1) Identifiers: where the taxpayers are influenced socially by the beliefs and behaviours of related people.
- (2) Compliers: where taxpayers pay their tax in compliance with the provision of law to avoid any punishment.
- (3) Internalizer: where the taxpayers keep their behaviour in accordance with tax requirements.

Torgler (2003) extended this classification into four clearer categories:

- (1) Tax evader: this category of taxpayers is less morale. Their decision to comply or not is based only on the expected cost and benefit.
- (2) Social taxpayer: this category of taxpayers is influenced by the environment. They follow the people related or closer to them. They will stop paying tax if they

observe that others do not pay. They argue that it is unfair when some people comply, while others do not comply.

(3) Intrinsic taxpayer: this category of taxpayers is influenced by internal factors, such as feeling of moral obligation rather than external factors such as punishment. In other words, the taxpayers respond emotionally to changes in the institutional factors such as, the behaviour of the government and tax authorities towards the taxpayers.

(4) Honest taxpayer: this category of taxpayers is against non-compliance, and consequently they comply with tax regulations in any way. The behaviour of these taxpayers is not influenced by any factors such as, tax rate, punishment, tax policies, among others. They are influenced only by absolute rather than marginal evaluation of tax policy.

Generally, the behaviour of taxpayers is expected in any level of compliance based on the factors that may have an influence. Therefore, the current study offers a framework to provide more understanding of the influence of the direct and moderating effect of Islamic religious perspective as well as the effect of geopolitical differences, tax service quality, public governance quality and tax system structure on the phenomenon of tax non-compliance.

3.4 Reasons for Non-compliance

Many reasons have been evidenced behind the behaviour of non-compliance of tax. Agbadi (2011) summarized these reasons in two approaches to explain the issue. One is to analyze the psychological and sociological motivations of compliance or otherwise. The other approach is to investigate compliance in terms of economic

decisions based on the likely economic incentives and costs of complying. These two approaches go along with the underpinning theories in the current study.

Supporters of psychological and sociological approach contended that tax non-compliance may be affected by several factors such as social influence, attitudes, certain background characteristics such as age, gender, race and culture (Meyer & Johnson, 1977). They argued that taxpayers are not simply independent, selfish and benefit maximizers, but their communication with other human beings is according to attitudes, beliefs, rules and roles. They identified that tax non-compliance is behavioural problem and consequently, the success of tax compliance is based on cooperation.

Economically, people concentrate on the benefits of tax non-compliance in opposition to the risks of doing so. Normally, taxpayers wish to maximize their wealth and will therefore refuse to comply with the tax system unless the benefits of compliance exceed the cost of non-compliance. This approach assumes that taxpayers are immoral and operate in some sort of social vacuum (Stanley, 2013). However, the economic approach to explaining tax compliance has some limitations. The definition of compliance, based on this approach, is not applicable with all taxpayers, since there is empirical evidence that many people are naturally honest and will disclose their financial affairs accurately regardless of the incentive to cheat (Smith & Kinsey, 1987). Notwithstanding these limitations, this approach is still relevant as it is considered to be a rational explanation of the influence of financial consideration on taxpayers' behaviour.

Some other reasons for tax non-compliance have also been found such as, professionalism of the tax administration, taxpayers awareness, complexity of the tax system. However, all these reasons are possible to be included either in the economic approach, psychological and sociological approach (Agbadi, 2011). Therefore, the current study focused on economic approach, psychological and sociological approach as explained in the following section.

3.5 Underpinning Theory and Supporting Theories

Tax compliance and non-compliance studies are multi-disciplined in nature, and thus, accountants, sociologists, psychologists and economists are all interested in studying tax compliance and non-compliance. Scholars have concluded that many factors influence tax compliance, so no single theory can entirely explain the phenomenon of tax non-compliance behaviour. Accordingly, it has been suggested that theories from sociology, psychology and economics could also be useful in explaining tax compliance behaviour (Alm, 1991, 1999; Jackson & Milliron, 1986).

In this regard, the literature showed that many studies have drawn from more than one theory and approach. For example: (1) the study of Sternburg (1993) was underpinned by deterrence theory and supported by social influence theory, (2) the study of Manaf (2004) was underpinned by deterrence theory supported by attitude theory, equity theory and cognitive theory, (3) the study of Saad (2011) was underpinned by equity theory and supported by distributive justice theory, procedure justice theory, theory of reasoned action and theory of planned behaviour, (4) the study of Alabede (2012) was underpinned by deterrence theory and supported by

prospect theory, cognitive theory, social exchange theory and social influence theory, and (5) the study of Mohdali (2013) was underpinned by deterrence theory and supported by social psychological approach and fiscal psychological approach.

In the same line, the current study integrated theories from these two theoretical approaches, specifically, social psychological approach and economic approach in order to clarify the rationality of the social psychological and economic factors influencing non-compliance behaviour. Particularly, the present study is underpinned by social influence theory, and supported by social exchange theory and deterrence theory as explained in the following sub-sections.

3.5.1 Social Influence Theory

Social influence theory is the main theory employed in the current study. It refers to the individual's attitudes, emotions and opinions towards the behaviour (Sussman & Gifford, 2013). Davis, Bagozzi and Warshaw (1989) pointed out that the impact of social influence theory on the behaviour is needed to be investigated, and proposed that further research can use this theory as the theoretical base.

The current study is mainly based on the Islamic perspective as a religious attitude towards tax and tax non-compliance, thus, this theory gives rational explanation on the relationship between Islamic religious perspectives with tax non-compliance behaviour. The social influence theory was proposed by Kelman (1958) and improved by Kelman (1974) and Bandura (1977). Also, this theory is related with social learning theory, which is attributed to Bandura's (1977) idea that the person is affected by the surrounding environment. In other words, the theory of social influence claims that the individual's behaviour is intentionally or unintentionally

influenced by attitudes which influenced by the environment, and such behaviour is explained by the relationship of the continuous common interaction between cognitive and behavioural environmental influences. Moreover, the outcomes of the behaviour play a significant role in influencing the attitudes of people (Bandura, 1977). Crisp and Turner (2007) suggested that social influence is concerned with how our thoughts, feelings and behaviour change when in the presence of others.

Moreover, Kelman (1958) identified three varieties of social influence:

- 1) Compliance is when people appear to agree with others, but actually keep their dissenting opinions private;
- 2) Identification is when people are influenced by someone who is liked and respected, such as a famous celebrity and;
- 3) Internalization is when people accept a belief or behaviour and agrees both publicly and privately.

Meanwhile, Deutsch and Gerard (1955) explained the interaction between social aspect and psychological aspect. They described two psychological needs that lead people to follow others' behaviour in the society. These include the need to be right (informational social influence) and the need to be liked (normative social influence).

In connection with tax non-compliance, Jackson and Milliron (1986) included social influence in the fourteen key variables of tax compliance. Similarly, Sutinen and Kuperan (1999) explained that social influence theory identified peers' opinions and the extent of social influence an individual's encounters in socialization as the key variables determining non-compliance.

Social influence is a broad term that relates to many different phenomena. It is linked to conformity, obedience and compliance. Conformity is a type of social influence involving a change in behaviour, belief or thinking to align with those of others or to align with normative standards. It is the most common and pervasive form of social influence (Aronson, Akert & Wilson, 2010). Obedience is a form of social influence that is derived from an authority figure. According to Frager (1970), it is evidenced that humans behave surprisingly obedient in the presence of perceived legitimate authority figures.

As for compliance, it is influenced by the power that individuals are perceived to have at their disposal. Power, in this case, is regarded as the capacity or ability of an individual or institution to exert influence, and influence is power in action (Hogg & Vaughan, 2005). French and Raven (1959) identified five bases of social power, which were later extended to six by Raven (1993). The six bases of social power include reward power, coercive power, informative power, expert power, legitimate power and referent power. The first base is reward power, which is the provision of the incentive for compliance. Manaf (2004) used the reward power to explain the relationship between incentive and tax compliance. Manaf concluded that positive incentive has significant relationship with compliance attitude of land taxpayers in Malaysia.

The second base is the coercive power, which suggests the use of the threat of punishment to motivate compliance. The third base is information power - it influences people to comply through the availability of information through tax

knowledge, which may encourage people to comply with tax payment. The fourth is expert power, which is the capacity of experts, with their knowledge, to motivate compliance. The tax authority may provide services that will help to address an individual's tax problem, which may motivate the individual to comply with the law. The fifth base is legitimate power on authority and the recognition accorded to the body to which the compliance is to be performed, as the legitimacy of the tax authority may influence the compliance. Referent power is the sixth base which may operate through a number of processes including consensual validation, social approval and group identification. Example of group identification is religion, which is tested in the current study as the main variable, and explained by the theory of social influence.

The attitude of an individual is inserted under the social theories. In other words, social theories are concerned with the ways attitudes are acquired rather than the relationship with behaviour (Myres, 2005). Oskamp (1991) stated that attitude is the cause of an individual's behaviour. Additionally, Fishbein's (1963) theory stated that a person's attitude towards any object is the function of his beliefs about the object and the implicit evaluative response associated with those beliefs. Other theories that emphasize attitude-behaviour are the Theory of Reasoned Action (TRA), credited to Fishbein and Ajzen (1975), and the Theory of Planned Behaviour (TPB) of Ajzen (1991), which was derived from the Theory of Reasoned Action. Under TPB, behaviour is the result of intention. However, the current study preferred social influence theory rather than TPB, because social influence is more flexible than TPB, since social influence theory is possible to accommodate factors, which cannot be absorbed in TPB (e.g., geopolitical differences).

With respect to taxation, the taxpayer's attitude towards payment of tax or towards the authority, which is collecting tax, is the function of his belief and attitudes. If he has a positive belief and attitudes, he may in turn have positive attitude towards tax payment, and thus, will have positive behaviour. The theories of attitude have been applied in a number of studies of tax compliance, including the studies of Song and Yarbrough (1978), Bobek (1997), Bobek and Hatified (2003), Manaf (2004) and Bidin, Idris and Faridahwati (2009).

3.5.2 Social Exchange Theory

Social exchange theory was established by Homan in 1958. Additional improvements of the theory were provided by Blau (1964). This theory explains social change and stability as a process of converted exchanges between parties. It is used to analyze the social interaction of the people (Witt, 2011). Social exchange theory suggests that human relationships are formed by the use of a subjective cost benefit analysis and the comparison of alternatives. Blau (1964) indicated that the process of social exchange theory is the essential social model of reciprocity. It structures many of the main assumptions of rational choice theory. Furthermore, social exchange theory suggests that social behaviour is a consequence of an exchange practice. The purpose of this exchange is to maximize benefits and minimize costs. According to this theory, people consider the likely benefits and risks of social relationships.

There are several assumptions for the social exchange theory as provided by Cropanzano and Mitchell (2005);

- 1) People who are involved in interaction are reasonably seeking to maximize their wealth.
- 2) Most benefits among humans are located in others.
- 3) People have right of entry to information about economic, social, and emotional phases of interaction that lets them to consider options.
- 4) People are balanced and calculate the best possible means to enter in rewarding situations.
- 5) People are goal oriented in a freely competitive system.
- 6) Social credit is preferable to social indebtedness.
- 7) The more deprived the individual feels in terms of an act, the more the person will assign value to it.

Furthermore, Homans (1958) outlined the theory in three propositions, which are as follows:

- 1) Success proposition: when people know that there is a reward for good performance of their work, they will repeat the action. In relation to tax, when taxpayers know that they will get benefits, they will repeat their action by paying taxes.
- 2) Stimulus proposition: The more often a certain motivation has led to a reward in the past, the more probable it is that a person will respond to it. Therefore, if taxpayers received benefits from paying tax in the past, they will respond by complying with tax laws.
- 3) The value proposition: The more valuable to an individual the result of taking an action, the more likely they are to take the action. Consequently, taxpayers

will comply with tax obligations if the quality of benefits they received is high.

These propositions have been confirmed by Wallace and Wolf (1999), who stated that the theory shows that people will repeat an action that is rewarding, respond to stimuli that have connection with such rewards and performance on the basis of the values given to the act.

The theory supposes that any possible relationship between two parties is based on mutual benefit, and therefore, this theory can be applied to tax non-compliance. Taxpayers will comply if they find that there is a value corresponding with what they have paid. In other words, citizens expect to receive benefit from the government, so, if they don't find, they are expected to evade their duties towards the government.

The theory of social exchange is used in the current study to provide more interpretation of tax non-compliance behaviour and how it is affected by the surroundings in the society within which the behaviour is performed. Consequently, this theory can be used to explain the relationship between public governance quality with tax compliance. In the concept of "give and take" which has been provided by this theory, taxpayers will pay their tax if the government has a high quality of governance, and submit high quality of service. Normally, some empirical studies applied this theory on tax non-compliance such as Alm, Jackson and McKee (1992) and Alabede (2012).

3.5.3 Deterrence Theory

The behaviour of human is to always act rationally by comparing costs and benefits of any activity (Alm, 1999; Allingham & Sandmo; Becker 1968; Brooks, 1998). Hence, the economic approach considers the behaviour of tax non-compliance from this viewpoint. Deterrence theory is the economic theory supporting this study.

Deterrence theory was proposed by Becker in 1968 and was applied in taxpayers' compliance behaviour by Allingham and Sandmo (1972). They stated that the decision of taxpayers to evade or not to evade taxes is a rational choice in regards of risk and uncertainty. The decision is made by examining the expected cost and benefit. Hamm (1995) specified that under deterrence theory, the compliance decision of taxpayers depends on four factors: tax rate, income of the taxpayer, possibility of audit, and punishment.

According to this theory, people do not commit crimes because they are afraid of getting caught, instead of being motivated by some deep ethical sense. Consequently, they are most likely to be deterred from committing a crime if the punishment is fast, certain and strict (Becker, 1968). Deterrence theory gained a high position as a military strategy during the Cold War with regards to the use of nuclear weapons. It accomplished an exceptional implication during this time by virtue of its extreme critical power that could deter a more powerful adversary, provided that this force could be protected against destruction by an amazement attack (Braithwaite, 1999).

Similarly, Hamm (1995) said that people choose to follow or violate the law after calculating the gains and costs of their actions. However, it is difficult to ascertain

the effectiveness of deterrence since only those criminals not deterred come to the notice of law enforcement. Hanefah (2007) argued that the principle of the theory is that if the probability of detection is high and/or punishment of the criminal is high then this would deter individuals from committing crimes.

According to the literature, deterrence can be divided into three types: general deterrence, specific deterrence and marginal deterrence. General deterrence is planned to prevent crime in the general population, and thus, punishment of offenders serves as an example for others in the general population who has not contributed in criminal events. It is meant to make them aware of the horrors of official sanctions in order to put them off committing crimes. In other words, the focus is on the general prevention of crime by creating examples of offenders. The individual performer is not the focus of the attempt at behavioural change, but rather receives punishment in public view in order to deter other individuals from defiance in the upcoming times.

As for specific deterrence, it is designed by the nature of the prohibited sanctions in order to deter the individual offender from committing any crime in the future. The focus is on the individual to discourage the criminal from future criminal acts by creating an awareness of the consequences (Jackson & Milliron, 1986).

In regard to marginal deterrence, it is proposed to deter criminals to limit their criminal acts. It states that a more severe crime should be punished more severely than a lesser crime and that a sequence of crimes should be punished more strictly than a single crime of the same kind (Nagin, 1998). However, Jackson and Milliron

(1986) indicated that most studies on tax compliance behaviour used general deterrence.

Deterrence theory has been criticized by some researchers. They argued that the theory is based on three assumptions: people know what the penalties are for, people have good control of their actions, and people make choices about their behaviour based on logic, not desire. The critical argument is that in case of many crimes, these three assumptions are not accurate (Urusquieta *et al.*, 2013). Along a similar line of criticism, Zagrare (2004) stated that deterrence theory is logically inconsistent and not accurate.

However, this theory has been used by many researchers in the area of tax compliance and non-compliance such as Allingham and Sandmo (1972), Sternburg (1993), Hamm (1995), Hanefah (1996), Slemrod, Blumenthal and Christian (2001) and Manaf (2004). Thus, the theory is used in the current study to shed more light on the relationship between the tax system structure and tax non-compliance behaviour.

3.6 A Review of Tax Compliance and Non-compliance Studies

This section is divided into three sub-sections. The first one reviews the earlier studies related to tax compliance and non-compliance, which have been conducted during the period from 1990 to 2009. The second sub-section presents the recent studies throughout the period from 2010 to 2014. Finally, the third sub-section is related to the studies, which have been carried out to explain the issue of tax non-compliance in Yemen.

3.6.1 Earlier Studies of Tax Compliance and Non-compliance

Many studies conducted about tax compliance focused on the classic model of tax compliance, which views the phenomenon mainly from the economic perspective (Gupta & McGee, 2010), and to some extent the social (Jackson & Milliron, 1986; Fischer *et al.*, 1992) and legal (Klepper *et al.*, 1991) perspectives as well. Crowe (1944) as cited in Gupta & McGee (2010), proposed a comprehensive study of tax non-compliance. Crowe (1944) discovered three perceptions towards tax non-compliance: never ethical, always ethical or ethical under some circumstances. Moreover, there are some studies, during the last decades of the last century, conducted from the three religious perspectives: Muslims perspective, Christian perspective, and Jewish perspective (Ross & McGee, 2012). Although Muslims may have different views about tax non-compliance, Crowe (1944) considered the point of view of all Muslims as one viewpoint and conducted her study based on this single perception.

The reviews of Jackson and Milliron (1986) and Richardson and Sawyer (2001) are considered among the comprehensive studies on tax compliance and non-compliance. Jackson and Milliron (1986) summarized 14 variables that may influence tax non-compliance, namely: age, gender, education, income level, income source, occupation, peer influence, ethics, fairness, complexity, IRS contact, probability of being detected, penalties and tax rates. Richardson and Sawyer (2001) provided an extensive literature of more than 130 studies on tax compliance published during the period from 1985 to 1997. The two articles of Jackson and Milliron (1986) and Richardson and Sawyer (2001) presented the most important variables, methods, issues and theory of tax compliance (Abdul-Jabbar & Pope,

2008). However, both studies ignored some important religious or political variables. Fischer, Wartick and Mark (1992) classified the determinants of tax non-compliance into four categories namely, demographic, proxy for non-compliance opportunity, attitudinal and structural.

Further, the impact of demographic factors on tax non-compliance has attracted the attention of many researchers and hence, many studies were carried out to examine the relationship between demographic factors and tax non-compliance. To begin with, Manaf, Hasseldine and Hodges (2005) examined the determinants that may influence taxpayer compliance attitude. They focused their study in the case of Malaysia, and found that age, race, education, income, occupation, and ethics significantly influenced taxpayers' compliance attitude and understanding of tax law, whereas incentives significantly influenced compliance attitude.

Abdullhadi (2002) investigated the influence of demographic factors on tax non-compliance. He distributed his questionnaire among Malaysian university students. He found no significant differences in tax variables between gender, age, income level, profession and education. Similarly, Devos (2008) conducted a study in demographics comprising specifically of age, gender, ethnicity, education, occupation, income level, location and tax return filling experience. The findings support that the relationships between the majority of demographic variables with the attitudes of taxpayers towards tax non-compliance are statistically significant.

Moreover, McGee (2009) conducted a comparative study in Moldova and Romania to measure the attitude towards tax non-compliance. Questionnaire was utilized to

gather data from both countries. He found that age, gender and education have significant relationship with tax non-compliance. However, Romanians are significantly more opposed to cheating on taxes in all demographic categories than Moldovans.

In the Middle East region, McGee and Bose (2008) carried out a study to examine the perceptions of people in the region about tax non-compliance. They collected data through questionnaire and interview in Egypt, Iran and Jordan, to compare the result of the three countries. The findings of the study clearly showed that tax non-compliance does not draw much support from the people of Egypt, Iran and Jordan. However, women seem to be more opposed to tax non-compliance than do men, and older people tend to be more opposed to tax non-compliance than do younger people, although the differences in attitudes were not always statistically significant. People tend to become less averse to tax non-compliance as the level of education increases, but the change in attitude is not always statistically significant. Although the study was conducted in some Middle East countries, the authors neglected other countries in the region such as Yemen and Sudan, which are considered the top countries suffering the problem of tax non-compliance (Osborn, 2007).

In the context of Tanzania, Fjeldstad and Semboja (2001) conducted a survey to explore why Tanzanian people pay tax and why they evade paying tax. They found that income level, probability of deduction and public service are negatively related to tax non-compliance. Chan, Troutman and Bryan (2000) proposed an expanded model of taxpayer compliance and their analysis of the survey indicated that the classical factors, such as income level and morality, are not the direct determinants of

non-compliance. They argued that the cultural differences are the significant factors of the issue. Meanwhile, Aripin, Kasipillai and Amran (2003) discovered that although the relationship between education and tax non-compliance is sometimes positive and sometimes negative, it is in all cases a significant relationship. Also, McGee and Tyler (2006) concentrated on the ethical aspect of tax non-compliance. They conducted their study in 33 countries, from Europe, Central Asia, South America and North America, to investigate the influence of demographic factors on the issue. It was found that non-compliance is ethical if the collected tax winds up in the pocket of corrupt politicians, and if the tax system is unfair. However, no Middle East country was included in this study, although the problem of tax non-compliance is evidenced in the Middle East region (Aljaaidi *et al.*, 2011).

Other studies concentrated on the complexity and fairness of tax system. For instance, Hanefah (1996) expanded the model of Fischer, Wartick and Mark (1992) to examine the tax compliance behaviour of individual taxpayers in Malaysia. He focused on the perceptions of Malaysian individual taxpayers about income tax administration system, tax fairness and complexity of tax law. Perceptions of taxpayers were gathered through survey. The findings showed that generally, these factors have an influence on the perception of taxpayers, and thus, on their compliance behaviour.

A similar study was conducted by Richardson (2006) who focused on across investigation. The analysis of his survey concluded that non-economic determinants have the strongest impact in tax non-compliance, with complexity found as the most significant determinant of non-compliance. The lower the level of complexity and

the higher the level of general education, service income source, tax morale and fairness, the lower non-compliance was noted across the country. Forest and Sheffrin (2002) found that simplifying the tax system was no effective deterrent to tax non-compliance because tax payers did not necessarily consider the complex tax system to be unfair. Ramasamy, Thurasamy, Haron and Ang (2003) examined the influence of the extent of tax knowledge of small entrepreneurs, attitudes towards compliance by other taxpayers, attitudes towards the effectiveness of the Institutional Review Board (IRB) and the attitudes towards fairness of the tax system. The results were different, since attitudes towards compliance by other taxpayers and attitudes towards the effectiveness of the IRB have positive effect on the compliance behaviour, and no relationship was found between the influence of the extent of tax knowledge of small entrepreneurs and the attitudes towards fairness of the tax system with tax compliance behaviour.

Kamdar (1997) carried out a study in corporate income tax compliance. He found that profits and audit rate negatively influenced tax non-compliance. Therefore, he suggested that greater audit coverage may reduce tax non-compliance. Alm, Bahl and Murry (1990) conducted experimental study in the relationship between auditing selection and income tax underreporting and found the relationship to be positive. Fischers (1993) explained that the actual detection rate for some types of non-compliance is very low. He added that tax enforcement experiences, opportunity to evade taxes, use of adviser and exposure to media coverage of tax issue influence detection probability. Mills (1998) explained the adjustments of the Internal Revenue Service (IRS) on the book-tax differences. She defined the book-tax differences as

the differences between accounting income and taxable income and argued that these adjustments may lead to non-compliance.

In addition to the above studies, Tedds (2007) argued that the political instability and regulatory burden among other factors are the determinants of tax non-compliance. Torgler, Schaffner and Macintyre (2007) supported that quality of political institutions has a strong observable effect on tax morale and in turn, on tax compliance behaviour. Overall, politics is affected by the surrounding environment, whether geographical, ethnic or social (Lopata, 2003). Nevertheless, both studies focused on the political side, regardless of its interaction with other effects.

Bobek and Hatfield (2003) employed the theory of planned behaviour to explain the role of moral obligation in tax non-compliance. They used a survey method, and found that the higher level of moral obligation alone could not fully eliminate tax non-compliance. So, they concluded that ethical belief may improve compliance even with lower level of moral obligation. Also, Erad and Feinstein (1994) argued that tax non-compliance is not always possible to be explained classically. Moral sentiment is likely to have a key role in the behaviour of tax non-compliance.

Numerous studies have tested the influence of compliance costs on tax compliance issue. More specifically, Chattopadhyay and Gupta (2002) identified the compliance cost of the personal income tax and its determinants. They used questionnaire to collect data. The critical point of the current study was the response rate which is very low. However, they suggested many reforms to reduce the cost of tax compliance including, reforming administration institutions, procedures, automation

and overhauling the tax system. Meanwhile, Slemrod (1985) indicated a relationship between tax non-compliance and tax compliance cost. He also argued that tax complexity increases tax non-compliance. Yesegat (2009) investigated the determinants of tax non-compliance by focusing on Value Added Tax (VAT). She integrated tax compliance cost and tax behaviour of taxpayers, and employed both questionnaire and interview to collect data. Her findings showed that tax compliance cost has insignificant positive relationship with tax non-compliance.

Abdul-Jabbar and Pope (2008) tested the relationship between tax compliance costs and the issue of compliance in Malaysia. They found no relationship between compliance costs and the likely tax compliance behaviour. Similarly, Abdul-Jabbar (2009) investigated the influence of tax compliance costs on tax non-compliance behaviour in SMEs in Malaysia. He employed the postal survey questionnaire in collecting data, and found an insignificant relationship between tax compliance cost and non-compliance. He also found that tax complexity and probability of tax audit influence tax non-compliance.

A summary of the findings of the earlier studies, during the period from 1990 to 2009 in tax compliance and non-compliance are shown in Table 3.1 arranged in chronological order.

Table 3.1

Summary of earlier studies of tax compliance and non-compliance for the period 1990 - 2009

Author(s)	Year	Country	Key findings
Alm, Bahl & Murry	1990	Jamaica	<ul style="list-style-type: none"> The relationship between auditing selection and income tax under reporting is positive.
Fischers	1993	USA	<ul style="list-style-type: none"> Tax enforcement experiences, opportunity to evade taxes, use of adviser and exposure to media coverage of tax issue influence detection probability.
Hanefah	1996	Malaysia	<ul style="list-style-type: none"> Perceptions of Malaysian taxpayers about income tax administration system, tax fairness and complexity of tax law have an influence on the compliance behaviour.
Kamdar	1997	USA	<ul style="list-style-type: none"> Profits and audit rate negatively influence tax non-compliance.
Mills	1998	USA	<ul style="list-style-type: none"> The differences between accounting income and taxable income (book-tax differences) lead to high level of non-compliance.
Troutman & Bryan	2000	USA & Hong Kong	<ul style="list-style-type: none"> Cultural differences are significant determinants of tax non-compliance.
Fjeldstad & Semboja	2001	Tanzania	<ul style="list-style-type: none"> There is a negative relationship between income level, probability of deduction and public service with tax non-compliance.
Abdullhadi	2002	Malaysia	<ul style="list-style-type: none"> Negative relationship between perceived tax fairness and tax structure complexity. No significant differences in tax variables of gender, age, income level, profession and education.
Forest & Sheffrin	2002		<ul style="list-style-type: none"> Simplifying the tax system has no effective deterrent to tax non-compliance.
Chattopadhyay & Gupta	2002	India	<ul style="list-style-type: none"> Reforming administration institutions, procedures, automation and overhauling the tax system are very important to reduce tax non-compliance.
Aripin, Kasipillai & Amran	2003	Malaysia	<ul style="list-style-type: none"> The relationship between education and tax non-compliance is significant. However, it is positive in some cases and negative in other cases.
Thurasamy, Haron & Ang	2003	USA	<ul style="list-style-type: none"> Attitudes towards compliance by other taxpayers and attitudes towards the effectiveness of the IRB have positive effect on the compliance behaviour. There are no relationship between the influence of the extent of tax knowledge and the attitudes towards fairness of the tax system with tax compliance behaviour.

Table 3.1 (Continued)

Author(s)	Year	Country	Key findings
Bobek & Hatfied	2003	USA	<ul style="list-style-type: none"> • The higher level of moral obligation alone could not fully eliminate tax non-compliance. • Ethical belief may improve compliance even with lower level of moral obligation.
Slemrod	1985	USA	<ul style="list-style-type: none"> • There is a relationship between tax non-compliance and tax compliance cost • Tax complexity has a positive relationship with tax non-compliance.
Manaf, Hasseldine & Hodges	2005	Malaysia	<ul style="list-style-type: none"> • Significant relationship between age, race, education, income, occupation and ethics with taxpayers' compliance attitude. • Understanding of tax law and incentive are statistically related to compliance attitude.
McGee & Tyler	2006	33 countries	<ul style="list-style-type: none"> • Non-compliance is not unethical if tax collected winds up in the pocket of corrupt politicians and if tax system is unfair.
Richardson	2006	Cross country	<ul style="list-style-type: none"> • Complexity is the most significant determinant of non-compliance. • With lower level of complexity and the higher level of general education, service income source, tax morale and fairness lead to low level of non-compliance.
Tedds	2007	Canada	<ul style="list-style-type: none"> • The political instability and regulatory burden, among other factors, influence the issue of tax non-compliance.
Torgler, Schaffner & Macintyre	2007	USA	<ul style="list-style-type: none"> • Quality of political institutions has a significant effect on tax compliance behaviour.
McGee & Bose	2008	Egypt, Iran & Jordan	<ul style="list-style-type: none"> • Women seem to be more opposed to tax non-compliance than men. • Older people tend to be more opposed to tax non-compliance than do younger people. • People tend to become less averse to tax non-compliance as the level of education increases.
Abdul-Jabbar & Pope	2008	Malaysia	<ul style="list-style-type: none"> • There is no relationship between compliance costs and the likely tax compliance behaviour.
Devos	2008	Australia	<ul style="list-style-type: none"> • The relationship between the majority of demographic variables with the attitudes of taxpayers towards tax non-compliance is statistically significant.
McGee	2009	Romania & Moldova	<ul style="list-style-type: none"> • Significant relationship exists between age, gender and education with tax non-compliance. • Romanians are significantly more opposed to cheating on taxes in all demographic categories than Moldovans.
Yesegat	2009	Ethiopia	<ul style="list-style-type: none"> • Tax compliance cost has insignificant positive relationship with tax non-compliance.
Abdul-Jabbar	2009	Malaysia	<ul style="list-style-type: none"> • The relationship between tax compliance cost and non-compliance is insignificant. • Tax complexity and probability of tax audit influence tax non-compliance.

Source: Author's compilation

From the review of the earlier studies, it seems that the Islamic viewpoints within Islam have not been considered so far. Furthermore, the problem of tax non-compliance has not been explored sufficiently in the Middle East region, although this region is one of the important areas in the world that has a significant impact on the global economy (Carapico, 1998), and although the problem of tax non-compliance has been reported in this region (Aljaaidi *et al.*, 2011). Moreover, the political issues have not been linked with the surrounding environment, which mostly have significant interactions.

3.6.2 Recent Studies of Tax Compliance and Non-compliance

Tax compliance and non-compliance have attracted the attention of researchers during the recent years. So, many studies have been conducted lately to investigate the issue in order to discover the factors behind the problem. Borrego, Lopes and Ferreira (2013) conducted a literature review of studies concerning tax non-compliance in an international level. They categorized the previous studies by date, countries, results and methodologies. They pointed out that there are two main ranks of research in tax non-compliance. First, the studies that explained tax non-compliance and the attitudes of taxpayers towards tax, and second, studies seeking to measure it. A number of recent studies conducted on the issue of tax non-compliance gave more attention to tax rate, penalties, quality of government and tax service quality (e.g., Kuria, Ngumi & Rugami, 2013; Ser, 2013; Azrina Ling & Wah, 2014; Bruce-Twum, 2014; Hidayat *et al.*, 2014; Khan & Ahmad, 2014; Mas'ud, Aliyu & Gambo, 2014; Ovute & Eyisi, 2014; Zakariya'u, 2015). These studies incorporated variables from two approaches, particularly, economic approach and social approach.

Among the studies, Ser (2013) integrated demographic factors with public governance quality, economic factors and tax system structure in one model to measure the influence of these factors on tax non-compliance. Questionnaire was selected as the research instrument in collecting the data. From non-economic factors, marital status, age, education level and tax education showed significant results, whereas, the results for gender, tax morale and public governance quality were insignificant. On the other hand, from economic factors, income level and tax rate showed significant results but not future tax costs.

Additionally, Mas'ud, Aliyu and Gambo (2014) tested the effect of tax rate on tax compliance in Africa. The population of the study covered 61 African countries for two observation years of 2012 and 2013. The findings from the study showed that tax rate has significant positive correlation with tax compliance in some African countries and a significant negative effect on tax compliance in other African countries.

Moreover, Alabede *et al.* (2011a) conducted a study to expand the basic tax compliance model by incorporating public governance quality and moderating effects of financial condition and risk preference. They suggested that prior studies have proven that tax compliance is influenced by other factors outside the basic model. Later, Alabede (2012) carried out his study to determine the factors that may influence tax non-compliance in Nigeria. He included many different variables in his study, particularly, quality of tax services, multi-ethnic background, public governance quality, tax system structure, tax knowledge, moral reasoning, occupation, source of income, income level and individual attitudes towards tax non-

compliance. Furthermore, financial condition and risk preference were examined as moderator variables. It was found that the model of tax compliance should be extended to incorporate perceived tax service quality, public governance quality, ethnic diversity and the moderating effect of taxpayers' financial condition for better understanding of tax compliance behaviour. Furthermore, policy should be directed towards strengthening these factors to reawaken the culture of tax compliance among individual taxpayers in Nigeria. The current study follows the call of Alabede (2012) to expand the model of tax non-compliance, where the environment of Yemen is taken into consideration by integrating the Islamic religious perspective and geopolitical differences in the model of tax non-compliance.

In a related study, Hidayat *et al* (2014) used Structural Equation Modeling (SEM) Approach to examine the influence of service quality and regional tax regulations on taxpayer compliance, satisfaction and behaviour. The data in this research was obtained through survey with respondents having businesses. The results showed that service quality and regional tax regulation have positive and significant effect on the taxpayers' satisfaction, behaviour and compliance.

Demographic factors have also been investigated in the recent studies relevant to the topic. A study carried out by Ross and McGee (2012) included the largest number of demographic factors on tax compliance in Netherlands. In their study, they investigated the influence of 25 factors on the issue of tax compliance, and the results were fluctuated. More broadly, Khlif and Achek (2015) investigated the effect of 4 categories of variables on tax non-compliance, including (1) demographic variables (2) cultural and behavioural variables (3) legal and institutional variables, and (4)

economic variables. They reported that the role of demographic factors on tax non-compliance is limited. Ali and Ahmad (2014) investigated the issue among the Malaysian youth, because youth tend to have low sense of responsibility. They found that a high level of tax morale is necessary in promoting tax compliance among the public. Also, it was found that increased tax knowledge does not necessarily lead to increased trust in the tax system and tax authority, and consequently, it does not affect the compliance behaviour.

With regards to the cultural impact on the issue of tax non-compliance, a study was carried out by Yong and Martin (2016) in New Zealand, an ethnically diverse society. They concluded that there may be factors, which affect taxpayers' compliance that might be more common in some ethnic groups than others. A general ruled provided by Pietro and Simona (2016) established that social and cultural pressure has significant impact on tax compliance.

More importantly, religiosity, as a cultural factor, has been focused on in some recent studies. Mohdali (2013) investigated the influence of religiosity on the tax compliance behaviour in Malaysia. She compared between the religiosity (defined as internal value of taxpayers) and attitudes towards government (considered as external value). Data was collected from, mostly, salaried taxpayers and the remaining from self-employed taxpayers using a self-administered survey and face to face interviews. Analysis showed that religiosity has significant positive impact on taxpayers' willingness to voluntarily comply with tax laws. Further, the study suggested that the perceptions of government and the tax authority in encouraging their positive attitudes towards taxation are very important. Similarly, Mohdali and Pope (2014)

found that religiosity has a minimal but statistically significant positive impact on voluntary tax compliance in Malaysia. This probably can be explained by the strong religious values held by many Malaysians, as well as the concept of giving, which has been emphasized in almost all religions.

The moderating effect of ethicality on morality and religiosity has been linked with tax non-compliance in the study of Coleman (2013). The findings supported the hypotheses, which indicated significant relationships. Similarly, the recent study also measured the Islamic religious perspective as internal value of taxpayers, and attitudes towards government, which is considered as an external value. Attitudes towards the government in the recent study have been defined in a number of variables such as, geopolitical differences, tax service quality and public governance quality.

Khan and Ahmad (2014) explored causes of tax non-compliance in Pakistan. A questionnaire with closed ended questions was designed and used to gather the data. It was found that the main cause of non-compliance is absence of progressive taxation. Moreover, corruption of government forces public to evade tax as they are convinced that there is no benefit from the government for them.

Africa has been taken into consideration during the recent years to test the phenomenon of tax non-compliance. Kuria, Ngumi and Rugami (2013) studied the compliance of rental income tax by combining the understanding of a tax system and tax laws with motivation such as, rewards and punishment. The study was implemented in Kenya, where simple random sampling and convenience sampling

was used to identify individual respondents. The responding rate was only 40%, but the findings showed that compliance with taxation issues was low on the part of income from rental properties. Also, landlords and possibly the other citizens were not ready to comply with tax regulations because there is a feeling of denial due to failure to provide clear evidence of the advantages of paying taxes, and taxpayers were aware of their obligation to pay taxes but they were not ready to comply. Further findings revealed that fines and penalties did not seem to be an adequate deterrent to manage truant landlords. Landlords felt that they were not provided with adequate incentives to motivate them to invest in housing.

In Nigeria, Zakariya'u (2015) found that tax system structure, income level and education have significant positive relationship with tax non-compliance, whereas tax rate and corruption have positive but insignificant relationship with tax non-compliance. Similar results were found in Ethiopia by Tehulu and Dinberu (2014). Therefore, in both papers, they recommended the government to improve the tax system through amending and adjusting tax laws and policies.

In Ghana, Twum (2014) investigated the gift tax compliance using direct taxpayer survey. A random sample of taxpayers was chosen and they were asked, among other questions, to describe their tax reporting behaviour. It was found that majority of the respondents were unaware of the existence of Gift Tax laws. The few who were aware mainly obtained the knowledge through the educational system. Thus, the gift tax compliance rate is very low. The major causes of non-compliance of gift tax in Ghana were found to be lack of awareness, which is a function of the educational levels of citizens, and the low rate of detection.

A summary of the findings of the recent studies, during the period from 2010 to 2016, in tax compliance and non-compliance is presented in Table 3.2 arranged in chronological order.

Table 3.2
Summary of recent studies of tax compliance and non-compliance for the period 2010 - 2016

Author(s)	Year	Country	Key findings
Alabede, Ariffin & Idris	2011a	Nigeria	<ul style="list-style-type: none"> • Tax compliance is influenced by other factors outside the basic model.
Alabede	2012	Nigeria	<ul style="list-style-type: none"> • The model of tax compliance should be extended for better understanding of tax compliance behaviour.
Ross & McGee	2012	Brazil, Russia, India, China, USA and Germany	<ul style="list-style-type: none"> • The results were fluctuated.
Borrego, Lopes & Ferreira	2013	various countries	<ul style="list-style-type: none"> • There are two main ranks of research in tax non-compliance. First the studies that explained tax non-compliance and the attitudes of taxpayers towards tax, and second those studies seeking to measure it.
Ser	2013	Malaysia	<ul style="list-style-type: none"> • Significant relationship between age, marital status, education and tax education with tax non-compliance. • Insignificant relationship between gender, tax morale and public governance quality with tax non-compliance. • Significant relationship between income level and tax rate with tax non-compliance.
Mohdali	2013	Malaysia	<ul style="list-style-type: none"> • Religiosity has significant positive impact on taxpayer's willingness to voluntarily comply with tax laws. • The perceptions of government and the tax authority in encouraging their positive attitudes towards taxation are very important.
Coleman	2013	USA	<ul style="list-style-type: none"> • The moderating effect of ethicality on morality and religiosity has significance relationships with tax non-compliance.
Kuria, Ngumi & Rugami	2013	Kenya	<ul style="list-style-type: none"> • The advantages which the taxpayers receive from the government may lead to more compliance. • Penalties are not an adequate deterrent of non-compliance.

Table 3.2 (Continued)

Author(s)	Year	Country	Key findings
Ali & Ahmad	2014	Malaysia	<ul style="list-style-type: none"> • A high level of tax morale is necessary in promoting tax compliance among the public. • The current level of tax literacy among working youth in Malaysia is still low • Increasing tax knowledge does not necessarily lead to increased trust in the tax system and tax authority.
Mas'ud, Aliyu & Gambo	2014	Africa	<ul style="list-style-type: none"> • Tax rate has positive significant correlation with tax compliance in some African countries, whereas the relationship is negative and significant in some other African countries.
Hidayat <i>et al</i>	2014	Indonesia	<ul style="list-style-type: none"> • The results showed that service quality regional and tax regulation have positive and significant effect on the taxpayers satisfaction, behaviour and compliance.
Khan & Ahmad	2014	Pakistan	<ul style="list-style-type: none"> • Causes of tax non-compliance are related to progressive taxation. • Corruption of government force public to evade tax as they think that there is no benefit from government for them.
Twum	2014	Ghana	<ul style="list-style-type: none"> • The lack of awareness and the low rate of detection are the major causes of non-compliance of gift tax in Ghana.
Tehulu & Dinberu	2014	Ethiopia	<ul style="list-style-type: none"> • The result revealed that several factors have significant impact on tax non-compliance, including fairness of tax system, penalties, personal financial constraints and changes on governmental policies.
Zakariya'u	2015	Nigeria	<ul style="list-style-type: none"> • Tax system, income level and education have significant positive connection with tax non-compliance • Tax rate and corruption have positive relationship with tax non-compliance but statistically not significant.
Khelif, & Achek,	2015	Tunisia	<ul style="list-style-type: none"> • The role of demographic factors on tax non-compliance is limited.
Yong & Martin	2016	New Zealand	<ul style="list-style-type: none"> • In an ethnically diverse society such as New Zealand, there may be factors, which affect taxpayers' compliance that might be more common in some ethnic groups than others.
Pietro & Simona	2016	Italy	<ul style="list-style-type: none"> • Social and cultural pressure has significant impact on tax compliance.

Source: Author's compilation

Generally, literature showed that many of the recent studies integrated studies from economic theories and social theories, and thus, the two approaches may be considered to be more relevant in the recent point of time.

3.6.3 Tax Compliance and Non-compliance Studies of Yemen

In investigating the causes of tax non-compliance in Yemen, the researcher noted the lack of research in the area. McGee (2006) in his investigations selected countries from North America, South America, Europe, Asia, Australia and New Zealand. However, no many studies have been conducted in the Middle East region as a whole, and Yemen in particular, with respect of perception of taxpayers towards tax compliance (Al-Ttaffi *et al*, 2011). However, few studies have offered possible explanations on why Yemenis are not complying with tax laws as well as factors influencing their taxpaying behaviour.

Al-Doais (2008) conducted a descriptive study in the role of Accounting Information System (AIS) in reducing tax evasion in the Republic of Yemen. It was noted that the accounting information system applied and used in Yemen does not have generally accepted characteristics in accounting information system, which were highlighted by studies and research on the characteristics of accounting information system to ensure the use of such information in making management decisions and thus, a different method should be employed to reduce the phenomenon of tax evasion. Further, the accounting information system applied and used in Yemen does not provide administrative, accounting and tax requirements and control that contribute to overcome the phenomenon of tax evasion. Moreover, the accounting information system applied and used in Yemen does not take non-financial information, which could be used as an essential tool in reducing the phenomenon of tax evasion, therefore this information do not contribute in the reduction of tax evasion in Yemen. Additionally, it was noted during the study that there is a lack in qualification of workers in dealing with the accounting information system as it does not meet the

required scientific competence and capability that will enable them to deal with tax evasion significantly. However, the study of Al-Doais (2008) failed to provide a logical explanation for the real reasons behind tax non-compliance in Yemen.

In a related study, the researcher of the present study, Al-Ttaffi (2009) examined the influence of twelve variables on tax non-compliance, namely, Islamic religious perspective, gender, age, marital status, education, income level, source of income, occupation, penalties, experience, tax rate and fairness of the government and the tax system. It was found that fairness of the government and tax system has a positive significance correlation with tax evasion, while gender, age, marital status, nature of occupation and experience have positive correlation with tax evasion. Although Al-Ttaffi's (2009) study is the first study that investigated the influence of Islamic religious perspective, it did not provide sufficient explanations of the Islamic opinions and perspective about taxation. Moreover, Islamic religious perspective may have a moderating effect, which has not been tested so far. Accordingly, new measurement is used in the current study to measure the Islamic religious perspective.

Aljaaidi, Manaf and Karlinsky (2011) carried out a study to find out the perception of Yemenis towards tax evasion, specifically to determine whether they consider it to be a crime or not. It was found the Yemeni people do not perceive tax evasion as a crime. Meanwhile, Gubran (2009) offered an analytical study of the reality of tax non-compliance in Yemen. In his study, he tried to answer three questions: What are the actual causes of tax non-compliance in Yemen? What are the effects of tax non-compliance and what are the ways to reduce tax non-compliance? Generally, he

found that the unfairness of government is the main cause of tax non-compliance in Yemen.

Recently, Helhel and Ahmed (2014) conducted a study which may be considered as the most recent study of tax in Yemen. They divided the factors, which may influence tax non-compliance into internal factors and external factors. They concluded that tax non-compliance is affected by a broad range of factors such as individual characteristics of tax payers, tax system, tax administration, economical situation and political situation. However, their study was very limited, since data collected through questionnaire was obtained only from Sana'a the capital city of Yemen. This indicated that the allegiance towards the Yemeni regime is similar, so, the attitudes towards the government are similar too. A summary of tax compliance and non-compliance empirical studies in Yemen are shown in Table 3.3 arranged in chronological order.

Table 3.3
Summary of tax compliance and non-compliance studies of Yemen

Author(s)	Year	Key findings
Al-Doais	2008	<ul style="list-style-type: none"> • AIS does not have a generally accepted characteristics in accounting information system. • AIS does not provide administrative, accounting and tax requirements and control that contribute to overcoming the phenomenon of tax evasion. • AIS is not concerned with the non-financial information. • There is a lack in qualification of workers in dealing with AIS.
Gubran	2009	<ul style="list-style-type: none"> • Unfairness of the government is the main cause of tax non-compliance in Yemen.
Al-Ttaffi	2009	<ul style="list-style-type: none"> • The model, examined in the study, has a significant impact on tax evasion in Yemen.
Aljaaidi, Manaf & Karlinsky	2011	<ul style="list-style-type: none"> • Yemeni people do not perceive tax evasion as a crime.
Helhel & Ahmed	2014	<ul style="list-style-type: none"> • Tax non-compliance is affected by broad range of factors such as individual characteristics of tax payers, tax system, tax administration, economical situation and political situation.

Source: Author's compilation

In general, the issue of tax non-compliance in Yemen has been described as a serious problem, but the literature specified that the studied of tax compliance and non-compliance are very limited. Moreover, the studies of tax non-compliance in developing countries in general, and in Yemen in particular, did not consider the magnitude role of SMEs in the economy of the countries.

Additionally, the political changes have not been linked with the geographical location, as it is believed that geopolitics maybe a main factor in Yemen. Furthermore, the quality of public governance and tax service has not been taken into consideration in the studies of tax compliance and non-compliance in Yemen.

3.7 Determinants of Tax Non-compliance Behaviour

According to the literature, the factors which may influence tax non-compliance are: age, gender, race, education, income level, source of income, occupation, ethics, perceived fairness, tax system structure, taxpayers knowledge, tax laws, positive inducement (Manaf, Hasseldine & Hodges, 2005; McGee, Paláu & Lopez, 2009; Gupta & McGee,2010; Ross & McGee,2012), religion, tax rate, fairness of the tax system, fairness of the government (McGee, Benk, Yıldırım & Kayıkçı 2011), tax service quality, public governance quality, personal financial condition and risk preference (Alabede, 2012). In the current study, the Islamic religious perspective is integrated in tax non-compliance model as a moderating variable of the relationship between non-compliance behaviour and its determinants among SMEs in Yemen.

3.7.1 Islamic Religious Perspective

Generally speaking, there is lack of research about the influence of Islamic religious perspectives on tax non-compliance. Obaid (2008) stated that the Yemeni people are all Muslims but even then, the Islamic perspective of people towards tax are different (Standing Committee for Scientific Research and Fatwa SCSRF, 1994; Mawdudi, 2005; Nabulsi, 2005; Al-Omari, 2009; Hasan, 2010; Al-Jibreen, 2012). Hence, Islamic religious perspective may have an influence on the behaviour of taxpayers.

Religion provides guidance to each individual through his/her believed values. The influence of religion occurs in the society even though individuals are not totally committed to it (Mohdali, 2013). Religion provides an essential basis for social integration. Therefore, understanding the Islamic religious viewpoints of the taxpayers in Muslim countries is of great importance and is an important factor that could likely influence taxpayers behaviour (Al-Ttaffi *et al.*, 2011).

Clearly speaking, Islam provided clear teachings in many issues in terms of permissible (Halal) and forbidden (Haram). In other words, in many issues, there are explicit texts in the form of Quranic statements or Hadith (the record of the sayings, advice and conduct of the Prophet Mohammed) (peace be upon him) that supplements the Holy Qur'an as a source of the Islamic religious law. Nevertheless, in some issues, particularly contemporary ones such as tax, there are no clear texts explaining whether it is Halal or Haram, because taxes did not exist at the time of the Prophet (peace be upon him). However, other types of payments were imposed, specifically, (a) Zakat which is an obligatory payment made annually under Islamic law on certain kinds of property and used for charitable purposes, (b) Kharaj, which

is defined as a type of individual tax on agricultural land belonging to government and its produce is developed under Islamic rule, and (c) Jizya, which refers to tax levied by Islamic states on non-Muslims that permanently reside in a Muslim country.

In the case of tax, Islam gave an opportunity for researchers to conduct their due diligence, and as such, Muslim scholars strive to provide Islamic provisions for these cases. Generally, there are several opinions about taxes, with some scholars viewing tax itself as forbidden, and others believing in its legitimacy and the government's right to impose taxes on its citizens.

In Saudi Arabia, the government imposes tax only on foreign individuals, while Saudi citizens are not subject to any tax on their personal income. In terms of business establishments, all businesses in Saudi Arabia are also subjected to tax even if they pay Zakat (The Saudi Department of Zakat & Income Tax, 2015). Al-Ayyan (2007) argued that companies pay Zakat and also pay tax because Zakat is spent on specific individuals (Asnaf) mentioned in the Qur'an, while tax is funded to cover the expenses of the services provided by the government to all businesses operating in Saudi Arabia. Mohdali and Pope (2014) argued that Zakat may encourage Muslims to pay taxes to the government in two ways. First, the practice of giving in religion –Sadaqah” was considered by some of the participants to motivate the same feeling of giving towards the country, which is similar to a large extent to the teaching in Christianity. Second, some of the Muslim participants considered that paying zakat is a good move to reduce their tax dues, as zakat is treated as a deduction or rebate,

which can be deducted from their net tax payable. However, tax system in some countries, including Yemen, do not rebate the amount of Zakat from the due tax.

Furthermore, the SCSRF (1994) issued a fatwa to clarify the Islamic perception about tax for all Muslims, whether inside or outside Saudi Arabia. The Fatwa stated that the collection of taxes and work in tax authorities are all forbidden (Haram), and it is not permissible for the government to impose tax on its citizens. Furthermore, non-compliance of tax could be viewed as permissible if it is imposed on Muslims, and therefore, taxpayers find any opportunity to do so without committing any forbidden act of Shariah, such as lying. However, as an independent council, Fatwa issued by the SCSRF serves as advisory statement and has no legal binding, unless it is legally adopted by the government.

A prominent Saudi scholar, Al-Jibreen (2012) contended that tax is an issue of diligence. He stated that tax is obligatory to be paid in two cases: if tax exists instead of Zakat and if it is in excess of Zakat but needed to finance some essential interests. In contrast, the collection of taxes is considered forbidden in cases when the government takes from citizens and disposes of the tax unfairly. Hasan (2010) cited a number of Islamic scholar perceptions, such as Al-Albani¹, to support the notion that tax is forbidden, but some may be permissible in the following exceptional cases:

- 1) When only the rich are taxed, and tax collected are distributed fairly.
- 2) When there is a deficit in the state budget.
- 3) When tax cannot be legally sustained, but it can be exceptionally imposed when necessary.

¹ Al-Albani is an Islamic scholar was residing in Jordan and before he was a former lecturer at the Islamic University in Madina, Saudi Arabia. Hasan was a student of Al-Albani during the period 1989 – 1999.

- 4) When tax money is not spent on anything contrary to Islam.

Mawdudi (2005) supported this viewpoint by stressing that the need for these funds must be real and not presumptive, and there should be an absence of other sources in the country to cover it. The imposition of tax does not mean that they replace Zakat, as the latter is worship, and must be paid in all cases whether or not it's needed, while tax should be imposed only when needed (Abu-Zahra, 2005; Shaltoot, 2007).

In Qatar, the Fatwa Centre (2014) cited a number of researches stating that if tax is imposed fairly, it is not permissible to evade it, whereas if unfairly, the non-compliance is permissible and legal. Al-Omari (2009) elaborated on the views of the four Islamic sects (thoughts) about taxes and they are as follows:

- 1) Hanafis: They allow the imposition of tax on the people if there is a need for it and such tax are referred to as episodes.
- 2) Maaliki: They support the entitlement of the government to impose taxes for special circumstances.
- 3) Shaafa'is: They acknowledge the legitimacy of tax on the rich if it's for public interest.
- 4) Hanbalis: They authorize tax and they consider it as the money spent for Jihad.

In the same line of the study, Nabulsi¹ (2005) explained his Islamic viewpoint in this issue. He believed that tax is considered one of the government's financial resources to cover their expenses, so they are permissible. Consequently, the citizens have to

¹ Islamic scholar and professor at the College of Education & Sharia, Damascus University, Syria. His view about tax has been taken from his personal website.

comply to pay their taxes. Moreover, Peerzade (2005) proposed an alternative Islamic approach instead of tax system. He explained that the Zakat system is the best alternative system in the Muslim countries. Generally, the financial system and levy of zakat requires considerable guidance according to the rules of Shariah, such as the condition of Nisab to impose Zakat, deduction of expense items and avoidance of the double or multiple assessment of the same base in one stipulated period.

In this regard, McGee (1997) emphasized that Muslims have a moral responsibility to pay Zakat for the support of the poor and for the legitimate functions of government. Thus, evading one's duty to pay Zakat is classified as an immoral act. As for tax, it is described as voluntary. In exceptional cases, tax may be imposed by the government if the amount raised by Zakat is insufficient to cover all the legitimate costs of government. Furthermore, imposing any payment on the citizen that creates an artificial rise in the prices, such as indirect tax, is strictly forbidden. Therefore, it is not always prohibited for a Muslim to evade taxes and regulations that have the same effect as taxes.

In summary, the Islamic perceptions on tax could be presented as follows:

- 1) Totally permissible (Halal): therefore, non-compliance is absolutely forbidden.
- 2) Permissible under circumstances and conditions: accordingly, tax non-compliance is permissible when the conditions are not met.
- 3) Totally forbidden (Haram): consequently, non-compliance is permissible when the opportunity is found to do so without committing any forbidden act.

These three Islamic perspectives about tax are relevant to all Mazhabs, and do not refer to any specific Mazhab. Generally, each Mazhab is at first interpreted to have a single view towards tax. However, due to various circumstances and interpretative practices, it is normal for some scholars from the same Mazhab to have different view as well. Consequently may lead individual in one Mazhab having different views towards tax.

Finally, it can be stated that religion provides an essential basis for social interaction, which may have a strong effect on the individual's tax non-compliance attitudes and behaviour. Although inconclusive, the overall literature has shown that religion may play a vital role in helping authorities to meet their target in fostering voluntary tax compliance. In other words, the religious attitudes towards tax could have an impact on the behaviour of taxpayers, where people who believe that tax is forbidden will have a negative behaviour towards paying tax, while those who have positive perception toward tax will be more committed to the payment of the due tax. However, the few studies conducted about the tax system to be implemented as a national revenue collection system in Islamic countries focused on imposing Zakat instead of tax.

3.7.2 Geopolitical Differences

The term "Geopolitics" has a meaning that combines between geography and politics. In other word, it joins geography and politics in one single word (Concise Oxford English Dictionary, 2011). Sarker (2014) explained that the term is a merged form of two separate words: 'geography' and 'politics'. Scholars, academicians, observers, and practitioners of global politics often use the term in order to describe

or analyze specific foreign policy issues and actions. Blackburn (2008) related that "geopolitics" means "the study or application of the effect of political geography on the structure, programs, or philosophy of a state". Also, geopolitics was defined by Dittmer (2013) as a complex of geographical and political factors affecting or determining the nature of a state or region.

Geopolitics contains three elements: an idea of the state, social view and political deduction of the natural determinants (Teschke, 2006). Lopata (2003) explained that the geopolitics is linked with the understanding, because understanding is a part of the culture which is different according to the geographical base. Kim (2011) clarified that the concept of "geopolitics" may have local, regional and international implications.

During the Cold War years, geopolitics played a central role in the political-military sphere. The formulation of the containment policy, the North Atlantic Treaty Organization Alliance (NATO), and the weapons deployments of the 1970s and 1980s were all motivated by geopolitical arguments. The end of the Cold War marked not only the revival of traditional geopolitics, but also opened up the new perspective of critical geopolitics (Macdonald, 2002). It is valuable to declare that throughout the recorded history, the Middle East has been playing a vital role in the global geopolitics (Sarker, 2014). Thus, the Middle East region is concentrated in the current study, specifically, during the current era where many strategic events have occurred in this area. In the Middle East, the geopolitics has, so far, undergone few changes due to the Arab uprising. The course of Arab Spring has led to the rise of

some regional powers as well as shift power balance among the regional members and their foreign alliances.

In the Middle East region, there are many geopolitical differences, which led to political and military conflicts. A clear example of the geopolitical differences in the Middle East region is the Yemeni case. The geopolitical diversity affiliation did not exist at the beginning of the nineties of the last century, where the North and South Yemen united in 1990. The Yemeni unity continued until 1994 where a war between the two halves occurred and ended with the victory of the northern part of Yemen over the southern part. Many Southerners considered this victory as an occupation, and therefore treated the government as the occupation government (Bahaj, 2000). In 2007, the Southern Movement was founded in the country, and began calling for reforming the path of unity, then moved to claim the secession of the south from the central government in Sana'a (Al-Rabae, 2014). This view has led a lot of southerners to take a political character, and thus resulted in the evasion of the performance of the duties of the central government in Sana'a, especially that most Southerners believe that Sana'a plundering the wealth of the south, which represents 85% of the total wealth of the country (Al-Naqeeb, 2011).

The literature gives the impression that geopolitics has been investigated in many areas such as religion, economy, education and society. Here are some of the instances; Naseem (2014) investigated the geopolitical value of Gwader in Pakistan. He explained that the geographical location of Gwader, which is near Dubai made it of great importance. In addition, the political changes in the region made it more important. Overall, the author linked between political factor and geographical factor

to justify the raise of Gwader value. Therefore, it could be understood that geopolitics is invaluable when dealing with the economic issues of the countries. Okusanya and Isabu (2010) conducted a study in two states of Nigeria, specifically, Katsina and Ekpoma to obtain the school teachers attitude to family life education. Selection of these two states was performed based on the basis of geographical location and political affiliation. The authors justified that the political affiliation is considered an influential factor mainly on the culture and attitudes of the people. Uwaifo (2007) in his study, in Nigeria also, classified the 36 Nigerian states into 6 geopolitical regions: the Northeast (NE), North-central (NC), the Mid-belt (MB), the Southeast (SE), Southwest (SW) and the South-South (SS).

Generally, the literature revealed that geopolitical differences have an effect on many issues. In education area, the influence of diversity of geopolitical differences may take several forms. Campbell (2003) addressed two forms, namely, the public provision of different kinds of schools, and the variations in social participation in those schools. He indicated that some countries, such as Australia, have succeeded to produce a national education among all regions. In other words, if the government failed to deal with geopolitical differences properly, it will create disadvantages out of these differences.

Socially, a question has been presented by Chiang (2009) that begs to determine whether geopolitical differences reduce national unemployment through inter-regional migration. He conducted his study in Taiwan to find an appropriate answer and found that geopolitical differences reduce regional and national unemployment, because of interregional migration. Moreover, Webster and Ivanov (2015) argued

that geopolitics is the main driver of tourist flow. They identified six geopolitical drivers of tourist flows in the future, namely: the fall of the American Empire, the rise of the BRIC countries (Brazil, Russia, India, and China) and the PINE countries (Philippines, Indonesia, Nigeria and Ethiopia), increased global political instability, increased importance of regional supranational organizations, greater control of the individuals on a global scale, and the greater importance and power of corporations than national governments.

With regards to economic aspects, Noguera-Santaella (2016) found that geopolitical events positively affected oil prices through conflicts, which affect oil supply reliability, even if disruption did not actually occur - this should be reflected in prices, if expectations react accordingly. Arayama and Miyoshi (2004) explored the influence of geographical location in the economic growth of China. They explained that sometimes governments distinguish in dealing between regions, and in so doing, resulted in differences in performance in GDP for the region, which affected the overall economy of the country.

Based on the theory of social influence, the individual behaviour is intentionally or unintentionally influenced by others in the environment, and is explained by its relationship to the continuous common interaction between cognitive and behavioural environmental influence. Accordingly, geopolitics is an issue that likely has an effect on the attitudes of people. Feld and Frey (2007) conducted an exploratory study in Italy. Although no geopolitical difference was found between South and North of Italy, citizens from South had lower compliance to tax rules compared to Northern citizens. This indicates that the areas of different geopolitics

will show different behaviour *fortiori*. However, likely no study has yet highlighted the influence of geopolitical differences on the issue of taxpayers' behaviour.

In other related studies, geographical differences have been investigated in taxation. Specifically, some studies focused on the influence of the geographical location on the behaviour of people. For instance, Loo, Evans and McKerchar (2010) studied the influence of the geographical location of citizens' residency on their behaviour. They found that citizens' geographical location influence their knowledge, and as reflected on their behaviour. In other words, knowledge is a mediating factor between geographical location and behaviour. Citizens located in cities will have more opportunity to gain knowledge, which positively influence their compliance of duties towards government. Similarly, Monteduro and Zanradi (2005) explained that compliance of duties towards government is associated with the redistribution of revenues. Tax is one of these revenues, and thus, if the collected tax is distributed in the geographical location, which were collected from, then tax non-compliance will be lower.

In contrast, if tax revenues are supplied to the centre, the distribution will be perceived unfair, so non-compliance is expected to be higher. This argument was supported by Madiès and Ventelou (2005). Furthermore, they justified that the central government has no information about the needs and behaviour of regions, and as such, the government cannot deal with citizens in the different regions correctly.

Generally, it could be concluded that behaviour of individuals are based on their attitudes, which are affected by the surrounding geopolitics. Taxpayers, as

individuals inside the society, are affected as well. So, the geopolitical differences are considered as a challenge that must be dealt with by the authorities. However, geopolitical difference is not a matter in itself, but the environment and authorities' dealings with these diversities often create other issues and problems. For instance, in the European case, Stepić (2011) argued that although the diversity of geopolitical identity is the reality of Europe, this geopolitical diversity has been exploited in a positive way in Europe while avoiding the negative aspects. This is unlike many of the developing countries, such as Nigeria and Yemen, in which the geopolitical differences had a negative impact on many of the phenomena.

In the Republic of Yemen, the country is divided into two parts: North and South. These two parts were two countries before 1990. The political changes from 1990 to 2007 created some sensitive issues between the two parts, where the northern part controls the decision-making process in the country, while the southern part perceives the central government in the north as an occupation government. For the purpose of the current study, the division of North from South Yemen is considered. Such division was also noted in Nigeria (Uwaifo, 2007), which is considered geopolitically similar to the Yemeni environment.

3.7.3 Tax Service Quality

Service quality can be defined as a degree of excellence or superiority and can be, either objectively or subjectively, evaluated (Christensen, 2001). It is, simply, a comparison of expectations with performance. It is a judgment of how well a distributed service conforms to the customer's expectations. Service business providers frequently assess the service quality provided to their customers in order to

increase their service quality, identify problems and to attain customer satisfaction (Stiglingh, 2014). Christensen (2001) explained how to evaluate service quality objectively or subjectively. Objective evaluation is possible when there exists a measurable standard for comparison, while subjective evaluation is in terms of human perceptions. Kothari and Sharma (2009) specified that perception of human about service quality can be one of two kinds: perceptions before service and perceptions after service.

The issue of tax is largely similar among private organizations, which cannot work continuously, without satisfying customers. This idea has been supported by Asubonteng, McCleary and Swan (1996). They clarified that service quality is measured as the difference between what the customers expect from service performance before the service comes across and their perceptions of the services that have been rendered. Accordingly, customers will evaluate the quality of service they received as low if the performance does not meet their expectation, and service quality as high if performance exceeds their expectation. Ott (1998) indicated that the quality of tax service is considered as evidence that the society is modern. He added that the goal of any tax authority is submitting a better service to taxpayers.

Thornton and Shaub (2013) categorized the tax service provided by tax authority to three: information, interaction and transaction, as transaction is the interior service, whereas information and interaction service offer support to transaction. According to Christensen (2001), service quality has technical and functional dimensions. Technical quality is what the customer receives as a result of interaction with the services provided. It could be evaluated by using one or more of the following

measurements: (1) perceptions of audit risk, (2) reduction in tax liability, or (3) overall accuracy and absence of errors. Functional quality is the process or manner in which the service is delivered. The dimension of function may consist of (1) responsiveness of the customer's needs, (2) providing the service in a reliable efficient manner, or (3) the physical surroundings in which the service is delivered. Thornton and Shaub (2013) included one more dimension, which is the corporate image. This dimension is with customer's perception of the organizational quality.

Parasuraman, Zeithaml and Berry (1985), (1991) and (1994) proposed service quality in five dimensions, specifically:

- 1) Reliability: Newman (2005) defined reliability as the hard quality dimension. This dimension is ranked as the first on the service quality model with the biggest gap between perceptions and expectation. Othman and Owen (2001) defined reliability as ~~the~~ "the ability to perform the promised service with dependability and accuracy".
- 2) Responsiveness: It is defined as a willingness of staff to assist taxpayers and offer quick service (Parasuraman *et al.*, 1994). Newman (2005) referred to responsiveness as the readiness of the staff to inform taxpayers when exactly things will be done, quick service, giving taxpayers entire attention, and being demonstrably responsive to the requests of taxpayers.
- 3) Assurances: Parasuraman, *et al.* (1994), defined assurance as ~~the~~ "knowledge, ability and courtesy of employees of the organization and its employees to confide and inspire". Naser, Jamal and Al-Khatib (1999) used assurance to refer to staff ability to provide a confidential service.
- 4) Empathy: Parasuraman *et al.* (1994) defined empathy as ~~the~~ "the helpful, individualized attention the organization provides to its customers". The empathy

essence is conveyed through customized or personalized service that the taxpayer is special and unique.

5) Tangibility: It refers to the physical facilities, personnel equipment and communication materials (Parasurman, Berry & Zeithaml, 1991). Therefore, tangibles consist of physical facilities, equipment or tools used to provide the service, physical representations of the service and speed of efficiency of dealings. Angur, Natarajan and Jahera (1999) and Jun and Cai (2001) used tangibles to refer to taxpayers' communications.

Hidayat *et al* (2014) suggested that tax collection does not work smoothly and as such, aside from the active role of tax officers, there must be awareness of the taxpayers. They explained that since tax service quality has a direct impact on the level of taxpayers' satisfaction, and on taxpayers behaviour, it is important to increase satisfaction of taxpayers through increasing the quality of service to taxpayers. Lin, Wang and Huang (2011) concluded in their study that service quality has a significant negative impact on non-compliance behaviour.

Generally, a lot of developed countries such as the USA, the UK, France, Sweden and Denmark are increasingly becoming aware of the necessity to accord the taxpayers the status of customers. They applied the concept of New Public Management on taxpayers by giving more consideration to their tax service requirements and taking care of them as clients (Kirchler, 2007). Stuart and Tax (1996) explained that tax service quality must integrate elements such as the physical evidence of the service environment, the action of the participants and the processes required to facilitate service delivery.

Also, Chen and Kao (2009) explained that there is interaction between the tax officers and the taxpayers, with the interaction influencing the perception of taxpayers about the quality of the tax service received from the tax authority. Parasuraman *et al.* (1985) added two more factors that can influence the perception of the customer about the quality of service namely, the physical environment quality and the outcome quality, which represents the actual service delivered to the customer.

Generally, Jackson and Milliron (1986) stated that the approach in which taxpayers are treated in the provision of tax service has an impact on their behaviour. Therefore, there are common perceptions about tax offices. Many of taxpayers believe that tax officers are not as they have to be, which influences the compliance of taxpayers. Job and Honaker (2003) indicated that the satisfaction of the USA taxpayers is very low because the service quality of IRS is deteriorating. Torgler (2007) suggested that tax authority can improve the compliance of taxpayers by creating cooperation with them. Torgler argued that tax authority must consider itself as service institution, provide a quality service and treat the taxpayers as partners.

Furthermore, in Alabede's (2012) study, he tested tax service quality in Nigeria. He stated that Nigerian taxpayers have a low perception about the quality of tax services offered by the tax authority. His study found that the relationship between perceived tax service quality and tax non-compliance behaviour is negatively strong. Thus, improving the quality of tax service provided by the tax authority will improve taxpayer's compliance behaviour.

Along a similar line of study, Al-Yasani (2005) showed that most citizens are not satisfied with the quality of public service delivered in Yemen, including tax service. This viewpoint is a public opinion in Yemen. The current study empirically highlighted the relationship between tax service quality and tax non-compliance in Yemen.

3.7.4 Public Governance Quality

Public governance quality is considered a sensitive issue and this has led researchers to avoid studying this issue up until the recent past. However, researches have been carried out in the current decades to examine the impact of public governance quality on tax non-compliance (Ser, 2013).

The literature review identified three types of governance (1) public governance, which is concerned with the government and how to organize the affairs and manages the resources, (2) economic governance, which is concerned with the private sector, and (3) social governance, which is concerned with the civil society and non-profit sector. It was pointed out that the attention is always on public governance (United Nations UN, 2007).

Torgler *et al.* (2007) explained that public governance quality is a multidimensional variable. Therefore, they adapted the following dimensions to measure public governance quality:

- 1) Voice, democracy and accountability: This dimension measures the level of citizens' participation in the selection of the government. Moreover, it measures the

financial management of the government in terms of transparency (Kaufmann, Kraay & Mastruzzi, 2007; Darby, Desbordes & Wooton, 2010).

2) Government effectiveness: This dimension measures the perceptions of taxpayers about the quality of service provided by the government by measuring the public bureaucracy, the competence of public sector employees, the independence of the civil action from political interference and the extent of the government's commitment to achieve its policies and plans means (Kaufmann *et al.*, 2007; Darby, Desbordes & Wooton, 2010).

3) Rule of law: This dimension measures the level of taxpayers' confidence in the rule of law on society and the degree of the government's commitment to the laws and rules (Kaufmann *et al.*, 2007; Darby *et al.*, 2010).

4) Control of corruption: It is defined as "the exercise of entrusted public power for private gain" (Kaufmann *et al.*, 2007). This dimension measures the perception of the taxpayers about corruption in the public sector (Darby *et al.*, 2010).

In a related study, Newman (2005) linked between the political side and the public governance. He explained that in most countries, the appointment of the head of the tax authority is performed by the key politicians in power in the country, and thus creating a relationship between tax non-compliance and political side through enabling politicians in ruling party indirectly affect the behaviour of tax authority by enforcing tax authority to conduct tax assessment in accordance with their own interests.

Also, Torgler, Schaffner and Macintyre (2007) pointed out that the citizens, in order to comply with the tax laws, must participate in the financial decision-making, and the government must be away from the centralization of financial decisions. Kaufmann, Kraay and Mastruzzi (2007) cited from some of the World Bank reports that the concept of participation by individuals must be comprehensive by using political methods such as, democracy. Moreover, the government's ability to manage the country's resources effectively and harness all the political tools for the benefit of citizens with respect for the citizens will result in the interaction between government and citizens in the economic, social and political aspects.

Along the same line of argument, Ser (2013) supposed that if the individuals perceive the government is fair, then they will have more confidence towards the government, and so they will comply with tax. Damayanti, Sutrisno, Subekti and Baridwan (2015) supported this opinion. They argued that the perception about the government is the main cause of the intention to comply with tax rules. An instance was given that throughout the period of 1973 - 1994, the U.S. government evidenced that the increase in unreported income is related to the distrust in government.

In a similar take on the relationship, Besancon (2003) extended the duties of the government and suggested that the government exists for the purpose of offering common and political goods to the citizens and further stated that quality of public governance is achieved when the government provides a high quality provision to the individuals. This view was supported by Rotberg (2005), who argued that public governance can be attained when the government supplies common and political

goods to the citizens. Furthermore, it was stated that the public governance should be capable of providing satisfaction and material prosperity to the citizens. Generally, the public governance is judged as "good" when the government uses and manages the resources of the country to respond to the requirements of the citizens. These requirements vary in importance, as some of them are more important than other, so the government should know their priorities.

In general, the relationship between taxpayers and the government is based on psychology's law of reciprocation, which calls for cooperation from both parties. Many of researchers concluded that public governance quality is negatively correlated to non-compliance (Obid, 2004; Ho *et al.*, 2006; Kirchgassner, 2010; Ross & McGee, 2011). Philips and Sandall (2009) explained the link between public governance quality and tax non-compliance. They argued that the citizens support the government to do its duties through payment of tax and as such, taxpayers remain interested in the way in which the government uses these mandatory funds.

Furthermore, Lassen (2003) clarified that the political goods offered by the government should deserve the payment of taxpayers. So, based on the concept of quid pro quo, taxpayers will comply with tax laws if they found that the government provides sufficient political goods.

Besancon (2003) explained that the association between the ruler and the ruled is considered a social contract and as such, the ruler (government) should deliver the political goods, effectively, to attain positive reaction from the ruled (citizens). Torgler (2003) stated that the positive behaviour by the government will generate

positive attitude and action by the citizens to comply with payment of tax. This viewpoint was supported by the study of Akpo (2009), which reported that good governance required the provision of quality public goods, and that where the government fails to provide public services to the citizens, they will stop to pay tax.

Based on social exchange theory, relationships between government and citizen are created by the use of subjective cost and benefit, and evolve on the principle of give and take. So, it is expected that the government will equally keep its part of the contract by providing quality public governance.

Finally, it is worth to highlight that governments finance significant part of their payments from tax revenues and thus, tax compliance is very important as government could use these funds to provide public service and aid its financial emergency (Ser, 2013). For instance, in Yemen, the amount of tax non-compliance in the year 2013 is approximately equal to the budget deficit for the same year. Hence, eliminating the problem of tax non-compliance will largely support the government to cover such deficit.

3.7.5 Tax System Structure

It is commonly recognized that one of the major causes for the phenomenon of tax non-compliance in many developing countries is tax system structure (Twum, 2014). Jackson and Milliron (1986) conducted a broad review of the tax non-compliance literature and identified 14 key factors that have been studied by researchers in the area. Fischer *et al* (1992) categorized the factors of Jackson and Milliron's (1986) model to four groups: demographic, non-compliance opportunity, attitudes and

perceptions and tax system structure. Based on this model, tax system structure contains four elements: tax rates, penalties, complexity of the tax system and probability of detection.

Imama and Jacob (2014) explained tax non-compliance by three groups of factors: factors related to the tax system, factors related to tax administration and factors related to culture. They indicated that a complex tax system can facilitate fraud and the taxpayer might choose to do dishonest behaviour simply to get things done. Also, tax rate plays a key role to increase or decrease the incentive of taxpayers to comply or not comply with tax. Penalties are very important factor as they can influence the behaviour of taxpayers.

Many studies emphasized on the model of Fischer *et al* (1992) such as, Palil (2010), Palil and Mustapha (2011), Borrego, Lopes and Ferreira (2013) and Richardson (2013). Mas'ud, Aliyu and Gambo (2014) argued that the importance of Fischer's model lies in its provision of insight into the importance of tax rate and penalties on tax non-compliance under the tax system structures. In general, most taxpayers in developing countries intending to evade tax, firstly look at two things: tax rate and penalties, and then decide whether to comply or not (Umar, Kasim & Martin, 2012). Therefore, the current study focuses on tax rate and penalties in Yemen as a developing country. The next sub-sections provide details about tax rate and penalties.

3.7.5.1 Tax Rate

Americans For Fair Taxation "AFFT" (2007) defined tax rate as the percentage at which an individual or corporation are taxed. The tax rate is the tax imposed by the government based on an individual's income or corporation earnings. There are several techniques to assess the tax rate, namely statutory, average, marginal, and effective. A statutory (legal) tax rate is the officially imposed rate, an average tax rate is the ratio of the total amount of taxes paid to the total tax base, a marginal tax rate is the tax rate that applies to the last or next unit of the tax base, and an effective tax rate is the calculation attempts to adjust a nominal tax rate to make it more meaningful (Graham, 1996).

The influence of tax rate on tax non-compliance attracted the attention of tax researchers. This has led to many studies conducted on the issue to discover the tangible evidence of the impact of tax rates on non-compliance. Many studies found positive association between tax rate and tax non-compliance, whereas others did not find any correlation or negative correlation between tax rate and tax non-compliance. In general, it is believed that a high tax rate is the main cause of tax non-compliance (Mwangi, 2014).

In more detail, it is noted that most of the studies found that the high tax rate causes high tax non-compliance (Hai & See, 2011). In their submission, Spicer and Becker (1980) found that taxpayers who are aware that their tax rate is higher than average tax rate paid by others have higher records of tax non-compliance. By implication, the perception by taxpayers that pay high tax rate is that they can outweigh their overpayment through tax non-compliance. Similarly, under-reporting behaviour of

taxpayers was found to positively correlate with high tax rate (Clotfelter, 1983; Joulfaian & Rider, 1998). More evidences show that the high tax rate is positively related to tax non-compliance (Ali, Cecil, & Knoblett, 2001; Christian & Gupta, 1993; Feinstein, 1991). Park and Hyun (2003) found that increasing tax rates encouraged non-compliance behaviour. Recent studies confirmed this association between tax rate and tax non-compliance - for instance, Nor Azrina, Ling & Wah (2014) and Zakariya'u (2015) found that the relationship is positively significant. Peter (2008) carried out a study to examine the relationship between tax rates and labour regulations with tax non-compliance and his findings showed that high taxes and extreme regulations are two very general reasons for tax non-compliance.

Moreover, the effect of tax rate on tax non-compliance is not only limited to country specific data; evidences are also obtainable in cross-country analysis. In a cross-country analysis of determinants of tax evasion internationally conducted with the OECD countries, an insignificant correlation between marginal tax rate and tax evasion was revealed (Richardson, 2006). In a similar study, Derwent (2000) studied taxpayers behaviour in five countries (USA, South Africa, Nigeria, Kenya and Gambia), and concluded that tax rate is considered a major challenge of tax compliance. Lin and Yang (2001) found a positive relationship between the tax rate and the non-compliance of taxes, and this finding was also confirmed by McGee and Ho (2006), McGee and Lingle (2006), McGee and Rossi (2006) and Ser (2013). Meanwhile, Levin and Widell (2014) applied Fisman and Wei (2004) and Dunem and Arndt's (2009) economic approaches to measure the effect of tax rate on tax non-compliance. They used the data from Kenya and Tanzania. It was found that tax

non-compliance is lower in Kenya than Tanzania, justified by the lower tax rate in the former.

In some companies, a smart indirect way towards tax non-compliance was noted by using the selling price to transfer goods among the branches to make the cost of goods higher than the actual cost, and in turn, decrease the taxable income. This act was justified by the high tax rate on income (Baumann & Friehe, 2013).

On the other hand, although a considerable portion of literature showed that high tax rate is positively related to tax non-compliance, other studies found either no relationship or even a positive relationship between tax rate and tax non-compliance. Allingham and Sandmo (1972) proposed a model to explain the relationship between tax non-compliance with several determinants including tax rate. They found that the taxpayers do not care about tax rate. They may decide either to fully report income or report less based on other determinants. Trivedi, Shehata, and Mestelmen (2004) explained that the high tax rate does not necessarily increase tax non-compliance. Porcano (1988) claimed that tax rates have no effect on tax non-compliance. Furthermore, other studies by McGee and An (2007), McGee and Bose (2007), and McGee (2007) suggested that there is no relationship between tax rate and tax non-compliance. These findings were supported by Modugu, Eragbhe, and Izedonmi (2012), who stated that tax rate does not have any positive or negative effect on tax non-compliance.

In other words, the level of the tax rate may not be the only factor influencing taxpayers' decision about paying taxes (Mwangi, 2014). Other studies argued that the

matter does not rest on the tax rate along, but the fairness of the government and tax system. For instance, Bazart and Bonein (2012) stated that fairness of tax rate leads to a decrease in the level of unreported income, and Spicer and Becker (1980) discovered that when taxpayers recognize that their tax rate is higher than tax rate paid by others, they will have higher records of tax non-compliance. Moreover, McKerchar and Evans (2009) argued that the level of trust between taxpayers and the government is the most important role in determining the impact of tax rate on non-compliance. When trust is low, the tax rate will be perceived as unreasonable and when trust is high, the same level of tax rate would be understood as contribution to the society. Boone, Khurana and Raman (2013) stated that taxpayers will pay tax if they perceive convenience with other elements, regardless of tax rate.

Other economic models of rational compliance decisions supposed that tax rate have an impact on tax non-compliance and estimated that increasing tax rates will reduce non-compliance behaviour (Alm, Sanchez, & De Juan, 1995; Feinstein, 1991; Kirchler, Hoelzl & Wahl, 2008). Richardson (2006) also provided empirical evidence that tax rate is significantly related to tax non-compliance. The study of Forest and Sheffrin (2002) suggested that reducing tax rate might not be an effective deterrent to non-compliance behaviour. This finding was confirmed by Mas'ud, Aliyu and Gambo (2014).

In general, it seems from the prior review that some studies claimed that the relationship between tax rate and tax non-compliance is positive, while other studies argued that the relationship is negative, whereas some others suggested that the relationship is neither positive nor negative. In fact, other studies confirmed this

trend of conflicting findings (Richardson, 2006). Serén and Panadés (2013) recommended that since the literature on the effect of tax rate and tax non-compliance is not definitive due mixed findings by various studies, the issue still requires further investigation.

3.7.5.2 Penalties

It is the nature of human beings not to do what is required from them without motivation. This motivation is possible to be one of two options - either incentive to encourage them to do their duties, or a penalty in case they did not do so. In some cases, both motivations are needed, while sometimes if the first option is not available or has no pressure, then the second alternative is needed (Doran, 2009). In the Yemeni tax law, the positive incentives are not regulated (Al-Ttaffi *et al*, 2011), so, penalties are examined to determine the relationship with tax non-compliance. Although the penalties are regulated in the Yemeni tax system¹, such laws are often a dead letter, because the of lack of enforcement by the authorities.

Based on the deterrence theory proposed by Becker (1968), people do not commit crimes because they are afraid of getting caught. Therefore, to resolve the tax issue, there must be effective punishment. Sanders, Reckers, and Iyer (2008) argued that deterrence theory provide a logical explanation of the relationship between penalties and tax non-compliance. In the issue of tax non-compliance, it must be shown that taxpayers are expected to evade tax, and then tax authority must resort to penalties to achieve compliance with tax or to reduce tax non-compliance. Therefore, the compliance will result out of punishment and of treat of detection (Cherry, 2001).

¹ See Chapter Two, sub-section 2.3.2.

Blank (2014) stated that tax penalties stem from tax non-compliance. In other words, non-compliance with the tax law can lead to tax penalties. Additionally, he provided further explanations of tax penalties by indicating that penalties are divided into two types, specifically, monetary tax penalties and collateral tax penalties. Monetary tax penalties are civil penalties, which require taxpayers to pay additional money to tax authority. Governments also sometimes threaten taxpayers to criminal tax penalties, but they are rarely imposed. Generally, monetary tax penalties are either percentage tax penalties, which consist of a portion of the taxpayers' underpayment of tax, or flat tax penalties, which consist of a stated amount that taxpayers have to pay for every happening of a particular offense. The other type of penalties is collateral tax penalties, which is defined as additional penalties that occur outside of the tax system. This penalty deprives citizens who failed to pay tax from enjoying any benefits provided by the government.

Generally, tax authorities are suffering from the problem of tax non-compliance, but the level is different from one country to another. Sometimes when the level of non-compliance is increased, tax authorities resort to regulating new rules and penalties to have more control and reduce the problem, such as what was done by the U.S. Congress in 1981, 1982 and 1984 (Cherry, 2001). However, the penalties are not the goal in itself, but rather to achieve a specific purpose, which is tax compliance. Therefore public education must precede penalties, as well as the need to continue to raise awareness among the public, even after taking penalties (Morris, 2010). Rettig (2011) suggested that the government must enhance voluntary compliance, and relegate penalties as the last option after exhausting non-punitive methods.

Moreover, penalties should be appropriated with the size of misconduct so as not to create any animosity with citizens. Sometimes penalties are the most readily available option, but this is neither the preferred nor the most effective compliance alternative (Milliron & Toy, 2001).

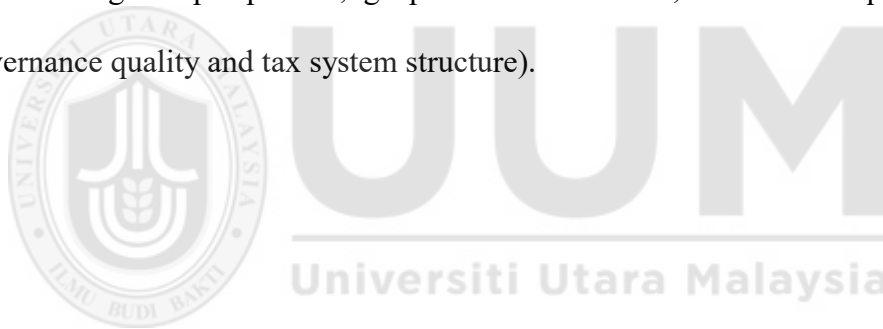
Witte and Woodbury (1985) clarified that penalties has a significant negative relationship with tax non-compliance, and this result is supported by Twum (2014). A study carried out by Sanders, Reckers, and Iyer (2008) to examine the relationship between accountability and penalties with tax non-compliance supported the hypothesis, which stated that the relationship is negatively significant. Doran (2009) argued that tax penalties always motivate taxpayers to comply with tax laws, especially, when those penalties are more costly than compliance.

On the other hand, Crane and Nourzad (1995) found a positive relationship between penalties and tax non-compliance. Azrina *et al.*, (2014) argued that threat of punishment has insignificant impact on taxpayers who are willing to comply with tax laws. Moreover, they argued that taxpayers tend to avoid taxes when they are threatened with tax penalties. Overall, threat of punishment appears to have not only an insignificant impact on compliant taxpayers but also trigger their intentions to be less compliant. However, other studies found no significant relationship between penalty rate and non-compliance (Pommerehne & Weck-Hannemann, 1996; Kamdar, 1997; Kuria, Ngumi & Rugami, 2013). Blank (2014) described collateral tax sanctions as a choice that can promote voluntary tax compliance more effectively than the threat of additional monetary tax penalties. Added to the above studies,

Morris (2010) argued if the penalties are not an effective way to deter non-compliance, then other option must be proposed.

3.8 Summary

In sum, this chapter provided the literature relevant to the study. The current study is underpinned by social influence theory and supported by social exchange theory and deterrence theory. The current study reviewed the relevant studies of tax non-compliance, which were presented in 3 categories, specifically, earlier studies, recent studies and tax studies of Yemen. Moreover, independent variables, which are expected to influence tax non-compliance, were reviewed in this chapter, (i.e., Islamic religious perspective, geopolitical differences, tax service quality, public governance quality and tax system structure).



CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Introduction

This chapter presents the framework of the study and hypotheses development. Also, the chapter discusses the research design and methodology employed in the current study and explains sampling and data collection procedures. The chapter also presents the operational definitions and measurements of the variables used in the study along with the questionnaire design and pilot study. Finally, the chapter provides an overview of the analysis techniques.

4.2 Research Framework

The research framework is a diagram that links variables theoretically and logically in order to show the hypotheses (Hair, Money, Samouel & Page, 2007). Furthermore, the framework is considered to be a guide for testing the hypotheses. The underpinning theory and supported theories explain the relationships between the variables in the model.

The model of the current study contains 7 constructs. Specifically, the model contains one dependent variable, which is tax non-compliance. The study investigated the influence of 6 independent variables, specifically, (1) Islamic religious perspective, (2) geopolitical differences, (3) tax service quality, (4) public governance quality, (5) tax rate, and (6) penalties, on the dependent variable. Moreover, Islamic religious perspective is tested as a moderator of the relationship between tax non-compliance and its determinants.

Yemen, as a least developing country, suffers from tax non-compliance. To have an effective treatment to solve the problem, the proposed solution is developed to satisfy the environmental needs of the country. Therefore, the model is adjusted to be relevant to environment and circumstances of Yemen.

The geopolitical differences in Yemen created different attitudes towards the government. The social interaction of citizens in both parts of Yemen, South and North, result in different attitudes towards performing duties of the government. The attitudes of Southern citizens are different from the attitudes of Northern citizens. This diversity of attitudes may influence the behaviour of these citizens in performing their duties (Al-Naqeeb, 2011). For this reason, the influence of the geopolitical differences on tax non-compliance is tested as an independent variable.

With regards to tax service quality, it is included in the model because most of the Yemeni citizens believe that the quality of service is very poor (Al-Yasani, 2005). Alabede (2012) explained that the tax non-compliance behaviour may perhaps be an indication that the taxpayers are not satisfied with the quality of public governance. The political changes in Yemen have resulted in an unstable situation in the whole country. This situation has reduced the accountability of the people in charge. Accordingly, the quality of public governance has decreased (Al-Rabae, 2014). Considering this background, integrating quality of public governance variable in the model of tax non-compliance in Yemen is justified.

Umar, Kasim and Martin (2012) indicated that most taxpayers in developing countries intending to evade tax mainly consider two things: tax rate and penalties. The same holds true in Yemen, where Yemeni taxpayers are believed to take these two elements into consideration. Generally, the literature suggest that tax service quality, public governance quality and tax system structure are considered to be relevant to understanding tax non-compliance behaviour in developing countries such as, Yemen (Manaf *et al*, 2005; Egwaikhide, 2010; Al-Ttaffi,2009).

The literature has shown that the basic model of tax non-compliance cannot explain the phenomenon indicating that the model should be expanded in a relevant way. As the relationships between tax non-compliance and its determinants are inconsistent, a moderator is recommended to be used to have adequate understanding (Baron & Kenny, 1986; Kirchler, *et al.*, 2007; Torgler & Schaffner, 2007; Slemrod, 2009). Al-Ttaffi *et al.* (2011) investigated the Islamic perspective as an independent variable, and suggested further studies to examine its moderating role. So the Islamic religious perspective is integrated in the model as a moderator.

Briefly, the factors specified in the preceding chapter comprise of the independent variables: Islamic religious perspective, geopolitical differences, tax service quality, public governance quality and tax rate and penalties. Moreover, the Islamic religious perspective is suggested to moderate the relationship between tax non-compliance and its determinants. Figure 4.1 shows the theoretical framework that illustrates the relationship between the dependent variable and independent variables, including the moderator variable.

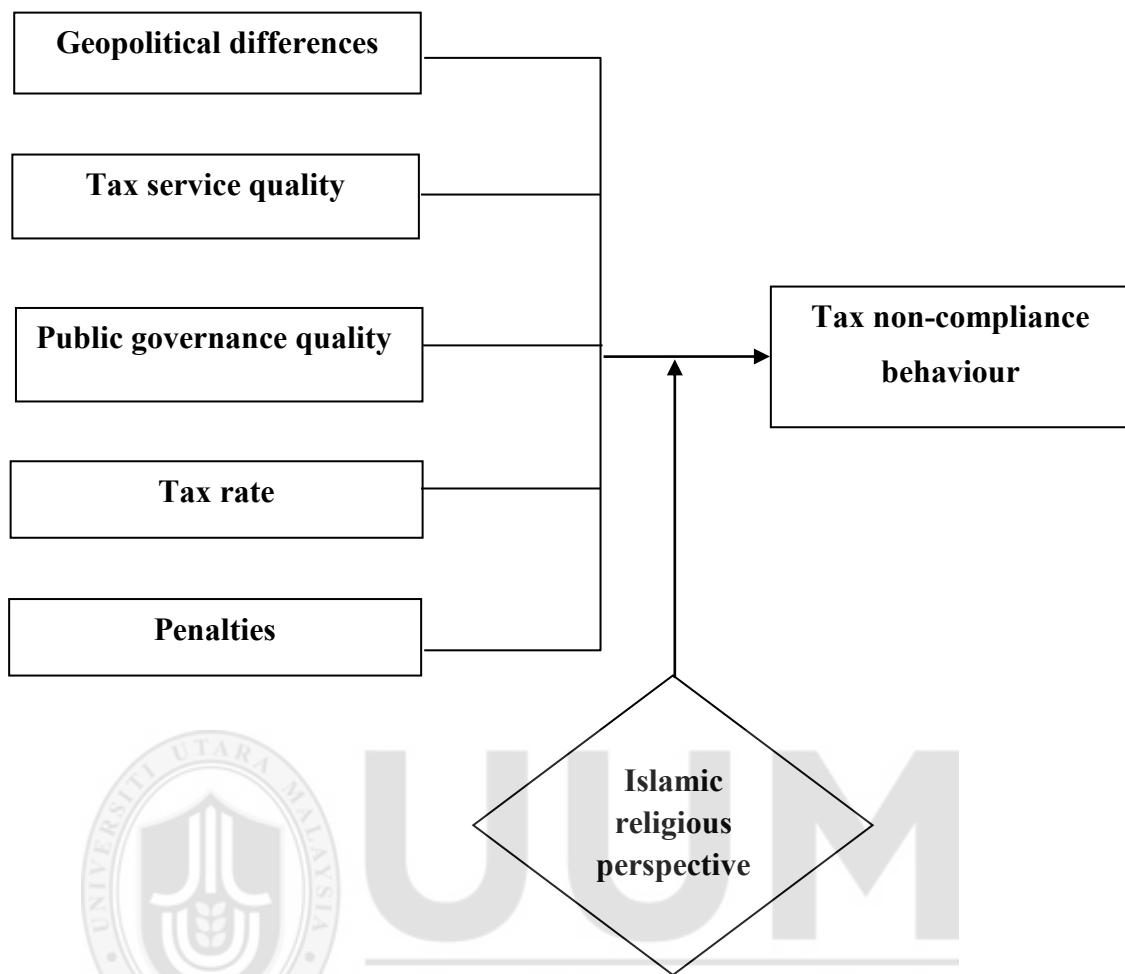


Figure 4.1
The Research Framework

Finally, it is important to highlight that there is no single theory capable of providing sufficient explanation of the factors influencing tax non-compliance behaviour. Therefore, several theories from different approaches are used to support the present study. Previously, in many tax studies, researchers mostly look at economic theories such as, deterrence theory. Since the nineties, researchers started to integrate other theories along with deterrence theory (e.g., Sternburg, 1993; Richardson & Sawyer, 2001; Manaf, 2004; Saad, 2011; Alabede, 2012; Mohdali, 2013). More importantly, researchers integrated social psychological theories with economic theories. For

example: Fischer *et al.* (1992) integrated social, psychological and economic theories in one model and this is prevalent in more current studies like Hanefah (1996), Alabede (2012) and Mohdali (2013). The current study developed the model by integrating the two approaches as well. Moreover, new variables are incorporated in the model, specifically, Islamic religious perspective and geopolitical differences in Yemen.

4.3 Hypotheses Development

Based on the theoretical background and prior empirical studies, this section presents a discussion on the hypotheses development. In order to answer the research questions and achieve the objectives of this research, the following subsections discuss the hypotheses proposed to be tested.

4.3.1 Islamic Religious Perspective

Religion is considered to be an essential basis for social integration and it provides guidance to each individual through his/her believed values. Yemen is a wholly Muslim country (Obaid, 2008) and hence, Islamic understanding towards particular issues may have an influence on the behaviour of people.

In this regard, Islam provides clear teachings in many issues in terms of permissible (Halal) and forbidden (Haram). Stated clearly, in many issues, there are explicit texts in the form of Quranic statements or Hadith, (the record of the sayings, advice and conduct of the Prophet Mohammed "peace be upon him") that supplement the Holy Qur'an as a source of the Islamic religious law. Nevertheless, in some issues, particularly contemporary ones such as tax, there are no clear texts explaining

whether it is Halal or Haram, because taxes did not exist at the time of the Prophet (peace be upon him). Therefore, understanding the Islamic religious viewpoints of the taxpayers in Muslim countries is of great importance and is an important factor that could likely influence taxpayers behaviour (Al-Ttaffi *et al.*, 2011). So, it is worth to argue that the differences in Islamic perspectives of the Yemeni people towards tax may affect the behaviour of taxpayers in Yemen.

Generally, the Islamic perspectives of Yemeni taxpayers towards tax could be classified as follows: (1) some taxpayers believe that tax is totally permissible (Halal), and thus they believe that non-compliance is absolutely forbidden, (2) other taxpayers believe that tax is permissible but under certain circumstances and conditions, accordingly, from this perspective, tax non-compliance is permissible when the conditions are not met, (3) the third group of Yemeni people believe that tax is totally forbidden (Haram), and consequently, non-compliance is permissible when the opportunity is found to do so without committing any forbidden act.

Drawing from social influence theory, these three the religious attitudes towards tax could have an impact on the behaviour of taxpayers, where people who believe that tax is forbidden will have a negative behaviour towards paying tax, while those who have positive perception toward tax will be more committed to the payment of the due tax. Thus, the following hypothesis is developed:

H₁: The Islamic religious perspectives of taxpayers towards tax have a significant effect on tax non-compliance behaviour among SMEs in Yemen.

Torgler and Schaffner (2007) explained that tax non-compliance cannot be explained by the basic model. This idea was supported by Slemrod (2009), with both arguing that the relationship between tax non-compliance and several determinants is inconsistent. Moreover, Baron and Kenny (1986) argued that moderators are introduced when the relationship between variables is inconsistent. The literature showed that the results of tax non-compliance studies are inconsistent. Kirchler (2007) indicated that the association could possibly be moderated by certain variables. Al-Taffi *et al.* (2011) investigated the direct effect of Islamic perspective on tax non-compliance, and suggested further studies to examine its moderating role. Therefore, in the present study, the Islamic religious perspective is proposed as a moderator variable on the relationship between tax non-compliance and its determinants.

4.3.2 Geopolitical Differences

The relevant literature review shows that geopolitics has a significant impact on different issues (Uwaifo, 2007; Chiang, 2009; Okusanya&Isabu, 2010; Stepic, 2011; Naseem, 2014; Webster &Ivanov, 2015; Noguera-Santaella (2016). However, the effect of geopolitics appears to have been under-investigated on the issue of tax non-compliance. Therefore, this study contributes to the tax knowledge by testing the impact of this factor on the behaviour of taxpayers in Yemen.

The Republic of Yemen is divided into two parts: North and South. These two parts were two countries before 1990. The political changes from 1990 to 2007 created some sensitive issues between the two parts, where the northern part controls the decision-making process in the country, while the southern part perceives the central

government in the north as an occupation government. For the purpose of the current study, the division of North from South Yemen is considered.

In Yemen, the southern people have different attitudes towards the government. These attitudes have been formed by the social influence between individuals in the society and the social exchange with the governmental authority. Hence, this southern attitude toward the government may create an evasion of duties towards the government (Al-Yasani, 2005; Al-Shaibi, 2000; Al-Rabae, 2014 & Al-Naqeeb, 2011). Accordingly the following hypothesis is developed:

H₂: The geopolitical differences of taxpayers have a significant effect on tax non-compliance behaviour among SMEs in Yemen.

However, the moderating effect of Islamic religious perspective of the taxpayer on the relationship between the geopolitical differences and tax non-compliance cannot be underestimated. Mohdali and Pope (2014) argued that the impact of religion as internal value of taxpayers have a greater impact in changing the behaviour of taxpayers. Therefore, Islamic religious perspective as internal value may later strengthen or weaken the relationship between geopolitical differences and tax non-compliance behaviour. Thus, the following hypothesis is developed:

H₃: Islamic religious perspective moderates the relationship between geopolitical differences and tax non-compliance behaviour among SMEs in Yemen.

4.3.3 Tax Service Quality

The issue of tax is largely similar among private organizations, which become unsustainable without satisfying customers. This idea has been supported by Asubonteng, McCleary and Swan (1996). Service quality is basically measured by customers by comparing expectations with performance (Christensen, 2001). So, service business providers frequently assess the service quality provided to their customers in order to increase their service quality and identify problems to attain customer satisfaction (Stiglingh, 2014).

In taxation, majority of empirical studies concluded that the relationship between tax service quality and tax non-compliance is negative (e.g., Job & Honaker, 2003; Torgler, 2007; Lin, Wang & Huang, 2011; Alabede, 2012). Hidayat *et al* (2014) explained that since tax service quality has a direct impact on the level of taxpayers' satisfaction, and on taxpayers' behaviour, it is important to increase satisfaction of taxpayers by increasing the quality of service to taxpayers. Chen and Kao (2009) explained that there is interaction between the tax officers and the taxpayers, with the interaction influencing the perception of taxpayers about the quality of the tax service received from the tax authority. Moreover, Jackson and Milliron(1986) stated that the approach in which taxpayers are treated in the provision of tax service has an impact on their behaviour.

Along a similar line of study, Al-Yasani (2005) showed that most citizens are not satisfied with the quality of public service delivered in Yemen, including tax service. This viewpoint is an established public opinion in Yemen. The current study

empirically highlights the relationship between tax service quality and tax non-compliance in Yemen.

Drawn from the theory of social influence, the behaviour of a taxpayer is posited to change according to his opinions and attitudes about the tax service quality. Accordingly, the following hypothesis is developed:

H₄: There is a negative relationship between tax service quality and tax non-compliance behaviour of SMEs in Yemen.

However, the Islamic religious perspective of the taxpayers may dictate the outcome of the relationship between tax service quality and the behaviour of taxpayers. In other words, although tax service quality exceeds what is expected by taxpayer, which may improve his compliance behaviour, his religious perspective may moderate his behaviour. Mohdali and Pope (2014) stated that the willingness to pay tax depends on the religious belief of the taxpayer, and consequently, integrating Islamic religious perspective as a moderator may alter, strengthen or weaken the relationship between tax service quality and tax non-compliance. Accordingly, the following hypothesis is developed:

H₅: Islamic religious perspective moderates the relationship between tax service quality and tax non-compliance behaviour among SMEs in Yemen.

4.3.4 Public Governance Quality

It is generally known that the government's ability to manage the country's resources effectively and harness all the political tools for the benefit of citizens will result in the interaction between government and citizens in the economic, social and political aspects (Kaufmann, Kraay&Mastruzzi, 2007). Normally, public governance is judged as "good" when the government uses and manages the resources of the country to respond to the requirements of the citizens. These requirements vary in importance, as some of them are more important than others, so the government should know their priorities. Based on social exchange theory, relationships between government and citizen are created by the use of subjective cost and benefit, and evolve on the principle of give and take. So, it is expected that the government will equally keep its part of the contract by providing quality public governance.

In taxation, the relationship between taxpayers and the government is based on psychology's law of reciprocity, which calls for cooperation from both parties. Many of researchers concluded that public governance quality is negatively correlated to non-compliance (Obid, 2004; Lassen, 2003; Besancon, 2003; Rotberg, 2005; Ho *et al.*, 2006; Akpo, 2009; Kirchgassner, 2010; Ross & McGee, 2011). Philips and Sandall (2009) explained the link between public governance quality and tax non-compliance. They argued that the citizens support the government to do its duties through payment of tax. In relation to this, governments finance a significant part of their payments from tax revenues and thus, tax compliance is very important as government could use these funds to provide public service and aid its financial emergencies (Ser, 2013). For instance, in Yemen, the amount of tax non-compliance in the year 2013 is approximately equal to the budget deficit for the same year.

Hence, eliminating the problem of tax non-compliance will largely support the government to cover such deficit.

In this line of study, Torgler (2003) stated that the positive behaviour by the government will generate positive attitude and action by the citizens to comply with payment of tax. Ser (2013) supposed that if the individuals perceive the government is fair, then they will have more confidence towards the government, and so they will comply with tax. Damayanti, Sutrisno, Subekti and Baridwan (2015) argued that the perception about the government is the main reason behind the intention to comply with tax rules. Besancon (2003) extended the duties of the government and suggested that the government exists for the purpose of offering common and political goods to the citizens and further stated that quality of public governance is achieved when the government provides high quality services to the individuals. Torgler, Schaffner and Macintyre (2007) pointed out that in order for the citizens to comply with the tax laws, they should be allowed to participate in the financial decision-making, and the government must steer clear from adopting centralization of financial decisions.

Drawing from the theory of social exchange, it is posited that the behaviour of taxpayer changes according to level of public governance quality. Accordingly, the following hypothesis is proposed to be tested:

H₆: There is a negative relationship between public governance quality and tax non-compliance behaviour of SMEs in Yemen.

However, the relationship between the quality of public governance and tax non-compliance behaviour may be contingent on the moderating effects of the taxpayer's religious perspective, because even in the presence of high public governance quality, the taxpayer may have a negative religious attitude towards tax. Accordingly, the following hypothesis is developed:

H₇: Islamic religious perspective moderates the relationship between public governance quality and tax non-compliance behaviour among SMEs in Yemen.

4.3.5 Tax Rate

The influence of tax rate on tax non-compliance has been attracting the attention of tax researchers. So many studies have been conducted to examine the influence of tax rate on taxpayer's behaviour. The results of studies concerning the relationship between tax rate and tax non-compliance are mixed, as some studies found positive association between tax rate and tax non-compliance, whereas others did not find any correlation or they found a negative correlation between tax rate and tax non-compliance. However, the majority of empirical studies evident that the high tax rate is positively related to tax non-compliance (Spicer & Becker, 1980; Clotfelter, 1983; Feinstein, 1991; Alm *et al.*, 1992; Christian & Gupta, 1993; Joulfaian & Rider, 1998; Derwent, 2000; Ali, Cecil, & Knoblett, 2001; Lin & Yang, 2001; Park & Hyun, 2003; Fisman & Wei, 2004; McGee & Ho, 2006; McGee & Lingle 2006; McGee & Rossi, 2006; Richardson, 2006; Peter, 2008; Dunem & Arndt, 2009; Hai & See, 2011; Ser, 2013; Levin & Widell, 2014; Nor Azrina, Ling & Wah, 2014; Zakariya'u, 2015).

According to the deterrence theory, a high tax rate leads to decrease in tax non-compliance. In this regard, Allingham and Sandmo (1972) referred to the scenario of the income effect. They argued that the effect of tax rate on non-compliance includes the substitution effects; therefore, higher tax rate will reduce after-tax-income and decrease non-compliance. They therefore concluded that the net change in tax compliance behaviour due to the effect of tax rate is ambiguous. Meanwhile, Mwangi (2014) stated that the high tax rate is the main cause of tax non-compliance behaviour. Accordingly, the hypothesis of the current study is developed below:

H₈: There is a positive relationship between tax rate and tax non-compliance behaviour of SMEs in Yemen.

Based on what is mentioned above, literature arguably supported that the findings in the relationship between tax rate and tax non-compliance are inconsistent. Baron and Kenny (1986) suggested that moderator is introduced when the relationship between variables is inconsistent. Similarly, Kirchler (2007) indicated that the association would be possibly moderated by certain variables. The moderating effect of Islamic religious perspective of the taxpayer on the relationship between tax rate and tax non-compliance cannot be underestimated as the impact of tax rate on non-compliance behaviour will only manifest itself, because the taxpayers can be influenced by their religious perspective. Thus, the following hypothesis is developed:

H₉: The Islamic religious perspective moderates the relationship between tax rate and tax non-compliance behaviour of SMEs in Yemen.

4.3.6 Penalties

Penalties are described in the literature as an important factor that may reduce the level of tax non-compliance. Allingham and Sandmo (1972) stated that tax non-compliance could be decreased by increasing the penalties. In addition, Tittle (1980) pointed out that penalties have a significant negative relationship with tax non-compliance, and this result is supported by Witte and Woodbury (1985), Feld and Frey (2006), Sanders, Reckers, and Iyer (2008) and Twum (2014).

Doran (2009) attributed the importance of penalties to two reasons. First, the nature of human beings assumes that taxpayers will not comply with tax rules without enforcement and, second compliant taxpayers should be assured that non-compliant taxpayers will be penalized by the tax authority. Thus, Doran (2009) concluded that tax penalties always motivate taxpayers to comply with tax laws, especially, when those penalties are more costly than compliance.

Based on the deterrence theory proposed by Becker (1968), people do not commit crimes because they are afraid of getting caught. Therefore, to resolve the tax issue, there must be effective punishment. Sanders, Reckers, and Iyer (2008) argued that deterrence theory provides a logical explanation of the relationship between penalties and tax non-compliance. Accordingly, the relationship between penalties and tax non-compliance is hypothesized in the following way:

H₁₀: There is a negative relationship between penalties and tax non-compliance behaviour of SMEs in Yemen.

Generally, the literature supported that the findings regarding the relationship between penalties and tax non-compliance are inconsistent. However, Islamic religious perspective as internal value may have a stronger impact on the behaviour of taxpayer than penalties as an external factor. This is because Islamic religious perspective of taxpayer may strengthen or weaken the relationship between penalties and tax non-compliance and thus, the following hypothesis is proposed to be tested:

H₁₁: *The Islamic religious perspective moderates the relationship between penalties and tax non-compliance behaviour of SMEs in Yemen.*

4.4 Research Design

Research design is the key plan that is prepared by the researcher to direct his steps to undertake the research project through the data collection and data analysis stages (Sekaran, 2003).

Zikmund (2003) explained that there are four research methods for descriptive and causal research. These methods are: (1) survey research design, which can be used to collect information related to the representative sample. This technique can organize either a survey questionnaire or interview. Moreover, respondents can be contacted through the internet, mail, telephone or in person through self administered survey questionnaire, (2) experimental research design, which is used when a researcher plans to examine the effect of some variables on a particular phenomenon - that is, when the effect of some variables is controlled or their effects are isolated. This research design can be conducted either in field or in laboratory, (3) secondary data research design, which is used when the researcher uses the past or the historical data

related to some variables, and (4) observational research design, where the researcher depends on his observations in collecting data and not on the perceptions of the respondents regarding many variables.

However, there is no rule in choosing the best research design, since it is fully dependent on the research purpose and the research environment (Cooper & Schindler, 2006; Zikmund, 2003). The most commonly used research method suggested for the study examining perception, attitude, opinion and behaviour of individuals is the survey method (Jackson & Milliron, 1986; Roth, Scholz & Dry, 1989; Cambell, 2003; Torgler, 2007; Uwaifo, 2007; Loo, Evans & McKerchar, 2010; Okusanya & Isabu, 2010).

According to Kim, Kim, Her, and Kim (2006), the data of tax compliance and non-compliance are classified into: (1) audit data, (2) tax authority data, (3) survey data, and (4) laboratory experiments data. It is worth to highlight that the data in tax non-compliance studies are usually incompletely collected because tax non-compliance is illegal, therefore, evaders will not disclose honestly (Cummings, Martinez-Vazquez, McKee, & Torgler, 2006). In the current study, consideration was given to the issues of data restrictions.

Similarly, in tax compliance issue, numerous studies utilized the survey method either in developed or developing countries (e.g., Spicer & Lundstedt, 1976; Song & Yarbrough, 1978; Mason & Calvin, 1984; Manaf, 2004; Hanefah, 1996; Tayib, 1998; Fjeldstad & Semboja, 2001; Kasipillai & Abdul-Jabbar, 2006; Saad, 2011; Verboon & van Djike, 2011; Hidayat *et al*, 2014; Mas'ud, Aliyu & Gambo, 2014). Torgler

(2007) argued that the survey method helps the researcher to obtain data relating to demographic and attitudinal variables of taxpayers. Creswell (2009) stated that the quantitative approach is suitable for studies, which contain many variables and treatments. For that reason, survey method was adopted as the research method of the current study, which is based on the quantitative research approach.

A survey questionnaire research design method was employed in the present study because it is the most appropriate way to collect primary data to obtain beliefs, personal and social facts, and attitude. Therefore, this study employed a survey questionnaire research design to gather data concerning the hypothesized relationships and such study can be categorized as a field with correlational research design or quantitative orientation (Kerlinger & Lee, 2000). Accordingly, to achieve the objectives of this study, a quantitative survey questionnaire research approach was conducted through questionnaire to measure the relationships between variables under investigation.

Literature of social science research has identified four different major categories of research designs namely, descriptive, correlational, experimental, and quasi experimental (Creswell, 2009). According to Sekaran (2003), a correlational study is a study that investigates the relationship between various variables, and when conducted in organizations, they are called field studies.

The present study is considered as correlational in nature as its main purpose is to provide a reliable and valid framework for the interaction between tax non-compliance and its determinants. In detail, the current study extends the model of tax

non-compliance to integrate Islamic religious perspective as a moderator. Furthermore, geopolitical differences, tax service quality, public governance quality and tax system structure are tested as independent variables. These variables, moderating and independent variables are justified to be relevant for the Yemeni environment.

4.5 Population and Sampling

Many scholars have stressed the importance of population and sampling in research design (Krejcie & Morgan, 1970; Sekaran, 2003; Zikmund, 2003; Hair *et al.*, 2014). Population refers to the entire elements, which might be a group of people, events, or things of interest that the researcher wishes to investigate (Sekaran, 2003). The population of the current study is the Small and Medium Enterprises SMEs in Yemen. According to COS (2013), NIS (2012) and MIT (2011), the number of SMEs in Yemen in 2010 is 45,483. This statistics is considered to be the most valid information, because the revolution and political instability began at the beginning of 2011 and the country is still unstable. Therefore, it is not expected that the country has established many SMEs during the period from 2010 up to the current date.

4.5.1 Sample Size

When the units of the population are limited, the researcher may select to study the whole population rather than taking a sample for the study (Zikmund, 2003). On the other hand, in research investigations involving several hundreds and even thousands of elements, it would be practically impossible to collect data from, or test, or examine every element. Even if it were possible, it would be prohibitive in terms of

time, cost, and other human resources, so selecting a sample was introduced by the researchers (Sekaran, 2003).

Although there is agreement among the researchers on the use of the sample, their views are different in how to determine the sample size. According to Zikmund (2003), the size of population, in most researches, does not have a major effect on the sample size. Medsker, Williams and Holahan (1994) argued that a minimum sample size of 100 is enough for Structural Equation Modeling (SEM). Roscoe (1975), as cited in Sekaran (2003), proposed rules of thumb for determining sample size. He suggested that the sample size in multivariate research should be several times (preferably 10 times or more) as large as the number of variables in the study. Hair *et al.*, (2010) explained that every parameter estimated needs 5-20 observations. In other words, at least 5 times the number of questions and observations. However, Roscoe (1975) argued that the sample sizes should be larger than 30 and less than 500 for most researches. Moreover, where samples are to be broken into subsamples, a minimum sample size of 30 for each category is necessary.

Different viewpoints came from other researchers in determining the sample size. Krejcie and Morgan (1970) explained that the sample size is determined according to the size of population. Thus, they prepared a table to find out the sample size for different level of populations. Cooper and Schindler (2006) said when preparing the sampling procedures, the researcher should try to obtain the maximum information from the largest possible number of respondents. So, the sample size for the population of the current study was determined using Krejcie and Morgan's (1970)

rule of thumb, because it achieves the largest number of respondents (see Appendix A).

The most updated number of SMEs in Yemen for the year 2010 is 45,483 (NIS, 2012; MIT, 2011; COS, 2013). In reference to the table of sample size prepared by Krejcie and Morgan (1970), the sample size of the current study is 381. However, Israel (2009) argued that in order to obtain adequate data, the researchers should increase the sample size to compensate for likely non response. Particularly, Israel (2009) recommended that researchers ought to increase the sample size by at least 30% to compensate for likely non response. Consequently, the sample size of the current study was increased to 500 to overcome the probable non response rate.

4.5.2 Sampling Technique and Selection

In the research method literature, sampling is categorized into probability and non-probability sampling. There are four general strategies for probability sampling, specifically, simple random sampling, stratified sampling, systematic sampling and cluster sampling. In the current study, for the purpose of representativeness, stratified sampling was utilized. Stratified sample means selection of representative sample of sub-groups in the same proportions in the population (Cameron *et al.*, 1997). The reason for taking a stratified sample is to have a more efficient sample that could be taken on the basis of simple random sampling. Another reason for taking a stratified sample is the assurance that the sample accurately reflects the population on the basis of the criterion or criteria used for stratification (Zikmund, 2003).

Sekaran (2003) argued that in stratified sampling, the subjects drawn from each stratum can be either proportionate or disproportionate to the number of elements in the stratum. In this regard, Sekaran and Bougie (2010) explained that a quota sampling can be considered as a form of proportionate stratified sampling, in which a predetermined proportion are sampled from different groups, but on a convenience basis. They argued that selecting strata should be on the basis of existing and appropriate information. Thus, in a specific way, a quota sampling technique was used to select the sample of the present study.

Quota sampling technique was used in the current study for 4 main reasons. Firstly, quota sampling is considered appropriate for the present study because sampling frame could not be accessed. Secondly, given the large population of 45,483 of SMEs, quota sampling technique ensures that sampling error is minimized (Cooper & Schindler, 2009). Thirdly, quota sampling technique ensures homogeneity within a group and heterogeneity across groups (Cooper & Schindler, 2009; Hair *et al.*, 2010). Finally, quota sampling technique was used because of the resource constraints of the researchers in terms of time and money (Hair *et al.*, 2010; Zikmund, 2003) as well as unavailability of a practical sampling frame (Cooper & Schindler, 2009).

Added to the above, the stratified sample is proceeded by determining the criterion of stratification, which is a characteristic of the population elements known to be related to the dependent variable or other variable of interest (Cameron *et al.*, 1997). Sekaran (2003) suggested that the researcher should select the appropriate criterion for the stratification. For instance, individuals are stratified based on the life stages,

income level, education and the like, whereas companies are stratified on the basis of size, industry, location, and so on.

In the current study, geopolitical differences form one of the independent variables. This variable is a categorical variable and measured by the location of the Yemeni cities. Yemen contains more than 25 main cities (COCA, 2014). However, the current study only focused on the cities that contain a large number of thriving SMEs. Consequently, such Yemeni cities were utilized as criterion for stratification in the present study.

Practically, the adoption of quota sampling technique, on the basis of Yemeni cities, involves five steps, as follows:

The first step is determining the population - As indicated earlier, the population is 45,483 (see Table 2.1).

The second step is defining the stratum - The logical stratum in this study is cities of Yemen. According to MIT (2011), 78.4% of SMEs in Yemen are located in 7 cities, specifically, Sana'a, Aden, Taiz, Mukalla, Seiyun, Ibb and Hodeidah. This is followed by identifying the number of SMEs in each city based on the proportions of SMEs in each city (see Table 2.2).

The third step involves determining the number of elements (SMEs) in each stratum (city) by multiplying the percentage of SMEs in each stratum on the population. For example, number of SMEs in Sana'a can be calculated by multiplying 45,483 on 25% ($45,483 \times 25\% = 11,371$).

The fourth step is determining the quota of each city in the sample by multiplying the proportions of each city by the total population, and dividing the yield to the total SMEs of the seven cities (total of SMEs in the 7 cities = 35,660). For example, 25% of SMEs in Yemen are located in Sana'a. To determine the quota of Sana'a in the sample size, the percentage of SMEs of Sana'a should be multiplied by 45,483, and divided by 35,660 ($25\% \times 45,483 / 35,660 = 32\%$).

The fifth step entails determining the quota of each city the number of subjects in a sample by multiplying the number of sample size by the quota of each city from the sample. For example, number of subjects in sample in Sana'a is determined by multiplying the sample size by 32% ($500 \times 32\% = 160$).

As mentioned above, data was collected only from the 7 largest cities in Yemen, because they contain 78.4% of the Yemeni SMEs, while 20.6% of Yemeni SMEs are distributed among nearly 20 cities. Accordingly, the remaining cities were ignored as there is no detailed information provided for each city. Table 4.1 shows the calculation of the sample size in the strata (the major Yemeni cities).

Table 4.1
Determining the number of subjects in the sample for the largest 7 cities in Yemen

Stratums (Cities)	Location of the city	The proportion of SMEs in the strata	Number of Elements in Stratum	The proportion of each stratum in the sample (Adjusted rates)	Number of Subjects in the Sample
Sana'a	North	25%	11,371	32%	160
Aden	South	13.4%	6,095	17%	85
Taiz	North	10.5%	4,776	13%	65
Mukalla	South	7.8%	3,548	10%	50
Hodeidah	North	7.8%	3,548	10%	50
Ibb	North	7.6%	3,457	10%	50
Seiyun	South	6.3%	2,865	8%	40
The other cities	North & South	21.6%	9,823	-	-
Total	-	100%	45,483	100%	500

Source: Prepared by the author based on the statistics provided by Ministry of Industry and Trade (2011).

Having identified the sample size of the strata, the next step is to select the sample elements in each stratum. In order to do so, separate simple random sample was taken within each stratum. Unfortunately, the Ministry of Industry and Trade (MIT) did not provide all elements in the strata. Therefore, the simple random sample procedures were requested from MIT by providing them the sectors of the enterprises as a criterion of sample selection. In other words, the sample in the cities was selected by MIT, from different sectors and this provided a list of 500 enterprises.

4.5.3 Unit of Analysis

The present study examines the relationship between tax non-compliance and its determinants in the level of enterprise unit. Thus, unit of analysis of the current study is SME represented by the manager, who in most cases is the owner of the enterprise. This owner and manager can provide right information, reflective of the real situation in the enterprise regarding the variables of the study. Consequently, it was assumed that managers have full independence so they treat the enterprise they are in charge of as their own business. Additionally, respondents, either owners or managers, are supposed to be fully aware of their right and duties towards the government.

4.6 Operational Definitions of Variables

The model of the current study contains 5 independent variables and one moderating variable to investigate their influence on the dependent variable. These variables were derived from literature and they were defined in different dimensions and measured using different number of items. All of these variables are explained in the following sub-sections.

4.6.1 Tax Non-compliance Behaviour

Tax non-compliance behaviour is the dependent variable of the current study. It is operationally defined as failure to meet tax obligations. Khan and Ahmad (2014) showed that non-compliance is a process in which a taxpayer does not pay tax to the tax authorities. Quadri (2010) defined tax non-compliance based on the concept of "tax gap". Therefore, tax non-compliance is considered as the difference between the actual collected tax and the amount that would be collected if there is full compliance. It can be described by other terms such as tax evasion, cheating, errors and misreporting (Abdul-Jabbar & Pope, 2008).

Alm (1999) argued that tax non-compliance behaviour is extremely difficult to be measured. Long and Swingen (1991) and Tanzi and Shome (1993) suggested in case of difficulty in measurement, an indirect method has to be developed to measure the phenomenon. The most commonly used method is the self-report method, which could be designed to measure behaviour in a supposed case scenario (Long & Swingen, 1991). Marshall, Smith and Armstrong (2005) advised to employ the scenario when the phenomenon of study is a sensitive issue like taxation. Kirchler and Maciejovsky (2001) argued that the use of a scenario is the best way as it may reduce personal bias. For the above mentioned reasons, many studies have employed the scenario technique in both developed and developing countries, for instance, Bobek (1997) and Marshall *et al.* (2005), Abdul-Jabbar and Pope (2008) and Saad (2011). In order to measure the dependent variable of the current study, the scenario case was adapted from the literature (Marshall, Smith & Armstrong, 2005; Bobek, 1997; Abdul-Jabbar & Pope, 2008; Saad, 2011).

Hidayat *et al.* (2014) identified tax compliance in the compliance register, compliance to deposit return letter of notification, compliance in the calculation and payment of taxes owed, and compliance in payments in arrears. Long and Swingen (1991) and Brown and Mazur (2003) acknowledged tax non-compliance as having four components: (1) reporting non-compliance, which means not providing accurate information on the taxable income, (2) deduction non-compliance, which means claiming overstatement of deduction, (3) filing non-compliance, which means failure to submit a tax return on time voluntarily, and (4) payment non-compliance, which means non-compliance to pay taxes on time. In order to measure the non-compliance for each component, the respondents were required to read the hypothetical scenario and answer the questions. Table 4.2 presents the components and measurement of tax non-compliance behaviour.

Table 4.2
Measurement items of tax non-compliance behaviour

Components	Measurement	Questions	References
Reporting non-compliance		Indicate the taxable income that should be included in the report.	Brown and Mazur (2003), Abdul-Jabbar & Pope (2008)
Deduction non-compliance	Indirect	How much should be deducted as business expenditure?	Abdul-Jabbar & Pope (2008)
Filing non-compliance	hypothetical scenario	Which of the dates below should Ahmed file his income tax?	Brown & Mazur (2003)
Payment non-compliance		How many days after receiving assessment notice should the income tax be paid?	Brown & Mazur (2003)

Source: Prepared by the author

4.6.2 Islamic Religious Perspective

The literature reviewed shows that there have only been few studies conducted to test the influence of religious perspective on the phenomenon of tax non-compliance. However, the current study concentrated on the different perspectives within the Islamic religion. Al-Ttaffi *et al.* (2011) investigated the Islamic perspective as independent variable, and suggested further studies to examine its moderating role.

The Islamic perceptions on tax, which are summarized in three perspectives, were used for measurement. The respondents were required to indicate their religious perspective in order to identify the influence of taxpayers' perspective in moderating the relationship between tax non-compliance and its determinants.. Table 4.3 presents the measurements of Islamic religious perspective.

Table 4.3
Measurements of Islamic religious perspective towards tax

The variable	Measurements	Source of Measurements
Islamic religious perspective	Totally permissible	Nabulsi (2005)
	Permissible under circumstances and conditions	Mawdudi (2005), Al-Omari (2009), Hasan (2010) & Al-Jibreen (2012)
	Totally forbidden	Standing Committee for Scientific Research & Fatwa (1994)

Source: Prepared by the author

4.6.3 Geopolitical Differences

The term "Geopolitics" has a meaning that combines geography and politics. It is a complex geographical and political factors affecting or determining the nature of a state or region (Dittmer, 2013).

Okusanya and Isabu (2010) argued that the political affiliation is considered an influential factor mainly on the culture and attitudes of the people. They conducted a study about attitude of family life education in 2 states of Nigeria, specifically, Katsina and Ekpoma. Also, Uwaifo (2007) in his study in Nigeria classified the 36 states into 6 geopolitical regions. In both studies, the authors divided the states on the basis of geographical location and political affiliation.

The current study was carried out on a country with similar circumstances, as it is two parts and each part has special political attitude towards the government. Yemen was two regions North Yemen and South Yemen, which united in 1990 (Bahaj, 2000). Southerners people have different attitudes towards the government from northerners people (Al-Shaibi, 2000). For that reason, the regional location of taxpayers, whether south or north, is the appropriate definition and measurement of the current study. This variable was adapted from Uwaifo (2007) and Okusanya and Isabu (2010). For the purpose of the study, the respondents were required to specify their governorates to identify whether they are from North or South.

4.6.4 Tax Service Quality

Service quality can be defined as a degree of excellence or superiority provided by the tax office. It can be measured by comparing expectations with performance. The evaluation of service quality could be objectively or subjectively conducted (Christensen, 2001).

Rust and Oliver's (1994) model consists of three components: the service product, the service delivery and the service environment. Alabede (2012) model, adopted

from the work of Caro and Garcia (2007), explained three dimensions of service quality: interaction quality, physical environment quality and outcome quality. Gronroos (1984) developed two dimensions: technical quality and functional service. Christensen (2001) adopted Gronroos' (1984) model and provided more explanation of the two dimensions technical and functional dimensions. Thornton and Shaub (2013) included one more dimension, which is the corporate image. This dimension is with customer's perception of the organizational quality. Many developed countries applied the concept of New Public Management on taxpayers by giving more consideration to their tax service requirements and accord the taxpayers the status of customers (Kirchler, 2007). Therefore, the literature related to customer satisfaction may be relevant in the measurement of tax service quality.

Parasuraman, Berry, and Zeithaml, (1991) used 22 items to measure tax service quality. However, 18 of these items are considered to be relevant for the environment of Yemen. Therefore, the current study adapted 18 items from Parasuraman *et al.* (1991) to measure tax service quality, following the measurement of Fararah and Al-Swidi (2013) and Fararah (2014). Table 4.4 shows the dimensions and measurement items of tax service quality.

Table 4.4
Dimensions and items of tax service quality

Dimensions	Items
Reliability	<ul style="list-style-type: none"> • I believe that tax office in Yemen offers wide range of services • I believe that tax office in Yemen offers convenient services in short processing time • I feel secure when conducting transactions with tax office in Yemen • I believe that tax office in Yemen meets the taxpayers demands by adding more counters during the peak time
Responsiveness	<ul style="list-style-type: none"> • I feel that tax officers in Yemen are willing to help me when I need to enquire about any matters related to tax • I believe that tax officers in Yemen show high respect when dealing with us • I believe that tax officers in Yemen have fast and efficient services counters
Assurances	<ul style="list-style-type: none"> • I believe that tax office staff in Yemen are polite and friendly • I feel that tax office staff in Yemen are always ready to provide advices related to the taxable matters • I believe that tax office staff in Yemen provide taxpayers with easy access to information they need • I feel that tax office staff in Yemen have knowledgeable and experienced management team
Empathy	<ul style="list-style-type: none"> • I feel that I am given individual attention when dealing with tax office in Yemen • I feel that tax officers in Yemen always respond to my interests • I feel that tax office staff in Yemen understand my specific needs • I feel that if I have any problem, tax office in Yemen does whatever is required to solve it
Tangibility	<ul style="list-style-type: none"> • I believe that tax office in Yemen has good offices with all required facilities • I believe that I can have speedy and efficient transactions when dealing with tax office in Yemen • I believe that tax office in Yemen has good offices to service taxpayers conveniently

4.6.5 Public Governance Quality

There are three types of governance: public governance, economic governance and social governance. This study focuses on the public governance quality, which is a multi-faceted concept that includes all aspects of employing authority for the benefit of the people (Alabede et al., 2011). Rotberg (2005) defined the public governance

quality as the provision of political goods provided by the government to the citizens effectively. Torgler, Schaffner and Macintyre (2007) pointed out that the citizens, in order to comply with the tax laws, must participate in the financial decision-making, and the government must be away from the centralization of financial decisions. Ser (2013), however, argued that if the individuals perceive the government is fair, then they will have more confidence towards the government, and so they will comply with tax. Lassen (2003) clarified that the political goods offered by the government should deserve the payment of taxpayers.

Torgler *et al.* (2007) argued that public governance quality is a multidimensional variable. Kaufmann, Kraay and Mastruzzi (2007) explained that public governance quality contains 5 dimensions, specifically, (1) voice, democracy and accountability, (2) political stability, (3) government effectiveness, (4) rule of law and (5) control of corruption. These dimensions were used by Darby *et al.* (2010). The present study adapted the measurement items of Darby *et al.* (2010). Table 4.5 shows the dimensions and measurement items of public governance quality.

Table 4.5

Dimensions and items of public governance quality

Dimension	Items
Voice, democracy and accountability	<ul style="list-style-type: none"> • I trust the Parliament Council in Yemen in making good laws for Yemen • I believe that there is a free and fair election in Yemen • I believe that there is no wastefulness in government expenditure in Yemen • I have access to the published accounts and annual report of the government in Yemen
Political stability	<ul style="list-style-type: none"> • I believe that political stability is improving in Yemen • I believe that political protest is not a threat to Yemeni stability • I believe that territorial and sectarian conflict is not a threat to stability in Yemen
Government effectiveness	<ul style="list-style-type: none"> • I am satisfied with quality of general infrastructure in Yemen • I feel that Yemeni public servants are not vulnerable to political interference in Yemen • I am satisfied with the manner the government is handling the health service in Yemen • I am satisfied with the manner the government is handling the education system in Yemen
Rule of law	<ul style="list-style-type: none"> • I feel that Yemeni Judiciary is free from interference of other agencies of government • I believe that justice is fairly administered in Yemen • I believe that Yemeni government has an effective power in combating crime
Control of corruption	<ul style="list-style-type: none"> • I trust the financial honesty of Yemeni politicians • I believe that the diversion of public funds due to corruption is not common in Yemen • I think that individual and firms, frequently, make extra payments in connection to tax payment, loan application, securing contract etc.

4.6.6 Tax System Structure

Many studies dedicated to examining the issue of tax compliance and non-compliance emphasized on the model of Fischer *et al.* (1992). Tax system structure is one of the most important variables in Fischer *et al.*'s (1992) model. Mas'ud, Aliyu and Gambo (2014) argued that the importance of Fischer's model lies in its insight into the importance of tax rate and penalties on tax non-compliance. Umar *et al.*

(2012) explained that most taxpayers in developing countries intending to evade tax, first look at two things: tax rate and penalties, and then decide whether to comply or not. For the reasons explained above, the focus in the current study is on the tax system structure through two dimensions:

(1) Tax rate: It is defined as the percentage at which an individual or corporation are taxed (AFFT, 2007). Bazart and Bonein (2012) stated that fairness of tax rate leads to a decrease in the level non-compliance. McKerchar and Evans (2009) argued that the level of trust between taxpayers and the government is the most important role in determining the impact of tax rate on non-compliance. Spicer & Becker (1980) discovered that when taxpayers recognize that their tax rate is higher than tax rate paid by others, they will have higher records of tax non-compliance.

(2) Penalties: Based on the deterrence theory of Becker (1968), people do not commit crimes because they are afraid of getting caught. Cherry (2001) argued that compliance is a result of punishment. Measurement items of tax system structure were adapted from Gilligan and Richardson (2005) and James, Reinhart and Murphy (2005). Table 4.6 shows the dimensions and measurement items of tax system structure.

Table 4.6

Items of tax system structure

Variables	Items
Tax rate	<ul style="list-style-type: none"> • Tax rate on higher income should be more than tax rate on lower income. • High income taxpayer should pay proportionately more than low income taxpayer • Tax rate should not be the same for all taxpayers • It is fair to non comply with tax if the tax rates are too high • It is unfair to non comply with tax if tax rate is fair
Penalties	<ul style="list-style-type: none"> • I think the person who is caught for tax non-compliance, will be forced to pay the tax he owes with interest • I think that the taxpayer who is caught for tax non-compliance, will be forced to pay substantial fine and pay the tax he owes with interest • I think the person who is caught for tax non-compliance, will be taken to court and pay the tax he owes with interest • I think the person who is caught for tax non-compliance, will be taken to court, pay substantial fine and pay the tax he owes with interest

4.7 Measurement of Variables

The current study applied quantitative approach, and data was collected through the sampling survey method using a questionnaire. Hair, Money, Page and Samouel (2007) said that the interval scale level is the most appropriate for quantitative research and accordingly, the interval scale level was used for measurement of some variables, while nominal scale measurement was used for other variables.

Likert scale measurement is one of the most commonly used scales to examine perception and attitudes (Eutsler & Lang, 2015). Thus, multiple-item Likert scale was considered to be an appropriate interval scale to measure some variables included in the current study. According to Al-Marri, Ahmed & Zairi (2007), the proper number of scale points is disputable and to date, no definitive length has been agreed upon. Some studies declared that more scale points improve the variance and reliability of the scale, whereas others argued that increasing scale points may have

unintentional consequences (Eutsler & Lang, 2015). They suggested that Likert scales are typically 5 or 7 point scales, where each point is labeled to indicate some extent of agreement with a particular statement. Al-Marri *et al.* (2007) conducted their study in United Arab Emirates using 5 Likert scale. They argued that 5 Likert scale is appropriate for respondents with different levels of education, therefore, it is suitable for respondents from Middle East region to answer and report their perceptions, attitudes, behaviours and assessments.

Consequently, to achieve the objectives of the current study, a five-point Likert scale ranging from -4 (strongly disagree) to -5 (strongly agree) was used. This scale was used in the literature of tax compliance and non-compliance (e.g., Hanefah, 1996; Tayib, 1998; Manaf, 2004; McGee, 2006, McGee & An, 2007; Abdul-Jabbar & Pope, 2008; Aljaidi, 2008; Devos, 2008; Ching, 2013).

4.7.1 Tax Non-compliance Behaviour

Tax compliance behaviour was measured with four components covering the four types of tax compliance using an indirect hypothetical scenario case. Respondents were asked to indicate (1) the amount of income that should be reported on the tax return (2) the amount of deduction that should be claimed on the tax return (3) the date that the income tax returns should be filed, and (4) how many days after receiving an assessment notice the income tax should be paid. Option "a" was coded as 1 and interpreted as compliance, while options "b" and "c" were coded as 2 and interpreted as non-compliance. In other words, option "a" was coded as 1, option "b" was coded as 2 and the option "c" was coded as 3. The value 1 was interpreted as

compliance, and the values 2 and 3 were transformed as 2 and interpreted as non-compliance.

On the whole, tax non-compliance was calculated by calculating the mean values of the four measurements. If the mean is equal to 1, it was interpreted as fully compliant respondent, whereas if the mean is equal to 2, it was interpreted as fully non-compliant respondent, while if the mean is between 1 and 2 it was interpreted as partly compliant respondent. For the purpose of analysis, tax non-compliance was measured using ordinal scale and arranged from low non-compliance to high non-compliance, where full compliance was coded as 1, part non-compliance was coded as 2 and full non-compliance was coded as 3 (Ashby, Webley & Haslam, 2009; Alabede *et al.*, 2011).

4.7.2 Islamic Religious Perspective

The three Islamic perspectives towards tax non-compliance were employed for the measurement of the variable. Each respondent is required to provide his/her religious perspective about tax whether totally permissible (Halal), permissible under circumstances and conditions or totally forbidden (Haram). For the purpose of cross tabulation analysis, the three Islamic religious perspectives were treated as a categorical variable, while these three perspectives were utilized and arranged from low strict (totally permissible), moderate strict (permissible under circumstances and conditions) to high strict perspective (totally forbidden) for the purpose of regression analysis. The perspectives of respondents on tax were linked with his/her intention of non-compliance with tax to identify the influence of Islamic religious perspective on tax non-compliance behaviour.

4.7.3 Geopolitical Differences

Geopolitical differences were measured by using nominal scale. The political division in Yemen before 1990 was adopted to categorize the respondents. Thus, North and South were used as a proxy to measure geopolitics of the respondents. So, SMEs in Yemen were divided into southerners and northerners. Respondents were required to indicate their location in Yemen whether in north or south. Since many Yemeni people have sensitive attitude about this terms (North and South), an indirect way was followed to identify their location. Respondents were asked to specify their governorates, then, this specification was used as a guide to know their region. Yemen contains twenty one governorates. Thirteen of them are located in the north region, namely, Sana'a, Amanat Al-A'semah, Taiz, Ibb, Amran, Sa'adah, Mareb, Al-Jaof, Al-Baidha'a, Raimah, Al-Mahwait, Hajjah and Al-Hudaidah, while the other eight governorates are located in the south region, namely, Aden, Lahej, Al-Dhalea, Abian, Shabwah, Hadhramout, Al-Mahrah and Suqatra island. The values were assigned to "1" as North, and "2" as South.

4.7.4 Tax Service Quality

Tax service quality was measured with 18 items and rated using a five-point Likert scale. Respondents were asked to indicate their disagreement or agreement to statements relating to the quality of service quality. The high score "5" (strongly agree) indicates that the respondents believe that the quality of service quality is high quality, whereas a low score "1" (strongly disagree) means low quality. The measuring 18 items were combined to obtain a total scale of the tax service quality.

For interpretation, the current study followed the 50th percentile method proposed by the National Institute of Technology Standard USA (2010), which is defined as a statistical tool that provides an estimate of the proportion of the data that should fall above and below a particular range (Isa, 2007). The mean score was used for the analysis as recommended by Kaplan (1983) and Camacho *et al.* (2001), because mean score allows to reduce the potential for error in measuring different variables, and, as a consequence, increases the reliability of the result, which cannot be attained by using individual score or total score. Accordingly, the mean score below 3 is regarded as low, and above 3 is considered as high. This method has been used in other studies in literature (e.g., Isa, 2007; Alabede *et al.*, 2011a; Alabede *et al.*, 2011b; Alabede *et al.*, 2011c) for interpretation of the mean score. In other words, a mean score 3 and higher indicates a high perception about the tax service quality, while a mean score lower than 3 is a signal of low perception about the tax service quality.

4.7.5 Public Governance Quality

Public governance quality was measured with 17 items and rated using a five-point Likert scale. Respondents were asked to indicate their disagreement or agreement to statements relating to the quality of public governance. The high score "5" (strongly agree) indicates that the respondents believe that the quality of public governance is high quality, whereas a low score "1" (strongly disagree) means low quality. The measuring 17 items were combined to obtain a total scale of the public governance quality. The mean score was used for the analysis, and following the 50th percentile method, a mean score 3 and higher indicates a high perception about the public

governance quality, while mean score lower than 3 is an indication of low perception about the public governance quality.

4.7.6 Tax System Structure

Tax rate and penalties are the variables under the under tax system structure. Tax rate was measured with 5 items. Respondents were asked to indicate the extent of their agreement or disagreement with statements relating to tax rate. The mean score was used for the analysis. A high score "5" (strongly agree) suggests that the tax rate is perceived to be fair, while a low score "1" (strongly disagree) means the tax is less fair. The measuring 5 items were combined to obtain a total scale of the tax rate. A mean score 3 and higher indicates a high perception about fairness of tax rate, while a mean score lower than 3 is a signal of low perception about fairness of tax rate.

Penalties were measured with 4 items. Respondents were asked to indicate the extent of their agreement or disagreement with statements relating to penalties. A high score "5" (strongly agree) is an indication that the penalties have a high influence on tax non-compliance, while a low score "1" (strongly disagree) is an indication that the penalties have a low influence on tax non-compliance. The measuring items of the 4 items were combined to obtain a total scale of the penalties. A mean score 3 and higher indicates a high perception penalties, and a mean score lower than 3 is a signal of low perception about penalties.

4.8 Questionnaire Design

The current study aims to test the research hypotheses based on the theoretical framework. Quantitative research technique and survey were used. The target of the

current study is SMEs in Yemen. The data was collected from various cities in Yemen, thus, it is difficult to use interview to collect data from the respondents. Accordingly, questionnaire was designed and distributed to the sample of the study.

There are some advantages of using questionnaire and they are, (1) it allows researcher to compare respondents because the respondents are given the same questions, (2) it ensures the quality of data is collected through standardized questionnaires, and (3) it makes data processing easier (Roshidi *et al.*, 2007). However, Kim *et al.* (2006) criticized the survey through questionnaire. They argued that there is a potential of inaccurate information provided by respondents as it is totally in the control of respondents in answering the questionnaire and they tend to give false and simple answer to the questions. Anyhow, gathering data in this way is much better than personal identification and thus, utilizing questionnaire in tax compliance and tax non-compliance studies is considered to be the best alternatives (Ching, 2013).

The questionnaire has a cover letter attached to it, which is considered as a courtesy to express gratitude for involvement in the survey undertaking. The questionnaire was divided into 3 parts. The first part was designed to measure the dependent variable of the current study which is "tax non-compliance" by using a hypothetical scenario case. Respondents were asked to indicate 4 tax situations, namely, reporting non-compliance, deduction non-compliance, filing non-compliance and payment non-compliance. Also, Islamic religious perspective was measured in this part. Each respondent was required to provide his/her religious perspective about tax whether

totally permissible (Halal), permissible under circumstances and conditions or totally forbidden (Haram).

The second part of the questionnaire was designed using a five-point Likert scale from "1" to "5" (strongly disagree, disagree, neutral, agree and strongly agree). Tax service quality, public governance quality and tax system structure were measured in this part. It is noteworthy that some studies used reverse items in the questionnaire. Although there are numerous advantages to this type of questions, but they may lead to ambiguities, make surveys more difficult for respondents and often lead to increased levels of measurement error, especially in developing or least developing nations (Weijters& Baumgartner, 2012). Therefore, the questionnaire used in the current study did not contain any reverse items.

As for the third part of the questionnaire, it was designed to obtain the owners, managers and business information of the respondents, specifically, nature of business, location of business and other demographic information (see Appendix B).

Table 4.7 summarizes the structure of the questionnaire.

Table 4.7
Summary of structure of the questionnaire

Variable	Dimension\ components	Type of question	Number of items/ questions
Tax non-compliance behaviour	Reporting non-compliance	Hypothetical scenario	1
	Deduction non-compliance		1
	Filing non-compliance		1
	Payment non-compliance		1
Islamic religious perspective	Tax is totally permissible	Categorical ¹	1
	Tax is permissible under circumstances and conditions		
	Tax is totally forbidden		
Tax service quality	Reliability	Five Likert scale	4
	Responsiveness		3
	Assurances		4
	Empathy		4
	Tangibility		3
Public governance quality	Voice, democracy and accountability	Five Likert scale	4
	Political stability		3
	Government effectiveness		4
	Rule of law		3
	Control of corruption		3
Tax system structure	Tax rate	Five Likert scale	5
	Penalties		4
Geopolitical differences	South & North (Governorates are the proxy of geopolitical differences)	Categorical	1

The questionnaire should be pre-tested before distribution in order to make sure that the measurement measures what it is intended to measure. Furthermore, one of the problems in obtaining data from an Arab society is the issue of English language, as Arabs do not possess sufficient familiarity with English to answer the questionnaire (Fararah, 2014). For these reasons, the questionnaire, as data collection instrument of the current study, was pre-tested and translated into Arabic language (see Appendix C).

¹ Islamic religious perspective was treated as ordinal variable for the purpose of regression. See subsection 4.7.2.

For the purpose of confirming the goodness of the measurement, and to avoid any mistranslation of the words, expressions and concepts used in development of the questions, a number of steps were taken in the translation into Arabic version as suggested by Brislin (1986) and Elbanna, Child, and Dayan (2013). First, the questionnaire was translated after a discussion with 2 senior visiting lecturers at Universiti Utara Malaysia (UUM) whose native language is Arabic. In the next step, both the English and Arabic versions of the questionnaires were checked by an expert translator. Last of all, both versions of the questionnaire were checked by 3 faculty members at the Accounting Department at Hadhramout University for more feedback and comments.

Following pre-test, besides language issue, hypothetical scenario was modified slightly and order of Islamic view was rearranged. No major modification was made. However, a pilot study was performed on this final version of the questionnaire to test the reliability to make sure that the items were properly understood.

4.9 Pilot Study

The main purpose of the pilot study is to ensure that the items, which will be used, were well worded and correctly understood. According to Sproull (2002), pilot test is important for testing the reliability of the measure. Sekaran (2003) declared that there are four common methods to measure reliability namely, test-retest methods, split half method, alternative form methods, and Cronbach's alpha coefficient. However, it was clarified by Davis (2007) that the first three methods have been criticized due to their practical weaknesses. As for the Cronbach's alpha method, it was argued that

this method is the best method to measure reliability, because it overcomes the weaknesses of the other methods. Hair *et al.* (2010) explained that the main criterion for testing data collection instrument is reliability measurement, which can be gained through calculation of Cronbach's Alpha coefficients. Moreover, the Cronbach's alpha coefficient method is the most commonly method used by the researchers, particularly in social science researches (Davis, 2007). Consequently, the present study, as a social science research, used the Cronbach's alpha method to assess the reliability of the constructs measurements.

According to Nunnally and Bernstein (1994), the minimum standard for Cronbach's alpha is 0.7. But Hair *et al.* (2010) argued that the minimum acceptable level of Cronbach's alpha is 0.60 for any construct to measure reliability and George and Mallery (2006) provided a rule of thumb for rating Cronbach's alpha coefficient as follows: $>.90$ (excellent); $>.80$ (good); $>.70$ (acceptable); $>.60$ (questionable); $>.50$ (poor) and $<.50$ (unacceptable). The interpretation of the result of reliability test in this study was guided by these rules of thumb.

The pilot study has to involve respondents from the same pool of the study from which the actual data will be collected (Bradburn, Sudman, & Wansink, 2004). Therefore, respondents from Mukalla city, which is one of the largest cities of Yemen, included within the sample of the study, were involved as the sample for the pilot study and they were asked to fill in the questionnaire. Furthermore, they were asked to comment if they had any difficulties in understanding the questions in order to eliminate the misunderstanding and confusion related to the items.

Generally, an appropriate size for a pilot study is approximately 30 cases (Malhorta, 2008; Sekaran & Bougie, 2010). Cooper and Schindler (2006) suggested that it may range from 25 to 100. Accordingly, 50 questionnaires were prepared and distributed to SMEs in Mukalla city for the purpose of the pilot study. The period of collection of data for the pilot study was in the month of February 2016. The questionnaires were administered by the researcher assistant. From the 50 questionnaires, 41 questionnaires were returned at a response rate of 82%.

As broadly recommended in the literature, modifications were made following the comment received from the respondents. Based on the data collected from the pilot study, the reliability test was performed. Table 4.8 shows the results.

Table 4.8
Reliability analysis of pilot study

Constructs	No. of Items	Cronbach's alpha
Tax service quality	18	0.84
Public governance quality	17	0.82
Tax rate	5	0.88
Penalties	4	0.85

Based on the rule of thumb provided by Nunnally and Bernstein (1994), George and Mallery (2006) and Hair *et al.* (2010), the overall results of the pilot survey were satisfactory, where variables had Cronbach's alpha greater than 0.8. However, there are few comments introduced by the respondents about some sentences, hence, considerable thought was given to these comments and the sentences were reworded accordingly. Following modification, the final draft was used to collect data from the actual respondents.

4.10 Data Collection Procedures

There are many methods of collecting data via surveys such as internet survey, face-to-face interview, mail survey, telephone interview, and drop-off survey. However, selecting the appropriate method is quite challenging as each one of them has its pros and cons (Zikmund, 2003).

Internet is considered to be an effective tool for taking public survey (Couper, 2000). It has several advantages such as, cost savings, eliminating printing and mailing of the instruments (Dillman, 2011). On the other hand, internet survey method has several disadvantages such as, limitation of respondents to access internet and some respondents are poor in internet skills and knowledge (Dillman, 2011). In regards to the mail survey, it leads to more precise results, since the respondents answer the questionnaire at their own judgment, thus it does not lead to bias findings (Zikmund, 2003). However, this method has been criticized for its low response rate, and also when questionnaires are not randomly distributed, bias may occur. Furthermore, in the Yemeni case, internet and mail methods are considered unsuitable in the present circumstances, because the whole country is suffering from frequent interruptions of electricity and internet connection.

A telephone survey is a quick method and it requires moderate cost to collect data. Nevertheless, the response rate is a moderate and it requires long lengths of time (Zikmund, 2003). As for face-to-face survey, it leads to high response rate and researchers are enabled to use the physical stimuli during the interview. Moreover, it enables the interviewer to avoid any misunderstanding and clarify the complex

questions (Zikmund, 2003). But the cons of this method are the high costs and the existence of biases (Couper, 2000).

Finally, drop-off-survey is a kind of survey, which is considered to be more flexible and combines the advantages of mail survey and face-to-face interview, as the questionnaires are delivered to the respondents by hand (Cooper & Schindler, 2011). Thus, it allows the researcher to distribute the questionnaire personally to the respondents and to urge them to fill it in and return it within a limited time.

The present study utilized the drop-off survey with questionnaire as a tool of data collection. A total of 500 questionnaires were eventually distributed. A quota sampling was considered as a form of proportionate stratified sampling, in which a predetermined proportion of respondents were sampled from different groups. Therefore, the questionnaires were distributed using the quota sampling. Finally, after identifying the quota sampling in each city, questionnaires were distributed randomly among SMEs to each city to ensure an equal distribution of the participants.

There are numerous reasons for selecting the drop-off survey with questionnaire method, which can be summarized as follows:

- Drop-off survey enables the interviewer to personally interact with the respondents to provide an overview of the importance of the survey and explain any ambiguities (Cooper & Schindler, 2011).
- There may be no biases in this method, because it allows the respondents to answer the survey at their own convenience, unlike both the face-to-face

interview and telephone interview, where the biases is expected to be higher (Zikmund, 2003).

- The cost of drop-off survey method is less than face-to-face interview.
- The rate of response for drop-off survey is higher than other methods, because when the researcher gives the questionnaires to the respondents by hand, it allows him to follow up and motivate the respondents to respond and to know when and how to collect the questionnaire from them.
- The drop-off survey provides better administration of sample design, because it easier to obtain an effective identification of the respondents location and enables the researcher to exclude untargeted respondents (Cooper & Schindler, 2011).

It is worth to highlight that in the period during which the data was collected, Yemen was suffering from unstable situation, which resulted from the ongoing crisis in many Yemeni cities, so most of the airports were closed. Thus, travelling to Yemen during this period would have been very difficult and costly. Moreover, travelling among cities within the country is highly risky and takes longer time than normal. This status of instability led to difficulties especially in some cities where the conflict is most intense, such as Sana'a and Taiz. However, life goes on as usual inside the cities and business operates almost daily, especially in places where little or no conflicts and battles occur. Therefore, questionnaires were distributed to the SMEs among the major 7 cities in Yemen by assistants who used the drop-off survey method (hand-by-hand). The use of research assistants facilitated following up the respondents to collect the completed questionnaires as much as possible. Most of the research assistants were academicians. Particularly, 4 of them were academicians,

while 2 were educated having bachelor degrees. Furthermore, sufficient explanations and general guidelines were provided to them by the researcher to deal with any difficulty in distribution and collection of the questionnaire. The period of collecting data from each single city was between 2 to 3 weeks. However, the overall period of collecting data from the 7 cities was 2 months (April and May 2016).

4.11 Techniques of Data Analysis

The statistical analysis of data of the current study was conducted by utilizing several tools from the Statistical Package for Social Science (SPSS20). The statistical tools for analyzing the data include: descriptive statistics, cross tabulation analysis, reliability analysis, factor analysis, correlation analysis and multiple regression analysis.

4.11.1 Descriptive Statistics

Descriptive statistics analysis was used in the present study to reduce the size of data to be controlled, and provide insight into the pattern of behaviour as well as social background of the respondents. The descriptive statistics techniques used in the study include mean and standard deviations. Also, the data was analyzed for the demographic profile from the third part of the questionnaire. Frequency and percentage were used to present the demographic and business data. The literature evidenced that similar techniques were used in prior studies in tax compliance and non-compliance (Manaf, 2004; Embaye, 2007; Feld & Schneider, 2007; Torgler *et al.*, 2007; Al-Taffi, 2009; Al-Taffi *et al.*, 2011; Alabede, 2012).

4.11.2 Cross-tabulation Analysis

Cross tabulation is a tool used to analyze the association between two or more than two variables. According to Wagner (2006), cross tabulation explores the relationship that exists between two or more variables by examining the connection of the categories of each variable to the other variable. In the current study, this statistical tool was performed by relating each categorical variable to tax non-compliance behaviour. The cross tabulation analysis was conducted using frequencies and percentages. Aside from this, Chi-square test analysis was conducted to find out the significance level of these variables in relation with tax non-compliance.

4.11.3 Goodness of Measure

According to Sproull (2002) and Sekaran and Bougie (2010), goodness of the research instruments is needed to be assessed to achieve the accuracy in the result and the overall enhancement of the research quality. Thus, reliability, validity and factor analysis were tested in the present study.

4.11.3.1 Measuring of the Reliability

Reliability is an evaluation of the level of consistency of multiple measurements of constructs (Hair *et al.*, 2010). Thus, the reliability analysis was conducted in the present study in order to measure the consistency of items of the study constructs.

4.11.3.2 Measuring the Validity

Validity refers to the extent to which the measurement measures what it is intended to measure (Nunnally & Bernetein, 1994). Although the good level of Cronbach's alpha gives indication of a good reliability, but it does not prove validity (Sekaran, 2003). In other words, the reliability does not offer the goodness of the measurement - so, validity is needed to be checked to confirm the goodness of the measurement. There are many ways to measure the validity. One of the frequently measurement of validity is the judgmental evaluation by several experts to ensure the items of measurement of the construct measure of all its aspects (Nunnally & Bernetein, 1994). First of all, the comprehensive review of the literature was employed to develop the items of the measurements. Furthermore, discussions with academicians and experts were conducted to adapt the items.

4.11.3.3 Factor Analysis

Factor analysis is a technique for data reduction to minimize the number of variables to a smaller set that have similar information and as such, in order to validate the instrument, the factor analysis on each construct should be tested individually (Marsh & Hocevar 1985). Bryman and Cramer (2009) provided three main reasons why researchers use factor analysis. First, the researcher can evaluate the degree to which items are tapping the same concept and second, if the researcher has a large number of variables, factor analysis can decide the degree to which they can be decreased to a smaller set. Third, the goal of factor analysis is to try to make sense of the complexity of social behaviour by decreasing it to a more fixed number of factors. Hair *et al.* (2010) explained that there are two basic types of factor analysis, which are, Confirmatory Factor Analysis (CFA) and Exploratory Factor Analysis (EFA).

They suggested that when instruments are developed to be used in a different environment, EFA is recommended to be adopted as the appropriate technique. Consequently, in order to ascertain whether the measurement used in the current study has construct validity, EFA was performed, following in the footsteps of related tax studies by Manaf (2004), Abdul-Jabbar, (2009), Alabede *et al.* (2011a), Alabede *et al.* (2011b), Alabede *et al.* (2011c) and Mohdali (2013).

For the purpose of evaluating the result of the EFA, the rule of thumb provided by Hair *et al.* (2010) and Coakes and Ong (2011) was used. The rule of thumb states that KMO should be >0.60 ; Bartlett's Test of Sphericity should be significant at $P < 0.05$; communality > 0.50 ; factor Loading > 0.40 , eigenvalue > 1 or total variance explained of at least 60% and anti-image correlation coefficient > 0.50 . Furthermore, Williams, Brown and Onsman (2012) pointed out that KMO that is 0.50 is considered acceptable for factor analysis. So, this rule of thumb was considered as well.

4.11.4 Correlation Analysis

Generally, correlation analysis is performed to examine the linear relationship between the variables (Coakes & Steed, 2003). In the current study, correlation analysis was employed to determine the strength of the relationship between the variables of the study. Moreover, it was used to detect the existence of multicollinearity among the variables (Meyer *et al.*, 2006; Hair *et al.*, 2010).

4.11.5 Multiple Regression Analysis

The present study examines the direct effect of a number of variables, particularly, Islamic religious perspective, geopolitical differences, tax service quality, public

governance quality and tax system structure, on tax non-compliance behaviour as well as the moderating effects of Islamic religious perspective on the relationship between tax non-compliance and its determinants.

According to Baron and Kenny (1986), hierarchical regression, which is also referred to by Evan (1987) as the moderated regression analysis, is suggested as a suitable method for determining the moderating effect of a quantitative variable on the relationship between other quantitative variables. In addition, Aguinis and Gottfredson (2010) explained that hierarchical regression analysis is one of the most popular, if not the most popular, approach for testing hypothesis of moderating effects, especially in behavioural studies. Hitt and Ireland (1985) explained that hierarchical regression is a special technique of multiple regression analysis that produces a conservative estimate of the moderating effect of a variable on the relationship between other variables, which is done through steps. Specifically, testing the direct effect at first, and then integrating the moderator in the regression. Accordingly, the present study adopted the hierarchical regression analysis as the appropriate technique to detect the moderating effects of Islamic religious perspective on the relationship between tax non-compliance behaviour and its determinants.

Hierarchical multiple regression analysis in the current study was run through 3 steps. The first step was used to determine the extent of the influence of the independent variables of the study on the issue of tax non-compliance. Specifically, the first step was utilized to test the influence of independent variables, specifically, geopolitical differences, tax service quality, public governance quality, tax rate and penalties, on

tax non-compliance behaviour as a dependent variable of the study. The second step was introduced to determine the influence of the independent variables including the moderator variable (Islamic religious perspective) as independent variable. Thus, this step was employed to test the direct effect of the variables, including the Islamic religious perspective, on tax non-compliance behaviour. The third step was employed to determine the interaction effect of Islamic religious perspective as a moderator variable on the relationship between tax non-compliance and its determinants.

However, the successful application of multiple regression analysis depends on a number of assumptions. These assumptions may cause statistical results to be biased or distorted (Meyer *et al.*, 2006). Coakes and Ong (2011) argued that the fundamental assumptions of multiple regression analysis include: sample size, normality, linearity, homoscedasticity and multicollinearity. Therefore, these assumptions were assessed in the current study before conducting the regression analysis.

4.12 Summary

This chapter presented the framework of the research and hypotheses development. Also, an overview of the research methodology and research design have been shown in this chapter. Operational definition and measurement of variables were also discussed in this chapter, along with data collection procedures, including population, sampling and design of the questionnaire. This chapter presented the process of Arabic translation of the questionnaire and the pilot study and it provided the techniques and tools used for the statistical analysis.

CHAPTER FIVE

DATA ANALYSIS AND RESEARCH FINDINGS

5.1 Introduction

This chapter presents the results of data analysis collected from the survey in Yemen. The Statistical Package for Social Science (SPSS) is used in the analysis. The analysis begins by analyzing the survey response, including response rates and respondents' profile. The data screening is performed, and then, the descriptive statistics and cross tabulation of all variables employed in the regression model are presented. Also, correlation analysis and factor analysis are conducted in this chapter. The regression analysis and its assumptions are performed, and finally, the hypotheses testing are presented in the last section of this chapter.

5.2 Response Rates

The outcomes of the efforts made by the researcher assistants, who distributed 500 questionnaires, yielded a total of 347 returned questionnaires, obtaining a response rate 69%. Although the data of the current study were collected during the period of crisis in Yemen, the response rate is considered high compared to previous studies in Yemen (e.g., 57% in Al-Ttaffi *et al.* 2011; 53% in Helhel and Ahmed, 2014). This high response rate may be attributed to the fact that the researcher used 7 assistants with at least 2 follow ups, which motivated the respondents to fill in and return the questionnaires. Table 5.1 shows the summary of the questionnaire response rate (before removing outliers).

Table 5.1

Summary of the questionnaire response rate

Response	Frequency	Rate
Number of questionnaires distributed	500	-
Number of questionnaires returned	347	69%
Number of questionnaires not filled by the right person	11	-
Number of incomplete questionnaires (less than 50%)	2	-
Number of usable questionnaires	334	67%

The table shows that out of 347 questionnaires, 11 were discarded because they were not filled up by the targeted person (owner or manager of SMEs), instead they were filled by some of the employees or workers as indicated by the researcher assistant. Additionally, following the recommendation of Hair *et al.* (2010), 2 questionnaires were excluded because more than 50% of their questions were left incomplete by the respondents. Accordingly, 334 questionnaires were considered usable for analysis at response rate of 67%. Sekaran (2003) suggested that a response rate of 30% is sufficient for surveys analysis, and as such, the current study has met this rule of thumb.

5.3 Data Screening and Inspection

According to Hair *et al.* (2010), data have to be screened before analysis. Thus, the data collected for the purpose of this study were inspected and well screened as shown in the next sub-sections.

5.3.1 Missing Data Treatment

In quantitative studies, missing data have a negative consequence on the outcome of the research, and it comes to reason why this issue has taken a major attention of researchers (Cavana, Delahaye, & Sekaran, 2001). There are many reasons why there

could be missing data. For example: respondents forgetting to answer an item, or incorrectly answering an item and data entry errors (Tabachnick & Fidell, 2007). In the current survey, 16 of the usable questionnaires (4.8%) had some missing values, with a total of 21 missing. However, experts presented different opinions to deal with this problem. In this concern, Hair *et al.* (2014) suggested to replace the missing values with mean of the nearby points, as it is reported to be the easiest way when the total missing data percentage is 10% or less. This method was followed in the current study. Table 5.2 shows the summary of the missing data.

Table 5.2
Summary of the missing values

Variables	Number of missing values
Tax service quality	7
Public governance quality	10
Tax system structure	4
Total	21

5.3.2 Removing Outliers

When using questionnaire as data collection tool, outliers is one of the issues which should be addressed (Hair *et al.*, 2014). Outliers refer to the observations that are, numerically distant if compared to the other observations (Byrne, 2010). In other words, outliers occur when the respondent answers a particular question or all questions extremely (Hair *et al.*, 2014). The existence of the outliers in the data leads to altering the estimates of regression coefficients and it leads to ambiguity in the regression analysis (Verardi & Croux, 2008).

There are many different methods of detecting outliers. According to Hair *et al.* (2006), detecting outliers based on Mahalanobis distance is an effective method.

Based on 44 items of measurement in this study, the cut-off point of chi square was set at a value of 78.750 at significance level of 0.001. Accordingly, 4 cases were determined as outliers (i.e., 90, 38, 154 and 24) because their MAH_1 were greater than the threshold value 78.75 (i.e., 93.36, 84.52, 81.71 and 79.56 respectively), so they have been deleted from the dataset. Therefore, the final analysis in the present study was conducted using the remaining 330 respondents (see Appendix D).

5.3.3 Non-response Bias

The literature has evidenced that non-respondents sometimes differ from other respondents in various aspects such as attitudes, perceptions and behaviours, so, the findings of the study may be affected (Malhotra, Hall, Shaw, & Oppenheim, 2006). Experts presented many methods to estimate non-response bias. Researchers in the social science field, including business and accounting, normally examine the existence of non-response bias by comparing responses of early and late respondents. Under this method, the late respondents are assumed to be proxies for non-respondents (Armstrong & Overton, 1977). This method was used in the current study as was utilized in the tax compliance literature in Manaf (2004), Abdul-Jabbar (2009) and Mohdali's (2013) studies.

In the course of the fieldwork, as the questionnaires were being retrieved through the research assistants they were numbered sequentially and a record of date of retrieval was also kept. In other words, the respondents were classified into 2 groups, which are, early respondents and late respondents. The respondents who returned the completed questionnaire before 30th April 2016 were considered as early

respondents, while the respondents who returned the completed questionnaire after this date were accounted as late respondents. Then, these 2 groups were compared.

Empirically, the majority of respondents fell under the group of early respondents - a total of 282 respondents at rate of 85%, while the remaining 48 respondents at rate of 15% were grouped as late respondents. According to Pallant (2013), the late respondents may have similar characteristics of non respondents, because they may not have responded if they were not followed up. Therefore, the late respondents could be utilized instead of non-respondents in testing the bias of non-response.

In order to test the non-response bias, Pallant (2013) suggested the use of the independent t-statistic in comparing the two groups, that is, the early respondents and late respondents. If the result under Levene's test for equality of variance indicates a significant value larger than 0.05, then the data did not violate the assumption of equal variance (Malhotra *et al.*, 2006; Pallant, 2013). Accordingly, t-statistic was carried out in the current study to identify the difference between the early and late respondents.

Table 5.3 indicates the result of the Levene's test of equality of variance between the two groups, where the significant value for all the variables is greater than 0.05. This suggests that the differences between early responses and late responses are not significant, and hence, the assumption of equal variance between the two groups was not violated. Therefore, it can be fairly assumed that non-response bias did not exist in the study data.

Table 5.3
Test of non-response bias

Variables		N	Mean	Levene's Test for Equality of Variances	
				F	Sig. [*]
Tax non-compliance	Early	282	1.55	0.09	0.77
	Late	48	1.62		
Islamic religious perspective	Early	282	1.91	0.08	0.77
	Late	48	2.21		
Tax service quality	Early	282	2.10	1.99	0.16
	Late	48	2.08		
Public governance quality	Early	282	1.49	1.77	0.18
	Late	48	1.51		
Tax rate	Early	282	2.42	1.45	0.23
	Late	48	2.53		
Penalties	Early	282	2.44	0.13	0.72
	Late	48	2.67		
Business sector	Early	282	2.94	2.87	0.09
	Late	48	3.40		
Geopolitical differences	Early	282	1.41	0.28	0.60
	Late	48	1.40		

* (P<0.05)

5.4 Respondents Profile

The descriptive analysis was utilized to explain the respondents profile in terms of 2 main groups of characteristics, namely, demographic information of respondents and the business information. Demographic information of respondents includes age, gender, marital status and education. Table 5.4 shows the summary of demographic characteristics of the respondents.

Table 5.4

Summary of the respondents' demographic characteristics

Demographic information			
Variables	Categories	Frequencies	Percentages
Age (years)	Less than 30	33	10%
	30 - 50	172	52%
	More than 50	125	38%
Gender	Male	311	94%
	Female	19	6%
Marital status	Single	26	8%
	Married	281	85%
	Others	23	7%
Education	Before secondary school	74	22%
	Secondary school\ Diploma	144	44%
	Bachelor degree and above	112	34%

From the table above, it is shown that the majority of respondents were between the ages of 30-50 years (52%), while 38% of the respondents were more than 50 years and 10% were less than 30 years. The summary also shows that the most of respondents were males (94%), compared to only 6% of females. As for marital status of the respondents, the summary shows that most of the respondents were married (85%), while 8% were single and 7% had other status (such as divorcees and widows). In respect of the education level of the respondents, 44% of the respondents had secondary school or diploma certificate, followed by 34% that had bachelor degree or above and 22% of the respondents before secondary school.

Concerning the information of business, it describes the period of business, business sector and location of business. Table 5.5 shows summary of business characteristics of the respondents.

Table 5.5

Summary of the respondents' business characteristics

Variables	Categories	Frequencies	Percentages
Period of business (years)	Less than 5	46	14%
	5 - 10	118	36%
	11 - 15	110	33%
	More than 15	56	17%
Business sector	Retail trade	140	42%
	Wholesales trade	92	28%
	Service	44	13%
	Farmer	21	6%
	Industry sector	12	13%
	Livestock	10	3%
	Others	11	4%
Location of business	North	194	59%
	South	136	41%

Concerning the information of business, the table shows that 36% of the SMEs involving in the survey were established for 5 - 10 years, 33% existed between 11 - 15 years, 17% were established for more than 15 years and 14% for less than 5 years. Although the SMEs which established within less than 5 years are exempted from tax, the current study will include them in all analysis, as the study is measuring the perception using self-reporting data, not real data. Moreover, these SMEs will be required to pay tax after 5 years, therefore, it is important to investigate their perception.

With regard to the business sector of the SMEs involved in the survey, the results show that 42% of them were dealing in retail trade, 28% were wholesales trade, 13% were from the service sector, 6% were in farming, 3% in industry, 3% in livestock and 4% of SMEs were from sectors other than the categories mentioned. Caution is needed to be taken in interpreting the result of some sectors, especially the sectors of less than 30 respondents (Abdul-Jabbar, 2009). Finally, for the purpose of identifying the geopolitical affiliation of the respondents, they were asked to specify their

location. The result shows that 59% of SMEs involved in the survey were located in the North part of Yemen, while 41% of them were located in South part of the country. So, it could be said that the questionnaires were distributed fairly between North and South, as the number of enterprises in the North part are more than in the South part.

According to the demographic information provided by NIS (2012), most employees and business owners in Yemen are males, with majority of them in urban area having education level of secondary school. The largest numbers of business in Yemen fall under the retail trade and whole sales trade (MIT, 2011). Thus, the sample profile fairly reflected the broad characteristics of Yemeni population.

5.5 Descriptive Statistics

A descriptive statistics test was employed in the current study to illustrate the level of tax non-compliance behaviour and the 4 independent variables, which were measured using five-Likert scale, namely, tax service quality, public governance quality and tax rate and penalties. These descriptive statistics processes are presented in the next sub-sections.

5.5.1 Tax Non-compliance Behaviour

Tax non-compliance can be computed through its four situations, specifically, reporting non-compliance, deduction non-compliance, filing non-compliance and payment non-compliance. Also, tax non-compliance could be described through its

overall value. Table 5.6 presents the level of the four situations¹ of tax compliance and tax non-compliance of the respondents.

Table 5.6

Summary of tax compliance/non-compliance behaviour by situations

Tax non-compliance Situations	Compliance		Non-compliance	
	N	%	N	%
Reporting non-compliance	175	53%	155	47%
Deduction non-compliance	175	53%	155	47%
Filing non-compliance	108	33%	222	67%
Payment non-compliance	108	33%	222	67%

The table discloses that 53% of the respondents complied in reporting their taxable income and in claiming the right deduction, while 47% of SMEs did not. Concerning the level of filing and payment compliance, it represents 33% of the respondents, whilst 67% of the respondents did not comply with filing and paying their due tax.

With regards to the overall level of tax non-compliance, the respondents were classified into three categories, namely compliant, partly compliant and fully noncompliant, where the compliant respondent is the respondent who is complying in the 4 components, while the fully noncompliant is the respondent which is not complying in the 4 components, and the partly compliant is the respondent who is complying in some components and not complying in others. Table 5.7 presents the level of overall tax compliance and tax non-compliance.

¹ All analyses in this chapter were done using the overall value of tax non-compliance, except of the descriptive part (sub-section 5.5.1), which was done using both the 4 individual situations and the overall value.

Table 5.7

Summary of overall tax compliance and non-compliance behaviour

	Compliance		Non-compliance			
			Partly compliance		Full non-compliance	
	N	%	N	%	N	%
Overall Tax compliance and non-compliance	108	33%	67	20%	155	47%

The table shows three levels of compliance and non-compliance - it presents that only 33% of the respondents were fully compliant with tax rules and regulations, while 47% of the respondents were fully non-compliant, whereas 20% of the respondents were partly compliant with tax laws. Hence, it could be noted that the level of tax non-compliance is high. Generally, the results of the two Tables (5.6 and 5.7) support the statistics of literature and suggest that the issue of tax non-compliance is still a critical problem in Yemen.

5.5.2 Tax Service Quality

The perspectives of respondents about tax service quality in Yemen were collected through 18 items (TSQ1 to TSQ18). Descriptive analysis shows that the mean of all items are less than 3. Furthermore, the table reveals that the lowest mean is the value of the item coded TSQ1 at 1.97 with standard deviation of 0.745, while the highest mean is the value of item TSQ4 at 2.24 with standard deviation of 0.810. Also, it is noted that the items TSQ4 and 11 have the highest mean values at 2.24 and 2.20 with standard deviation 0.810 and 0.749 respectively. The rest of mean values are less than 2.20. Table 5.8 presents a summary of mean values, standard deviations values, minimum values and maximum values of the five-Likert scale for the items.

Table 5.8
Descriptive statistics of tax service quality

Codes	Items	Mean	StdD	Min.	Max.
TSQ1	I believe that tax office in Yemen offers wide range of services	1.97	0.745	1	4
TSQ2	I believe that tax office in Yemen offers convenient services in short processing time	2.02	0.793	1	4
TSQ3	I feel secure when conducting transactions with tax office in Yemen	2.03	0.802	1	4
TSQ4	I believe that tax office in Yemen meets the taxpayers demands by adding more counter during the peak time	2.24	0.810	1	5
TSQ5	I feel that tax officers in Yemen are willing to help me when need to enquire about any matters related to tax	2.06	0.758	1	4
TSQ6	I believe that tax officers in Yemen show high respect when dealing with us	2.11	0.808	1	5
TSQ7	I believe that tax officers in Yemen have fast and efficient services counters	2.12	0.810	1	5
TSQ8	I believe that tax office staff in Yemen are polite and friendly	2.15	0.832	1	5
TSQ9	I feel that tax office staff in Yemen are always ready to provide advices related to the taxable matters	2.07	0.916	1	5
TSQ10	I believe that tax office staff in Yemen provide taxpayers with easy access to information they need	2.07	0.869	1	5
TSQ11	I feel that tax office staff in Yemen have knowledgeable and experienced management team	2.20	0.749	1	5
TSQ12	I feel that I am given individual attention when dealing with tax office in Yemen	2.10	0.761	1	5
TSQ13	I feel that tax officers in Yemen always respond to my interests	2.10	0.796	1	4
TSQ14	I feel that tax office staff in Yemen understand my specific needs	2.13	0.771	1	5
TSQ15	I feel that if I have any problem, tax office in Yemen does whatever required to solve it	2.11	0.780	1	5
TSQ16	I believe that tax office in Yemen has good offices with all required facilities	2.10	0.800	1	5
TSQ17	I believe that I can have speedy and efficient transactions when dealing with tax office in Yemen	2.04	0.790	1	5
TSQ18	I believe that tax office in Yemen has good offices to service taxpayers conveniently	2.05	0.774	1	4
Overall		2.09	0.645		

StdD= standard deviation, Min = minimum, Max= maximum

In general, the overall value of tax service quality is 2.09. This means that taxpayers in Yemen perceived the quality of tax service as low. Thus, it could be claimed that the results is in line with the prior study, which concluded that most citizens are not satisfied with the quality of service rendered in Yemen (Al-Yasani, 2005).

5.5.3 Public Governance Quality

The viewpoints of respondents about public governance quality in Yemen were expressed through 17 items (PGQ1 to PGQ17). Descriptive analysis shows that the mean of all items are less than 2. Also, the table discloses that the lowest mean is the value of the item PGQ6 at 1.37 with standard deviation of 0.542, while the highest mean is the value of item PGQ17 at 1.82 with standard deviation of 0.807. According to Al-Rabae (2014), the political changes in Yemen have resulted in instability in the whole country. This situation has reduced the accountability of the people in charge, and hence, the quality of public governance became low. Table 5.9 shows a summary of mean values, standard deviations values, minimum values and maximum values of the five-Likert scale for the items.



Table 5.9

Descriptive statistics of public governance quality

Codes	Items	Mean	StdD	Min.	Max.
PGQ1	I trust the Parliament Council in Yemen is making good laws for Yemen	1.39	0.569	1	3
PGQ2	I believe that there is a free and fair election in Yemen	1.43	0.621	1	4
PGQ3	I believe that there is no wastefulness in government expenditure in Yemen	1.43	0.601	1	3
PGQ4	I have access to the published accounts and annual report of the government in Yemen	1.57	0.612	1	3
PGQ5	I believe that political stability is improving in Yemen	1.42	0.610	1	4
PGQ6	I believe that political protest is not a threat to Yemeni stability	1.37	0.542	1	3
PGQ7	I believe that territorial and sectarian conflict is not a threat to stability in Yemen	1.42	0.619	1	4
PGQ8	I am satisfied with quality of general infrastructure in Yemen	1.42	0.590	1	3
PGQ9	I feel that Yemeni public servants are not vulnerable to political interference in Yemen	1.64	0.648	1	3
PGQ10	I am satisfied with the manner the government is handling the health service in Yemen	1.59	0.657	1	4
PGQ11	I am satisfied with the manner the government is handling the education system in Yemen	1.47	0.629	1	4
PGQ12	I feel that Yemeni Judiciary is free from the interference of other agencies of government	1.45	0.623	1	4
PGQ13	I believe that justice is fairly administered in Yemen	1.56	0.592	1	3
PGQ14	I believe that Yemeni government has an effective power in combating crime	1.41	0.608	1	4
PGQ15	I trust the financial honesty of Yemeni politicians	1.41	0.599	1	4
PGQ16	I believe that the diversion of public funds due to corruption is not common in Yemen	1.58	0.639	1	4
PGQ17	I think that individual and firms, frequently, make extra payments in connection to tax payment, loan application, securing contract etc.	1.82	0.807	1	4
Overall		1.49	0.466		

StdD= standard deviation, Min = minimum, Max= maximum

Generally, the overall value of public governance quality result was 1.49. It gives impression that taxpayers are not satisfied with the quality of public governance in Yemen. The results of the current study support those reported in literature and

reveal a significant dissatisfaction of people in Yemen about the quality of public governance provided by government.

5.5.4 Tax System Structure

Tax system structure was explained in the current study through 2 variables, namely, tax rate and penalties. The next subsections present the descriptive statistics of these 2 variables.

5.5.4.1 Tax Rate

Tax rate, as one of the variables of tax system structure, in Yemen was measured through 5 items (TSS1 to TSS5). Table 5.10 shows a summary of mean values, standard deviations values, minimum values and maximum values of the five-Likert scale for the items.

Table 5.10
Descriptive statistics of tax rate

Codes	Items	Mean	StdD	Min.	Max.
TSS1	Tax rate on higher income should be more than tax rate on lower income.	2.34	1.031	1	5
TSS2	The high income taxpayer should pay proportionately more than low income taxpayer	2.39	1.041	1	5
TSS3	Tax rate should not be the same for all taxpayers	2.41	1.169	1	5
TSS4	It is fair to non comply with tax if the tax rates are too high	2.59	0.967	1	5
TSS5	It is unfair to non comply with tax if tax rate is fair	2.53	0.986	1	5
Overall		2.44	0.951		

StdD= standard deviation, Min = minimum, Max= maximum

The table shows that the mean of the items is at 2.34 as minimum mean value with standard deviation 1.031 and 2.59 as maximum value with standard deviation 0.967. Regarding the overall value of tax rate, the result is 2.44. As the values are

interpreted as lower than 3, this indicates that the respondents were of the opinion that the tax rate structure is not fair.

5.5.4.2 Penalties

Penalties are the second dimension among the components of tax system structure, which have been used in the current study. Data of this variable were collected through 4 items (TSS6 to TSS9). Table 5.11 shows a summary of mean values, standard deviations values, minimum values and maximum values of the five-Likert scale for the items.

Table 5.11
Descriptive statistics of penalties

Codes	Items	Mean	StdD	Min.	Max.
TSS6	I think the person who is caught for tax non-compliance, will be forced to pay the tax he owes with interest	2.41	1.124	1	5
TSS7	I think that the taxpayer who is caught for tax non-compliance, will be forced to pay substantial fine and pay the tax he owes with interest	2.49	1.095	1	5
TSS8	I think the person who is caught for tax non-compliance, will be taken to court and pay the tax he owes with interest	2.60	1.006	1	5
TSS9	I think the person who is caught for tax non-compliance, will be taken to court, pay substantial fine and pay the tax he owes with interest	2.45	1.127	1	5
Overall		2.47	1.011		

StdD= standard deviation, Min = minimum, Max= maximum

The table reveals that the mean of the items is 2.41 as minimum mean value with standard deviation 1.124 and 2.60 as maximum value with standard deviation 1.006, and the overall value of tax rate is 2.47. This result suggests that the respondents believed that penalties are less strict on tax non-compliance behaviour in Yemen because the mean values are lower than 3.

5.6 Cross-tabulation Analysis

Cross-tabulation is one of the most practical tools used to analyze categorical (nominal measurement scale) data. It is presented in a two or more dimensional table that records the frequencies of respondents, with particular characteristics to be described in the cells of the table (Wagner, 2007).

In the current study, cross-tabulation was used to present the frequencies of 3 nominal variables, specifically, Islamic religious perspective and geopolitical differences with tax non-compliance behaviour. Furthermore, the statistical significance of these variables in the relationship with tax non-compliance behaviour was conducted using chi-square. The cross tabulation and chi-square are presented in the next 3 sub-sections.

5.6.1 Islamic Religious Perspective and Tax Non-compliance

In measuring the Islamic perspective on tax non-compliance, the three perspectives were utilized as high strict perspective (totally forbidden), moderate strict perspective (permissible under circumstances and conditions) and low strict (totally permissible). The descriptive statistics indicates that the majority of the respondents (40%) perceived tax as forbidden act, while 31% of the respondents believed that tax is permissible but under particular circumstances and conditions, and 29% of the respondents believed that tax is totally permissible. Table 5.12 shows the cross tabulation of Islamic religious perspective on tax non-compliance with tax non-compliance behaviour.

Table 5.12

Cross-tabulation: Islamic religious perspective and tax non-compliance behaviour

	Totally permissible		Permissible under circumstances and conditions		Totally Forbidden	
	N	%	N	%	N	%
Fully compliant	65	67%	26	26%	17	13%
Partly compliant	20	20%	33	33%	14	10%
Fully noncompliant	12	13%	41	41%	102	77%
Total	97	29%	100	31%	133	40%

From the table, it is clear that the majority of respondents (67%) who believed that tax is totally permissible were fully compliant, because they have a positive perspective towards tax, while 20% of them were classified as partly compliant, and only 12% of them were fully noncompliant with tax rules and laws. The second group of the respondents those who believed that tax is permissible under circumstances and conditions - 41% of these respondents were fully non compliant with tax rules, while 33% of them were partly compliant, and 26% of them were compliant with tax rules. The third group of the respondents was about those who believed that tax is totally forbidden. The majority (77%) of these respondents were fully noncompliant with tax rules and regulations, while 17% were totally compliant, and 14% were partly compliant with tax rules and regulations. Furthermore, the Chi-square test revealed that the difference in non-compliance behaviour among Islamic religious perspective of the respondents is significant ($p = 0.000$). Therefore, the results supported the expectation of the current study.

5.6.2 Geopolitical Differences and Tax Non-compliance

In order to measure the geopolitical affiliation in Yemen, the respondents were divided into two groups, specifically, Northern respondents and Southern respondents. T-test between Northern respondents and Southern respondents was

performed and it was found that the two groups are homogenous (see Appendix E). Table 5.13 shows the cross tabulation of geopolitical differences with tax non-compliance behaviour.

Table 5.13

Cross-tabulation: Geopolitical differences and tax non-compliance behaviour

	North		South	
	N	%	N	%
Fully compliant	51	26%	57	42%
Partly compliant	23	12%	44	32%
Fully noncompliant	120	62%	35	26%
Total	194	59%	136	41%

The cross tabulation table presents that the majority (62%) of Northern respondents were fully noncompliant with tax rules and regulations, while 51% were totally compliant with tax rules and regulations, and only 12% were partly compliant with tax rules. Regarding the Southern respondents, the table reveals that 42% of Southern respondents were totally compliant, 26% were fully non-compliant and 32% were partly compliant.

The literature suggests that the attitudes of Southern citizens are different from the attitudes of Northern citizens. This diversity in attitudes may influence the behaviour of these citizens in performing their duties (Al-Naqeeb, 2011). Accordingly, the current study expects a significant difference between Southern and Northern. The Chi-square analysis supported this expectation and clarified that the difference between the two groups is significant ($p = 0.000$), which means that the results supported the expectation of the current study.

5.7 Correlation Analysis

Correlation analysis is a statistical technique employed to indicate the strength and direction of the linear relationship between variables (Hair *et al.*, 2010; Pallant, 2013). In the present study, correlation analysis was conducted to explore the relationships among the variables (independent variables and moderator). Moreover, it was used to detect the existence of multicollinearity among the variables (Meyer *et al.*, 2006; Hair *et al.*, 2010). The strength of the relationship between variables was established at a statistically significant level of ($p < 0.01$) and ($p < 0.05$) and the strength of the relationship (r) was interpreted following the rule of thumb suggested by Tolmie, Muijs, and McAteer, (2011). Table 5.14 shows this rule of thumb.

Table 5.14
Correlation strength: Tolmie et al., (2011) rule of thumb

r values	Strength of relationship
$r \leq 0.1$	Weak relationship
$0.1 < r \leq 0.3$	Modest relationship
$0.3 < r \leq 0.5$	Moderate relationship
$0.5 < r < 0.8$	Strong relationship
$r \geq 0.8$	Very strong relationship

The results of correlation analysis between variables of the current study are reported in Table 5.15.

Table 5.15
Inter - correlation Matrix

	IRP	TSC	PGQ	TRA	PEN
Islamic religious perspective (IRP)	1				
Tax service quality (TSQ)	0.010	1			
Public governance quality (PGQ)	-0.001	0.135*	1		
Tax rate (TRA)	-0.030	0.386**	0.091	1	
Penalties (PEN)	-0.057	0.296**	0.044	0.692**	1

** Correlation is significant at 0.01

* Correlation is significant at 0.05

N = 330

According to Tolmie *et al.*'s (2011) rule of thumb, Table 5.15 shows that Islamic religious perspective weakly correlated with all variables. Also, the table reveals that tax service quality moderated the relationship with tax rate with 0.386 at significant level 0.01, modest relationship with penalties and public governance quality with 0.296 and 0.135 at significant level 0.05 and 0.01 respectively. Also, the table presents that the relationships between public governance quality with all other variables were weak. Also, the relationships between tax rate with all of the variables were weak as well. Penalties, also, was found to have a weak relationship with most variables.

Generally, the correlation analysis indicates an acceptable level of linear associations among the variables of the study. However, the correlation coefficient does not imply causations, and does not explain the effect of the dependent variables when they are used simultaneously. Moreover, the categorical variables are needed to be tested with other analysis. Therefore, further multivariate analysis were conducted, specifically, multiple regression analysis.

5.8 Factor Analysis

In order to ensure the goodness of the research instruments, several analysis techniques were tested. One of these techniques is factor analysis. Bryman and Cramer (2009) provided three main reasons why researchers use factor analysis. First, the researcher can evaluate the degree to which items are tapping the same concept. Second, in case the researcher has a large number of variables, factor analysis can decide the degree to which they can be decreased to a smaller set. Third,

the goal of factor analysis is to try to make sense of the complexity of social behaviour by decreasing it to a more fixed number of factors.

For the current study, the items used in the questionnaire were gathered from literature, thus, it is suggested that different research conditions and research areas may influence the choice of variables to represent the research constructs (Pizam & Ellis, 1999). Therefore, there is a tendency for the items used to measure the differences in the construct due to the differences in the context of study. In line with this thinking, Gunasekaran (1999) indicated that when items have been borrowed from the literature to measure variables, it is deemed necessary to re-examine the validity of the measures because they will be examined in a different context.

Certain requirements should be met before factor analysis can be performed. First, the minimum sample size must be at least ten times as large as the number of variables to be analyzed (Hair *et al.*, 2010). In this study, there are 4 variables; therefore, the minimum sample size required was 40 observations. As there were 330 observations in this study, this requirement was met. The second requirement is concerning the type of data used for factor analysis, which should be a metric measurement. That means if the data can be justified as approximating an interval level, such as Likert scale, then it is appropriate to use in factor analysis (Pallant, 2013). In this study, Likert scales were used for the variables involved in the factor analysis, so this requirement was met as well. Consequently, in order to ascertain whether the measurement used in the current study has construct validity, Exploratory Factor Analysis (EFA) was performed, as how it has been conducted in

related tax studies by Manaf (2004), Abdul-Jabbar, (2009), Alabede *et al.* (2011a), Alabede *et al.* (2011b), Alabede *et al.* (2011c) and Mohdali (2013).

To carry out the EFA, the procedures recommended in Coakes and Ong (2011) were followed. First, the assumptions underlying the application of EFA were evaluated to ensure that they are achieved. Second, the items of each principal construct were submitted to EFA using SPSS. Third, the SPSS output was evaluated to determine the appropriateness of each principal construct for factor analysis. This was conducted by examining the value of the Kaiser- Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity. Furthermore, factor loading of the items was tested as well.

In general, the results of the EFA were assessed by the rule of thumb provided by Hair *et al.* (2010) and Coakes and Ong (2011). They argued that KMO should be >0.60 , Bartlett's Test of Sphericity should be significant at $P < 0.05$, communality > 0.50 , and factor loading > 0.40 , eigenvalue > 1 or total variance explained of at least 60% and anti-image correlation coefficient > 0.50 . Furthermore, Williams, Brown and Onsman (2012) pointed out that KMO with 0.50 is considered acceptable for factor analysis. So, this rule of thumb was considered as well.

5.8.1 Factors Analysis of Tax Service Quality

Tax service quality has 18 items. The results of the analysis are shown in Table 5.16.

Table 5.16

Factor analysis for tax service quality

Factors	Code	Factor loading	Communalities	Anti-image correlation	Total eigenvalue	Variance
Factor1	TSQ6	0.820	0.765	0.944	7.058	39.21%
	TSQ5	0.798	0.753	0.939		
	TSQ7	0.794	0.746	0.967		
	TSQ2	0.766	0.746	0.938		
	TSQ3	0.728	0.736	0.954		
	TSQ1	0.715	0.684	0.973		
	TSQ9	0.700	0.669	0.955		
	TSQ11	0.680	0.608	0.974		
	TSQ4	0.680	0.559	0.969		
	TSQ8	0.638	0.651	0.965		
	TSQ10	0.630	0.712	0.971		
Factor2	TSQ17	0.832	0.819	0.967	5.588	31.05%
	TSQ18	0.810	0.706	0.964		
	TSQ15	0.766	0.765	0.965		
	TSQ16	0.748	0.770	0.964		
	TSQ13	0.649	0.629	0.972		
	TSQ12	0.645	0.692	0.941		
	TSQ14	0.643	0.637	0.950		
Total variance					= 70.26%	
KMO = 0.960						
Bartlett's Test of Sphericity: Approx Chi-Square = 5432.095						
df = 153						
Sig. = 0.000						

From the table above, it is clear that the values of Bartlett's Test of Sphericity (0.000) and KMO (0.960) suggest that the data on tax service quality were suitable for factor analysis. Also the analysis explores that the two factors accounted for 70.26% of the variance with eigenvalues greater than 1, with the lowest and highest factors loading of each item ranging between 0.643 and 0.820. Overall, the result suggests that the technical criteria were met; therefore, all items are retained for the subsequent analysis purpose.

Despite the fact that factor analysis yielded 2 factors, it is worth noting that the current study measured tax service quality at the overall level. Previous tax studies

on service quality (Tayib, 1998; Fauzi&Idris, 2009) and other variables (Saad, 2011; Alabede *et al.*, 2011) also analysed their respective variables at uni-dimensional level, even when their factor analysis extracted different dimensions from the original. The main reason for conducting factor analysis is to ensure factor loading of each question item is within the acceptable range. The current study met these criteria.

5.8.2 Factor Analysis of Public Governance Quality

Public governance quality was measured using 17 items. Table 5.17 presents the results of the factor analysis of public governance quality.

Table 5.17
Factor analysis for public governance quality

Factors	Code	Factor loading	Communalities	Anti-image correlation	Total eigenvalue	Variance
Factor1	PGQ7	0.808	0.748	0.951	7.210	42.41%
	PGQ1	0.801	0.739	0.935		
	PGQ15	0.790	0.686	0.944		
	PGQ2	0.785	0.698	0.935		
	PGQ12	0.775	0.709	0.960		
	PGQ5	0.774	0.693	0.955		
	PGQ3	0.773	0.687	0.946		
	PGQ11	0.770	0.697	0.946		
	PGQ6	0.767	0.632	0.926		
	PGQ8	0.760	0.645	0.944		
	PGQ14	0.634	0.491	0.949		
Factor2	PGQ17	0.853	0.734	0.949	4.243	24.96%
	PGQ9	0.793	0.724	0.946		
	PGQ13	0.742	0.691	0.926		
	PGQ4	0.730	0.644	0.967		
	PGQ16	0.660	0.587	0.928		
	PGQ10	0.658	0.647	0.886		
Total variance = 67.37%						
KMO 0.943						
Bartlett's Test of Sphericity: Approx Chi-Square 4627.828						
df 136						
Sig. 0.000						

The table reveals that the values of Bartlett's Test of Sphericity (0.000) and KMO (0.943) suggest that the data on public governance quality were appropriate for the factor analysis. Furthermore, the table shows that the two factors accounted for about 67.37% of the variance with eigenvalues greater than 1 as well as the lowest and highest factor loading at 0.808 and 0.658 respectively. Additionally, the lowest communality and anti-image correlation coefficient were 0.587 and 0.886, respectively. Generally, the result met the criteria, hence, all items were retained.

Factor analysis led to the extraction of the items into 2 factors. Earlier studies on public governance quality (Darby *et al.*, 2010; Alabede *et al.* 2011) analysed the variables differently. However, the current study is equally concerned with the public governance quality scale as a whole not on each dimension of the construct.

5.8.3 Factors Analysis of Tax System Structure

Tax system structure was investigated in the current study through 2 variables, namely, tax rate and penalties. Factor analyses of these variables are presented in the following sub-sections.

5.8.3.1 Tax Rate

Tax rate was measured using 5 items. Table 5.18 presents the results of the factor analysis.

Table 5.18

Factor analysis for tax rate

Factor	Code	Factor loading	Communalities	Anti-image correlation	Total eigenvalue	Variance
Factor1	Rate2	0.942	0.887	0.882	4.250	84.99%
	Rate3	0.939	0.882	0.877		
	Rate1	0.934	0.873	0.903		
	Rate5	0.920	0.847	0.908		
	Rate4	0.872	0.761	0.898		
Total variance =						84.99%
KMO 0.893						
Bartlett's Test of Sphericity: Approx Chi-Square 1850.733						
df 10						
Sig. 0.000						

This factor accounted for 84.99% of the variance, with an eigenvalue of 4.250. The five items of the factor loaded at a value above 0.87 while the lowest value of communality and anti-image correlation coefficient were 0.761 and 0.877 respectively. The appropriateness of the data on tax rate for factor analysis was also assured with the values of Bartlett's Test of Sphericity (0.000) and KMO 0.893. These results also met the criteria for factor analysis; thus, all items were retained for the analysis.

5.8.3.2 Penalties

Penalties were measured using 4 items. Factor analysis was conducted using varimax. Table 5.19 presents the results of the factor analysis of penalties.

Table 5.19

Factor analysis for penalties

Factor	Code	Factor loading	Communalities	Anti-image correlation	Total eigenvalue	Variance
Factor1	Penalties2	0.955	0.911	0.845	3.512	87.79%
	Penalties1	0.944	0.890	0.821		
	Penalties4	0.929	0.862	0.907		
	Penalties3	0.921	0.848	0.901		
Total variance						= 87.79%
KMO 0.866						
Bartlett's Test of Sphericity: Approx Chi-Square 1408.451						
df 6						
Sig. 0.000						

The table reveals that the value of Bartlett's Test of Sphericity is 0.000 and KMO is 0.866. Furthermore, eigenvalue is 3.512 which is greater than 1, with total variance of 87.79%. Moreover, the varimax rotation revealed that the factor loadings of the four items were 0.955, 0.944, 0.929 and 0.921. The lowest anti-image correlation was 0.821. Finally, the table indicates that the lowest communality is 0.848. In general, the result suggests that the criteria were met, and so, all items were retained for the subsequent analysis.

5.9 Multiple Regression

The current study incorporated the Islamic religious perspective in the model of tax non-compliance as a moderator. Hierarchical regression analysis is a commonly used technique in indentifying the moderating effects (Kim, Al Shammari, Kim, & Lee 2009). Baron and Kenny (1986) suggested that hierarchical regression is a suitable method for determining the moderating effect in quantitative researches. Therefore, for the purpose of analyzing the relationship between tax non-compliance and its determinants and examining the moderating effect of Islamic religious perspective, the hierarchical multiple regression analysis was employed in the current study.

However, assumptions of multiple regression were evaluated before conducting the regression.

5.9.1 Assumptions of Multiple Regression

In order to avoid any statistical violation in the result of multiple regression analysis, the basic assumptions of multiple regression analysis have to be tested (Coakes & Ong, 2011). Thus, 4 assumptions were well evaluated as discussed in the next sub-sections to ensure the correct result of the multiple regression analysis.

5.9.1.1 Normality

Normality is an important assumption in multivariate analysis and statistical tests, because any substantial violation of this assumption may lead to defective results (Hair *et al.*, 2010). The normality test was performed, in the present study, to determine whether or not the sample data were normally distributed.

Among the different methods to evaluate normality, prior studies suggested to use skewness and kurtosis values to illustrate the distribution of data (Pallant, 2013; Kline, 2015). Skewness is a measure that illustrates to what extent the data are moved away from the center (George & Mallery, 2006). In social science researches, many scales and measures are naturally positively or negatively skewed (Pallant, 2013). According to Hair *et al.* (2010), the values of skewness must be ranged between +1 and -1 for the data to be described as normal data. However, Kline (2015) suggested that the skewness value between +3 and -3 is acceptable. By using the rule of thumb suggested by Kline (2015), Table 5.20 show that the skewness

values of the variables of the current study were within the range of +3 and -3, which give an indication that the data were normal distributed.

Table 5.20

Results of skewness and kurtosis for normality test

Variables	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Tax non-compliance behaviour	0.721	0.134	3.847	0.268
Islamic religious perspective	-0.044	0.134	-1.029	0.268
Tax service quality	0.728	0.134	0.886	0.268
Public governance quality	1.298	0.134	2.262	0.268
Tax rate	0.759	0.134	-0.097	0.268
Penalties	0.813	0.134	0.027	0.268

As for kurtosis, it is defined as an indicator used to identify whether the data set are peaked or flat relative to a normal distribution. It could be either negative or positive value, where negative value refers to a flatter distribution whereas positive values points to peaked distribution (George & Mallery, 2006). According to Coakes and Steed (2003), kurtosis values should range between +3 and -3. In the present study, all of the kurtosis values were within the recommended range of +3 to -3, except for the kurtosis value of "tax non-compliance behaviour" at (3.847). However, based on Hu *et al.* (1992), as the kurtosis value is located between +7 to -7, it would be acceptable, especially if skewness between is +1 to -1. Therefore, it could be argued that the data displayed no problem with kurtosis.

In conclusion, the results of normality evaluation presented that the normality assumption was not violated. This indicates that all the data for the variables of the study were normally distributed.

5.9.1.2 Linearity

Linearity essential is test aims to predict the right direction of hypotheses, especially when the residuals have a straight line association with dependent variables (Pallant, 2013). Although multiple regression supposes that the variables in the statistical analysis are related to each other in a linear manner, the soft deviation from linearity is not critical issue in multiple regression analysis (Sheridan & Ong, 2011). According to Hair *et al.* (2010), the top method used for predicting the linearity between two variables is scatter plot. Additionally, Pearson correlation coefficients are also used to measure the level of linear association between variables (Hair, *et al.*, 2010).

In the current study, the linear association between the variables was assessed through a matrix scatter plot and Pearson correlation coefficients. The matrix scatter plot of most of the associations between variables created a fairly oval shape as recommended in Meyers *et al.* (2006) and the correlation coefficients also indicated a fairly linear relationship between the majority of the variables (see Appendix F).

5.9.1.3 Multicollinearity

Multicollinearity test among independent variables is highly recommended before testing the model (Hair *et al.*, 2010). Multicollinearity indicates the degree of relationship existing between the independent variables. According to Pallant (2013), multicollinearity occurs when the relationship between some independent variables is highly correlated. It is considered as a problem because it could indicate unstable regression coefficient (Bryman & Cramer, 2009).

Multicollinearity can be detected through the correlation between independent variables. The literature suggested that a correlation greater than .90 is an indication that multicollinearity may be a problem (Meyers *et al.*, 2006). Pearson correlation was performed previously (see Table 5.15) and the result indicates an acceptable level of linear associations among the variables of the study. Furthermore, the multicollinearity of multiple variables may be assessed by the tolerance and variance inflation factor (VIF). The threshold values for the tolerance value and VIF are 0.20 and 5.00 respectively. However, if the value of tolerance is above 0.20 and the value of VIF is less than 5.00, this indicates multicollinearity is not an issue (Hair *et al.*, 2014). Pallant (2013) recommended that multicollinearity exists if the tolerance value is less than 0.10 and the VIF value is above 10. Table 5.21 shows the results of multicollinearity test.

Table 5.21
Multicollinearity Test

Model	Collinearity Statistics	
	Tolerance	VIF
Islamic religious perspective	0.963	1.039
Tax service quality	0.838	1.193
Public governance quality	0.976	1.025
Tax rate	0.477	2.098
Penalties	0.499	2.006
Geopolitical differences	0.928	1.077

From the table, it is noted that the values of tolerance ranged between 0.983 and 0.477. However, the highest value of VIF is 2.098, which is less than 5. According to rule of thumb suggested by Hair *et al.* (2014), if the value of VIF is less than 5.00, then multicollinearity is not an issue, even though the value of tolerance is above 0.20. The multicollinearity result met the rule of thumb suggested by Pallant (2013).

Therefore, it could be concluded that there is no multicollinearity among the independent variables of the current study.

5.9.1.4 Homoscedasticity

Homoscedasticity occurs when the variance of the dependent variable is equal for all the data (Hair *et al.*, 2010). Pallant (2013) suggested the scatter plot method to examine homoscedasticity. In the current study, the assumption was tested by observing that the points are dispersed throughout the plot randomly and evenly. Therefore, from the test result, homoscedasticity assumption was not violated (see Appendix G).

5.9.2 Regression Models

The current study introduced Islamic religious perspective as a moderator. Following Darrow and Kahl (1982), Baron and Kenny (1986), Evans (1987) and Hair *et al.* (2010), the data in the studies involving a moderator, must be regressed in steps. In the first step, the independent variables are regressed against the dependent variable. In the second step, the moderator variable is introduced as independent variable. Finally, the interaction effect of the moderator with the independent variables is regressed against the dependent variables.

Accordingly, there are 3 multiple regression models utilized to test the hypotheses in the current study. The first model was used to determine the extent of the influence of the independent variables of the study on the issue of tax non-compliance. Specifically, the first regression model was utilized to test the influence of independent variables, specifically, geopolitical differences, tax service quality,

public governance quality, tax rate and penalties, on tax non-compliance behaviour as a dependent variable of the study. The results of this model were used to evaluate the hypotheses H₂, H₄, H₆, H₈ and H₁₀. The first regression model is presented in following equation:

$$\text{Tax non-compliance behaviour} = \beta_0 + \beta_1 \text{Geopolitical differences} + \beta_2 \text{Tax service quality} + \beta_3 \text{Public governance quality} + \beta_4 \text{Tax rate} + \beta_5 \text{Penalties} + E$$

The second model was introduced to determine the influence of the independent variables including the moderator variable (Islamic religious perspective) as independent variable. Thus, this model was employed to test the direct effect of the variables, including the Islamic religious perspective, on tax non-compliance behaviour. So, the results of this model were used to evaluate the hypotheses H₁, H₂, H₄, H₆, H₈ and H₁₀. The second regression model is indicated in following equation:

$$\text{Tax non-compliance behaviour} = \beta_0 + \beta_1 \text{Islamic religious perspective} + \beta_2 \text{Geopolitical differences} + \beta_3 \text{Tax service quality} + \beta_4 \text{Public governance quality} + \beta_5 \text{Tax rate} + \beta_6 \text{Penalties} + E$$

The third regression model was employed to determine the interaction effect of Islamic religious perspective as a moderator variable. The results of this model were used to evaluate the hypotheses H₃, H₅, H₇, H₉ and H₁₁. The third regression model is introduced in following equation:

$$\begin{aligned} \text{Tax non-compliance behaviour} = & \beta_0 + \beta_1 \text{Islamic religious perspective} + \\ & \beta_2 \text{Geopolitical differences} + \beta_3 \text{Tax service quality} + \beta_4 \text{Public governance quality} + \\ & \beta_5 \text{Tax rate} + \beta_6 \text{Penalties} + \beta_7 \text{Geopolitical differences} * \text{Islamic religious} \\ & \text{perspective} + \beta_8 \text{Tax service quality} * \text{Islamic religious perspective} + \beta_9 \text{Public} \\ & \text{governance quality} * \text{Islamic religious perspective} + \beta_{10} \text{Tax rate} * \text{Islamic religious} \\ & \text{perspective} + \beta_{11} \text{Penalties} * \text{Islamic religious perspective} + E \end{aligned}$$

These steps processes were used in numerous tax studies including Murphy (2007), Chen, Pan and Pan (2009) and Alabede *et al.* (2011b).

5.9.3 Multiple Regression Results

Practically, tax non-compliance behaviour (dependent variable) was regressed on the set of predictor variables (independent variables) in the first step to obtain the main effect. In the second step, tax non-compliance behaviour was regressed on the set of predictor variables including Islamic religious perspective. In the third step, tax non-compliance was regressed on the set of predictor variables including Islamic religious perspective, and on the existence of interaction effect of Islamic religious perspective a cross product of predictor variables (see Appendix H).

In explaining the results of regression analysis, the R^2 , adjusted R^2 and F value were considered. According to Hair *et al.* (2014), there is no rule of thumb for the acceptable level value of R^2 as it depends mainly on the research context and model complexity, so many criteria were suggested to be used when evaluating the R^2 values. However, the experts, including Hair *et al.* (2014), provided rules of thumb that could be used as a guide in evaluating the models. For instance: Falk and Miller (1992) argued that a minimum value of 0.10 value for R^2 is considered to be acceptable, while Cohen (1988) recommended that R^2 values of 0.26, 0.13 and 0.02 are interpreted as substantial, moderate, and weak respectively. Furthermore, Hair *et al.* (2014) explained that R^2 values of 0.75, 0.50 and 0.025 can be interpreted as substantial, moderate, and weak respectively. As for F-value, Staiger and Stock (1997) and Stock and Yogo (2005) suggested that F-value must be greater than 10.

Concerning the moderating effect, Hair, Anderson, Tatham, and Black (1998) argued that the change of R^2 should be used to determine it. Ramayah (2014) suggested the use of change R^2 with significant F change value. He further argued that the R^2 change must be significant, and to ascertain this, significant F change must be considered to ensure that R^2 change is sufficient. If significant F change is less than 0.05, this indicates the presence of the moderating effect. Additionally, the weight of the contribution of each independent variable was evaluated independently as recommended by Hair *et al.* (2010). Table 5.22 reports the results of multiple regressions of the three models.

Table 5.22

Multiple regression results

Variable	Model 1		Model 2		Model 3	
	Without IRP		IRP as IV		IRP as Moderator	
	Beta	t	Beta	t	Beta	t
Islamic religious perspective (IRP)			.195	3.707***	.187	2.007***
Geopolitical differences (GD)	.335	6.331***	.322	5.181***	.345	4.722**
Tax service quality (TSQ)	-.240	-2.701**	-.273	-3.001**	-.199	-3.015**
Public governance quality (PGQ)	-.128	-2.531***	-.170	-2.496***	-.153	-2.281***
Tax rate	.068	1.225***	.092	1.313***	.127	1.322***
Penalties	-.021	-.293	-.032	-.222	-.077	-.210
GD * moderator (IRP)					.134	2.450***
TSQ * moderator (IRP)					.014	.235
PGQ * moderator (IRP)					.049	.936
Tax rate * moderator (IRP)					.289	3.714
Penalties * moderator (IRP)					-.181	-2.389**
R^2	0.233		0.259		0.361	
Adjusted R^2	0.209		0.233		0.334	
Change R^2	0.233		0.026		0.101	
F value	8.773		9.236		12.699	
P value	0.000		0.000		0.000	
Sig. F change	0.000		0.089		0.001	

*** P<0.01 ** P<0.05

The table reveals that model 1, model 2 and model 3 are statistically significant as explained by the F values of 8.773 ($P=0.000$), 9.236 ($P=0.000$) and 12.699 ($P=0.000$) respectively. This result means that the three models were able to explain the phenomenon of tax non-compliance in SMEs in Yemen. Moreover, the table also shows that the R^2 of the models 1, 2 and 3 are 0.233, 0.259 and 0.361 respectively, and the adjusted R^2 of the three models are 0.209, 0.233 and 0.334 respectively, which means that the models 1, 2 and 3 explained the phenomenon at about 21%, 23% and 33% respectively. According to the rules of thumb recommended by Cohen (1988), Falk and Miller (1992) and Hair *et al.* (2014), the levels of R^2 and adjusted R^2 are considered to be satisfactory.

As for the moderation effect of model 3, the change R^2 is 10% with value of significant F change at 0.001. According the rule of thumb of Ramayah (2014), the moderating effect is significant if F change value is less than 0.05, which indicating that there is a moderation effect in the model. Thus, the Islamic religious perspective has significant moderating effect on tax non-compliance model.

On the weight of the contribution of each independent variable in model 1, the regression pointed out that among 5 variables there were 4 variables that had a significant contribution to the model, whereas only one variable had a non significant contribution to the model. Particularly, the regression concluded that tax service quality ($\beta = -0.240$; $P=0.044$) and public governance quality ($\beta = -0.128$; $P=0.006$) are negatively related to tax non-compliance behaviour. Meanwhile, geopolitical differences ($\beta = 0.335$; $P=0.034$) and tax rate ($\beta = 0.068$; $P=0.027$) are positively related to tax non-compliance behaviour.

In model 2, the multiple regression result reveals that 5 variables were significantly related to tax non-compliance behaviour, whereas one variable was insignificantly related to the same. Specifically, tax service quality and public governance quality were negatively related to tax non-compliance behaviour with ($\beta = -0.273$; $P=0.032$) and ($\beta = -0.170$; $P=0.002$) respectively. While Islamic religious perspective ($\beta = .195$; $P<0.009$), geopolitical differences ($\beta = 0.322$; $P<0.038$) and tax rate ($\beta = 0.092$; $P<0.021$) were positively related to tax non-compliance behaviour.

As for model 3, it includes the 6 variables of model 2, and additionally, 5 moderating effect of Islamic religious perspective, on the relationship between tax non-compliance with its determinants. Thus, the number of associations in this model is 11. Among these associations, 7 of them were significantly related to tax non-compliance behaviour, whereas the other 4 associations were not significantly related.

In detail, tax service quality and public governance quality were negatively related to tax non-compliance behaviour with ($\beta = -0.199$; $P=0.028$) and ($\beta = -0.153$; $P=0.000$) respectively, whilst Islamic religious perspective ($\beta = -0.187$; $P=0.009$), geopolitical differences ($\beta = 0.345$; $P=0.038$) and tax rate ($\beta = 0.127$; $P=0.009$) were positively related to tax non-compliance behaviour. Also, the interaction effect of geopolitical differences with Islamic religious perspective and the interaction effect of penalties with Islamic religious perspective contributed to the model by a significant association with tax non-compliance at ($\beta = 0.134$; $P=0.001$) and ($\beta = -0.181$; $P=0.017$) respectively.

It is worth to highlight that one of the main contributions of the current study is the moderating effect of Islamic religious perspective. The regression results discovered that the direct associations between geopolitical differences and tax rate with tax non-compliance are positively significant in all three models, the direct associations between tax service quality and public governance quality with tax non-compliance are negatively significant in all three models and the direct association between penalties with tax non-compliance is positively insignificant in all three models.

The moderation tests revealed that Islamic religious perspective moderated the relationships between tax non-compliance behaviour and certain determinants. In other words, the interaction effect of Islamic religious perspective strengthened the relation between political differences with tax non-compliance. Also, the relationship between tax service quality, public governance quality and tax rate with tax non-compliance behaviour were changed in the presence of interaction effect of Islamic religious perspective from significant relationship to non significant relationship, and the relationship between penalties with tax non-compliance was changed in the presence of Islamic religious perspective from non significant relationship to significant relationship.

5.10 Hypotheses Testing

Following the recommendations of Hair *et al.* (2010), the hypotheses of the current study were tested using the multiple regressions analysis results. The hypotheses were classified into 2 groups, specifically, hypotheses of the relationship between the independent variables with tax non-compliance and hypotheses of the moderating

effect of Islamic religious perspective. The first group of hypotheses was tested using the results of model 3 and supported by the results of model 1 and model 2, whereas the second group of hypotheses was tested using the results of model 3.

5.10.1 The Hypotheses of Independent Variables

The current study developed 11 hypotheses - 6 of which are H₁, H₂, H₄, H₆, H₈ and H₁₀ addressed the relationship between the independent variables with tax non-compliance. The following sub-sections describe the result of the direct relationship between Islamic religious perspective, geopolitical differences, tax service quality, public governance quality, tax rate and penalties with tax non-compliance behaviour.

H₁: The Islamic religious perspectives of taxpayers towards tax have a significant effect on tax non-compliance behaviour among SMEs in Yemen.

The statistical results reported a significant influence of Islamic religious perspective on the tax non-compliance behaviour among SMEs in Yemen. These results were derived from the multiple regression of model 3 ($\beta = 0.187$; $P=0.009$). A similar result is also reported in model 2, where the beta value of Islamic religious perspective is 0.195 ($P=0.009$). This result indicates that the people with more strict perception towards tax (those believe that tax is totally forbidden) will have higher level of tax non-compliance than the people with less strict perception towards tax (those believe that tax is totally permissible). Additionally, in the descriptive statistics, the chi-square test revealed that the difference in non-compliance behaviour among Islamic religious perspective of the respondents is significant ($p=0.000$). These statistical results provide evidence that there are significant differences

in non-compliance behaviour based on the Islamic perspectives. Consequently, the first hypothesis is supported.

H₂: The geopolitical differences of taxpayers have a significant effect on tax non-compliance behaviour among SMEs in Yemen.

The statistical results of the three models evidenced that the differences in geopolitics of taxpayers have a significant influence on tax non-compliance behaviour among SMEs in Yemen. Particularly, the beta values of geopolitical differences in model 3 is 0.345 (P=0.038). A similar result is also reported in model 1 ($\beta = 0.335$; P=0.038) and in model 2 ($\beta = 0.322$; P=0.034). This result gives interpretation that tax non-compliance exists when there are geopolitical disparities. Moreover, the chi-square analysis revealed that the equality of the variances of the 2 geopolitical groups is significant ($p = 0.000$), which means that the differences in geopolitics have a significant effect on the behaviour of tax payers. Hence, the second hypothesis is supported as well.

H₄: There is a negative relationship between tax service quality and tax non-compliance behaviour of SMEs in Yemen.

The statistical analysis indicated that tax service quality has a significant negative influence on tax non-compliance behaviour among SMEs in Yemen. The multiple regression analysis of the model 3 reveals that the Beta values of tax service quality is -0.199 (P=0.028), and, furthermore, the statistical results of regression in model 1 and 2 also reveal that the influence of public governance quality on tax non-compliance was negative and significant, as the Beta values in model 1 and 2 are -0.273 (P=0.044) and -0.240 (P=0.032) respectively. This result explains that tax

non-compliance behaviour decreases when tax service quality is higher. Accordingly, the fourth hypothesis is supported.

H₆: There is a negative relationship between public governance quality and tax non-compliance behaviour of SMEs in Yemen.

The statistical analysis indicated that public governance quality has a significant negative influence on tax non-compliance behaviour among SMEs in Yemen. The multiple regression analysis of model 3 reveals that the Beta values of public governance quality is -0.153 (P=0.000). Similarly, the results of models 1 and 2 reveal that the relationship was negative and significant at Beta values -0.170 (P=0.006) and -0.128 (P=0.002) respectively. This result confirms that tax non-compliance behaviour decrease when public governance quality is increased. Thus, the sixth hypothesis is supported.

H₈: There is a positive relationship between tax rate and tax non-compliance behaviour of SMEs in Yemen.

The multiple regression analysis revealed that the association between tax rate with tax non-compliance is positively significant, where the Beta values of tax rate in model 3 is 0.127 (P=0.009), and the Beta values of models 1 and 2 are 0.092 (P=0.027) and 0.068 (P=0.021) respectively. This result shows that tax non-compliance behaviour increase when tax rate is increased. Therefore, the regression analysis results evidenced that the eighth hypothesis is supported.

H₁₀: There is a negative relationship between penalties and tax non-compliance behaviour of SMEs in Yemen.

The statistical analysis reported that the Beta values of penalties in model 3 is -0.077 (P=0.641), and similar results were found in models 1 and 2, where the Beta values are -0.032 (P=0.770) and -0.021 (P=0.782) respectively. It is clear that the result of the relationship between penalties and tax non-compliance behaviour in all three models is not statistically significant. Consequently, the statistical results rejected the tenth hypothesis.

5.10.2 The Hypotheses of Moderating Effect of Islamic Religious Perspective

Among the hypotheses of the current study, there are 5 that are related to the moderating effect of Islamic religious perspective. Specifically, H₃, H₅, H₇, H₉ and H₁₁ are related to the moderating effect of Islamic religious perspective on the relationship between tax non-compliance and its determinants.

H₃: Islamic religious perspective moderates the relationship between geopolitical differences and tax non-compliance behaviour among SMEs in Yemen.

The statistical results of models 1, 2 and 3 evidenced that the geopolitical differences positively related to tax non-compliance behaviour [$(\beta = 0.335; P=0.034)$, $(\beta = 0.345; P=0.038)$ and $(\beta = 0.322; P=0.038)$ respectively]. Also, the multiple regression result of model 3 revealed that the interaction effect of Islamic religious perspective with geopolitical differences positively influenced tax non-compliance behaviour ($\beta = 0.134; P=0.001$), which means that the presence of Islamic religious perspective strengthened the relationship between geopolitical differences and tax

non-compliance. Therefore, the third hypothesis is supported, because the interaction between Islamic religious perspective and geopolitical differences has a significant influence on tax non-compliance behaviour among SMEs in Yemen.

H₅: Islamic religious perspective moderates the relationship between tax service quality and tax non-compliance behaviour among SMEs in Yemen.

The statistical results of models 1, 2 and 3 reported that the tax service quality had a negative significant influence on tax non-compliance behaviour [$(\beta = -0.240; P=0.044)$, $(\beta = -0.273; P=0.032)$ and $(\beta = -0.199; P=.0.028)$ respectively]. In the third model, the relationship between tax service quality and tax non-compliance, in the presence of Islamic religious perspective, is insignificant ($\beta = 0.014; p= 0.814$), which means that the interaction effect of Islamic religious perspective and tax service quality is insignificant. Therefore, the fifth hypothesis is rejected.

H₇: Islamic religious perspective moderates the relationship between public governance quality and tax non-compliance behaviour among SMEs in Yemen.

The statistical results of models 1, 2 and 3 revealed that the public governance quality had a negative significant influence on tax non-compliance behaviour [$(\beta = -0.128; P=0.006)$, $(\beta = -0.170; P=0.002)$ and $(\beta = -0.153; P=.0.000)$ respectively]. Model 3 revealed that the relationship between public governance and tax non-compliance, in the presence of Islamic religious perspective, is insignificant ($\beta = 0.049; P=0.350$), which indicates that the interaction effect of Islamic religious perspective and public governance quality has insignificant influence on tax non-compliance behaviour among SMEs in Yemen. Thus, the seventh hypothesis is rejected.

H₉: The Islamic religious perspective moderates the relationship between tax rate and tax non-compliance behaviour of SMEs in Yemen.

Although the multiple regression analysis revealed that the relationship between tax rate and tax non-compliance was positively significant in models 1, 2 and 3 [$(\beta = 0.068; P=0.027)$, $(\beta = 0.092; P=0.021)$ and $(\beta = 0.127; P= 0.009)$ respectively], the statistical result of model 3 suggested that the interaction between Islamic religious perspective and tax rate have insignificant influence on tax non-compliance behaviour ($\beta =0.289; p= 0.311$). This result indicated that the interaction effect of Islamic religious perspective and tax rate has insignificant influence on tax non-compliance. Hence, the result rejected the ninth hypothesis.

H₁₁: The Islamic religious perspective moderates the relationship between penalties and tax non-compliance behaviour of SMEs in Yemen.

The multiple regression analysis of models 1, 2 and 3 revealed that the relationship between penalties and tax non-compliance was insignificant. The Multiple regression result of model 3 revealed that the Islamic religious perspective of taxpayers has a significant negative moderating effect on the relationship between penalties and tax non-compliance behaviour, which was evidenced in the Beta value of -0.181 ($P=0.017$). This result evidences that the presence of Islamic religious perspective significantly moderated the relationship between penalties and tax non-compliance. Hence, the result provides a proof in support of the eleventh hypothesis.

5.11 Summary

In this chapter, the results of the study were presented. SPSS was used in data analysis. At the beginning, the survey response, the data screening and respondents' profile were established, then the descriptive statistics and cross tabulation of variables were presented. Also, correlation analysis and factor analysis were conducted followed by the performance of the regression analysis and its assumptions for the purpose of hypotheses testing. The result of multiple regression analysis concluded that 7 out of 11 hypotheses developed in chapter four are supported. Specifically, the regression provides evidence that supports hypotheses H₁, H₂, H₃, H₄, H₆, H₈, and H₁₁.



CHAPTER SIX

DISCUSSION AND CONCLUSION

6.1 Introduction

In this chapter, the findings of the study are discussed in details, and the implications are explained from three perspectives namely, theoretical perspective, methodological perspective and practical perspective. Then recommendations are suggested for future research in tax non-compliance, and finally, the limitations of the study are considered.

6.2 Summary of Findings

As stated in the previous chapter, the hypotheses of the current study were tested and 7 out of 11 hypotheses were confirmed to be significant, while 4 hypotheses were rejected. The summary of the hypotheses findings is presented in Table 6.1.

Table 6.1

Summary of hypotheses findings

No.	Hypotheses	Results
H1	The Islamic religious perspectives of taxpayers towards tax have a significant effect on tax non-compliance behaviour among SMEs in Yemen	Supported
H2	The geopolitical differences of taxpayers have a significant effect on tax non-compliance behaviour among SMEs in Yemen	Supported
H3	Islamic religious perspective moderates the relationship between geopolitical differences and tax non-compliance behaviour among SMEs in Yemen	Supported
H4	There is a negative relationship between tax service quality and tax non-compliance behaviour of SMEs in Yemen	Supported
H5	Islamic religious perspective moderates the relationship between tax service quality and tax non-compliance behaviour among SMEs in Yemen	Not Supported

Table 6.1 (Continued)

No.	Hypotheses	Results
H6	There is a negative relationship between public governance quality and tax non-compliance behaviour of SMEs in Yemen	Supported
H7	Islamic religious perspective moderates the relationship between public governance quality and tax non-compliance behaviour among SMEs in Yemen	Not Supported
H8	There is a positive relationship between tax rate and tax non-compliance behaviour of SMEs in Yemen	Supported
H9	The Islamic religious perspective moderates the relationship between tax rate and tax non-compliance behaviour of SMEs in Yemen	Not Supported
H10	There is a negative relationship between penalties and tax non-compliance behaviour of SMEs in Yemen	Not Supported
H11	The Islamic religious perspective moderates the relationship between penalties and tax non-compliance behaviour of SMEs in Yemen	Supported

Specifically, hypotheses 1, 2, 4, 6, 8 and 10 addressed the direct relationships between the independent variables with tax non-compliance. Hypotheses 1, 2, 4, 6 and 8 were supported, while hypothesis 10 was not supported. Concerning the moderating effect, it was described in hypotheses 3, 5, 7, 9 and 11. The analysis concluded that hypothesis 3 and 11 were supported, while hypotheses 5, 7 and 9 were not supported. The following section discusses the result of these hypotheses by comparing them with the prior studies.

6.3 Discussion of Results

The analysis and testing of data was reported in the preceding chapter. In this section, further discussions on the findings are offered. As stated in Chapter One, the current study developed 7 research questions and 7 research objectives. This section is basically structured to discuss the questions stated in the first chapter of this

research in relation to the achievement of the objectives of the study. In other words, discussion of study results is arranged corresponding to the research questions and objectives.

6.3.1 Research Question 1

The first research question of the current study addresses whether there is a significant relationship between Islamic religious perspectives of taxpayers and tax non-compliance behaviour among SMEs in Yemen. The people in the Republic of Yemen are completely Muslims, but their viewpoints about tax are different. In such community, the religious viewpoints of individuals play an important role in guiding them through their believed values. The influence of religion happens in the community even if individuals are not fully committed to their religion (Khamis, Mohd, Salleh & Nawi, 2014). Therefore, the Islamic attitudes towards tax could have a positive or negative effect on the behaviour of taxpayers.

The regression analysis carried out in the current study revealed that the difference in non-compliance behaviour among Islamic religious perspectives of the respondents is significant. According to the cross tabulation analysis, it was concluded that most of the respondents that believed tax is totally permissible are fully compliant. On the contrary, majority of the respondents that believed tax is totally forbidden are fully noncompliant. These results are in line with the theoretical concepts and hypothesis of the current study. Moreover, the result is similar to a large extent of findings in the previous studies conducted on ethics, culture and attitudes. Particularly, in the studies of ethics of tax non-compliance, the taxpayers who believed that non-compliance is an ethical behaviour were more non-compliant, and on the other hand, the taxpayers

who believed that non-compliance is an unethical behaviour were less non-compliant (Reckers, Sanders & Roark, 1994; McGee & Ho, 2006; McGee & Rossi 2006; McGee, 2007; McGee *et al.* 2009; Gupta & McGee, 2010). The analogous in the results of Islamic religious perspective and ethics may be attributed to the fact that both are considered internal values of taxpayers, as Muslims are influenced by Islamic religious perspective, while non-Muslims are affected by ethics as an internal value, so the results were very similar.

Based on social influence theory, the behaviour of taxpayers is influenced by the social environment, which could be culture, beliefs, attitudes surrounding and so on. The Islamic religious perspective can be explained by this theory, because it is a religious attitude towards the behaviour. Bobek, Roberts and Sweeney (2007) suggested that social norms were consistently important in explaining tax compliance behaviour. Particularly, Okediji (2005) argued that the impact of culture and religious belief on taxpayers' behaviour exists. According to Chan *et al.* (2000), cultural differences have an effect on taxpayers' compliance behaviour, whereas Chau and Leung (2009) considered culture as a powerful factor, which may influence taxpayers' behaviour. Lewis *et al.* (2009) also argued that the taxpayers' behaviours differ as a result of a variation in culture. Tsakumis, Curatola and Porcano (2007) concluded that the study of culture might contribute to understanding the behaviour of taxpayers. Other studies concentrated on the difference of ethnicity as one of the social norms. The study of Coleman and Freeman (2002) indicated that differences in ethnicity have considerable influence on tax compliance behaviour in Australia. The finding of Coleman and Freeman' study was empirically supported by Lassen (2003)

and Rothengatter (2005), who stated that social norms from an ethnic group may help improve compliance.

With respect to religion, Mohdali and Pope (2014) explained that religion provides an essential basis for social integration. Torgler (2003) suggested that religiosity is an important factor that may have a major impact on the behaviour of taxpayers. Torgler and Murphy (2004) argued that religiosity creates morale values, which have an influence on taxpayers' behaviour. Mohdali and Pope (2012) said that the influence of religiosity happens through the concept of giving such as, zakat for Muslims and tithing for Christians. They argued that the practice of giving either to their religious organisations or to the poor and needy was expected to improve their willingness to pay taxes. However, empirical study of Mohdali and Pope (2012) in Malaysia concluded that there is no relationship between being religious and tax non-compliance behaviour. Contrasting to this result, earlier studies such as the studies of Tittle and Welch (1983), Stack and Kposowa (2006) and Richardson (2008) found that the higher the level of religiosity, the lower will be the level of tax non-compliance.

More specifically on religious views in Islam, Peerzade (2005) suggested applying the Islamic approach instead of tax system. According to him, the system should adopt Zakat instead of tax as the best alternative system in the Muslim countries. Therefore, the level of compliance will be improved, because citizens, as Muslims, believe that Zakat evaders will be punished by Allah even if they are not punished by the government. On the same line of argument, McGee (1997) emphasized that Muslims have a moral responsibility to pay Zakat for the support of the poor and for

the legitimate functions of government. Thus, evading one's duty to pay Zakat is classified as an immoral act. As for tax, it is described as voluntary. In exceptional cases, tax may be imposed by the government if the amount raised by Zakat is insufficient to cover all the legitimate costs of government. In such case, the taxpayers must comply with this regulation. The strongest argument for complying with government regulations is that the tax benefits the general public (McGee, 2012).

Broadly, it is evident from the previous studies that the behaviour of taxpayers is influenced by attitudes, culture, beliefs and religiosity. Likewise, the Islamic religious perspective, as a religious attitude, is considered one of the factors affecting taxpayers' behaviour. Specifically, the current study reported that the behaviour of taxpayers is based on their Islamic religious attitudes. In other words, the Islamic perspectives of taxpayers significantly affect their behaviour. This result provides an answer to the first question of the current study about the influence of Islamic religious perspectives on the behaviour of taxpayers, and largely corresponds to the theory of social influence.

The finding of the current study is not surprising for a country like Yemen, as the Yemenis are totally Muslims and they are considered as religious people (Obaid, 2008). Thus, each Yemeni taxpayer acts based on his/her Islamic religious beliefs and perspective. In other words, when the taxpayer believes that tax is forbidden, he or she will certainly try to non-comply. However, the taxpayer may non-comply with tax rules even when he or she believes that tax is permissible.

Finally, understanding the Islamic religious viewpoints of the taxpayers in Muslim countries is of great importance and is an important factor that could likely influence taxpayers' behaviour. Thus, it could be stated that the Islamic fundamental aspects explain the results of the current study with the respect to the fact that people having high strict viewpoint towards tax were more non-compliant, whereas the people having low strict perception towards tax were more compliant. In order to improve the compliance level, the government is recommended to provide more arguments to taxpayers about the importance of payment of tax, especially, with the availability of the Islamic scholars who have a positive perception about tax, such as Nabulsi (2005), who believe that tax has to be paid because of the service rendered by the government to its citizens, and Al-Ayyan (2007), who distinguished between Zakat, as a religious commitment collected from specific people to be spent on specific individuals (Asnaf) mentioned in the Qur'an, and tax, as funds to cover the expenses of the services provided by the government to the citizens.

In the Yemeni system, both tax and Zakat are regulated. Unlike some Muslim countries like Malaysia, the tax system in Yemen does not rebate the amount of Zakat paid from the tax due on the citizen, and as such, the citizens have to pay the full due taxes and pay the full due Zakat as well. Therefore, the Yemeni government is recommended to enhance the level of tax compliance by rebating the Zakat paid from the due tax.

6.3.2 Research Question 2

The second research question in the current study addresses whether there is a significant relationship between geopolitical differences and tax non-compliance

behaviour among SMEs in Yemen. The Republic of Yemen contains two parts, specifically, North and South. This deviation was used as a proxy to measure geopolitics in Yemen. The attitudes towards the government are different between the two parts, as the Southern attitudes toward the government may lead to evasion of duties towards it (Al-Yasani, 2005; Al-Shaibi, 2000; Al-Rabae, 2014 & Al-Naqeeb, 2011).

In the current study, the multiple regression analysis indicated that the difference in non-compliance behaviour between the geopolitics in Yemen is significant. The cross tabulation analysis also showed the respondents from South are more compliant than their Northern counterparts. This is despite the fact that Southerners distrust the government under the North's control, and consider it as the occupation government (Bahaj, 2000), which led a lot of Southern citizens to take a political character and evade their duties to the government in Sana'a. This is also notwithstanding the fact that Southerners believe that Sana'a plundered the wealth of the south, which represents 85% of the total wealth of the country (Al-Naqeeb, 2011). Regardless of the above, the current study revealed that the compliance level in South is higher than North. This can be interpreted by recognizing the status of South and North before the Yemeni unity in 1990, where the South was more systematic and the socialistic in controlling its people, while the political regime in the North was administrated by tribalism. In other words, the southerners are used to complying with governmental rules and regulations, even in the presence of disputes with the government, while the northerners are not used to such behaviour.

Although the current study is likely to be the first to examine the relationship between geopolitics and tax non-compliance, the literature evidences that the geopolitical diversity have a significant influence on many disciplines other than tax, such as, politics (Stepić, 2011; Naseem, 2014), social (Uwaifo, 2007), education (Okusanya & Isabu, 2010), economy (Arayama & Miyoshi, 2004) and religiosity (Marks, 2000).

Equally, geographical differences have been investigated in the areas related to taxation. Specifically, some studies focused on the influence of the geographical location on the behaviour of taxpayers. Loo, Evans and McKerchar (2010) found that the geographical residency location of the citizens interacts with the political issues to influence the knowledge and culture of people, and such influence is reflected on their tax behaviour. Moreover, Monteduro and Zanradi (2005) and Madiès and Ventelou (2005) linked the behaviour of people with centralization of political governance. They concluded that people are more compliant if they reside closer to the political centre.

The present study provides an indication that Southern residents in Yemen are different from the Northern citizen in terms of behaviour towards the governmental duties such as tax, which provides an answer to the second research question of the study. Nevertheless, geopolitical differences is not a matter itself, but the environment and dealing by the regimes with this diversities often create other issues and problems (Burton, Karlinsky & Charlotte, 2005). Therefore, the Yemeni government is recommended to deal with such problems more systematically.

6.3.3 Research Question 3

The third research question in the current study addresses whether there is a significant relationship between tax service quality and tax non-compliance behaviour among SMEs in Yemen. The descriptive statistics on the data of the current study provide an indication that taxpayers in Yemen have a low perception about the quality of tax services provided by the tax offices. This statistics supported the arguments of Al-Yasani (2005), who described that most citizens in Yemen are not satisfied with the quality of service delivered, and argued that this viewpoint is a common opinion in Yemen. Currently, the situation in Yemen is worst than before, as the political crisis ongoing in Yemen is expected to have an extreme effect on the public service quality, and thus, perception of the Yemeni citizens is low.

The current study hypothesized that tax service quality negatively influences tax non-compliance behaviour, and the regression results of the three models supported this hypothesis. The findings of the current study support the social influence theory. Furthermore, the literature shows practical explanations of this result. For instance, Jackson and Milliron (1986) explained that the approach in which taxpayers are treated in the provision of tax service has an impact on their compliance behaviour. Added to this, Asubonteng *et al.* (1996) suggested that the issue of tax is similar largely to the private organizations, which cannot work, continuously, without satisfaction of their customer. Parasuraman *et al.* (1985) argued that the physical environment quality and the outcome quality are main factors that can influence the perception of the customer about the quality of service. Therefore, to get better compliance behaviour from taxpayers, tax authorities must improve the quality of tax service. Moreover, Job and Honaker (2003) indicated that the satisfaction of the

American taxpayers is very low because the service quality of IRS is deteriorating. Torgler (2007) suggested that tax authority must consider itself as service institution and provide a quality service and treat the taxpayers as partners.

Treatment of taxpayers as customers is adopted by a lot of developed countries such as the USA, the UK, France, Sweden and Denmark. They recognized the necessity to accord the taxpayers the status of customers, and applied this concept on taxpayers by giving more consideration to their tax service requirements and taking care of them as clients (Kirchler, 2007).

Aside from the above studies, several studies supported the result of the negative association between tax service quality and tax non-compliance. Chen and Kao (2009) explained that there is interaction between the tax officers and the taxpayers, where the quality of tax service negatively influences the non-compliance behaviour. Lin, Wang and Huang (2011) found out that service quality has a significant negative impact on non compliance behaviour. In Nigeria, Alabede (2012) found that Nigerian taxpayers have a low perception about the quality of tax services offered by the tax authority, which led to low tax compliance behaviour of Nigerian taxpayers. In general, it can be logically stated that the current study provided evidence that the quality of tax service indeed negatively influences the phenomenon of tax non-compliance in Yemen. Finally, as a recommendation to the tax authority and tax offices in Yemen, practical steps must be taken to achieve high quality of tax service in order to reduce the non-compliance behaviour of Yemeni taxpayers.

6.3.4 Research Question 4

The fourth research question in the current study addresses whether there is a significant relationship between public governance quality and tax non-compliance behaviour among SMEs in Yemen. The low perception of Yemeni taxpayers about the quality of public governance has been reported through the descriptive statistics of the data in the current study. Al-Rabae (2014) explained that the political changes in Yemen have resulted in an unstable situation in the whole country. Al-Rabae explained that this situation has led to increased corruption, low level of accountability and responsibility of governmental agencies, which did not perform their duties well and collapse of public service and infrastructure. Accordingly, the quality of public governance has been perceived as low.

Ser (2013) argued that the government's ability to manage the country's resources effectively for the benefit of citizens will result in the interaction between government and citizens in the economic, social and political aspects. Damayanti, Sutrisno, Subekti and Baridwan (2015) supported this opinion by arguing that the perception about the government is the main cause of the intention to comply with tax rules. Meanwhile, Torgler (2003) stated that the positive behaviour by the government will generate positive attitude and action by the citizens to comply with payment of tax. Similarly, Akpo (2009) argued that when the government fails to provide good public services to the citizens then they will stop to pay tax. Thus, the current study hypothesized that the quality of public governance negatively associated with tax non-compliance behaviour, and the regression results supported this hypothesis.

The hypothesis and finding of the current study are consistent with the prediction of social exchange theory, as it suggests that relationships between government and citizen is created by the use of subjective cost and benefit, and is evolved on the principle of give and take, so, taxpayers seem to be more willing to comply with tax rules and regulations including paying their taxes when they can observe a direct relationship between their contributions and the quality of public governance provided by the government (Wallshutzky, 1985; Alm *et al.* 1992; Fjeldstad & Semboja, 2001; Alm & Gomez, 2008).

Furthermore, the literature supported the findings of this study, which evidenced that the positive behaviour by government may be reciprocated by the taxpayers through enhanced compliance behaviour (e.g., Torgler, 2003; Besancon, 2003; Obid, 2004; Rotberg, 2005; Ho *et al.*, 2006; Torgler, 2007; Kirchgassner, Philips & Sandall, 2009; 2010; Ross & McGee, 2011; Alabede, Ariffin & Idris, 2011a; Alabede, 2012).

Lassen (2003) clarified that the political goods offered by the government should deserve the payment of taxpayers. So, based on the concept of *quid pro quo*, taxpayers will comply with tax laws if they found that the government provide sufficient political goods. This argument was supported by Torgler, Schaffner and Macintyre (2007) and Kaufmann, Kraay and Mastruzzi (2007). They explained that the concept of participation by individuals must be comprehensive by using political methods such as democracy.

In line with the findings of this study, it can be said that the low quality of public governance in Yemen contributes significantly to increasing the level of tax non-

compliance in Yemen. Therefore, the findings of this study provide proof that public governance quality is a significant determinant of tax compliance behaviour, and thus, it is recommended that the Yemeni government improves the quality of public governance, especially, many payments, particularly, those related to the infrastructure projects are funded from tax, so, to improve the compliance of taxpayers, citizens must see tangible effect in return of their payments.

6.3.5 Research Question 5

The fifth research question in the current study addresses whether there is a significant relationship between tax rate and tax non-compliance behaviour among SMEs in Yemen. The descriptive statistics of the current study revealed that taxpayers in Yemen were of the opinion that the tax rate structure is moderately not fair. The multiple regression results disclosed that the relationship between tax rate and tax non-compliance was positively significant. This result is consistent with the theory of deterrence and hypothesis of the current study. Mwangi (2014) described that high tax rate is the main cause of tax non-compliance.

In the literature, most of the earlier empirical studies supported the result of the present study, such as Clotfelter (1983), Feinstein (1991), Christian and Gupta (1993), Joulfaian and Rider (1998), Ali, Cecil, and Knoblett (2001), Lin and Yang (2001), McGee and Ho (2006), McGee and Lingle (2006), and McGee and Rossi (2006). Hai and See (2011) found that the high tax rate causes high tax non-compliance, and Park and Hyun (2003) found that increasing tax rates encouraged non-compliance behaviour. Spicer and Becker (1980) explained that taxpayers, who are aware that their tax rate is higher than average, records a high level of tax non-

compliance. Derwent (2000) studied taxpayers behaviour in five countries (USA, South Africa, Nigeria, Kenya and Gambia), and concluded that tax rate is considered a major challenge of tax compliance.

The recent studies confirmed the positive association between tax rate and tax non-compliance, such as Ser (2013), Nor Azrina, Ling and Wah (2014), Levin and Widell (2014) and Zakariya'u (2015). The current study supported the literature and provided evidence that the high tax rate significantly influence the behaviour of tax payers and lead to increased level of tax non-compliance.

6.3.6 Research Question 6

The sixth research question in the current study addresses whether there is a significant relationship between penalties and tax non-compliance behaviour among SMEs in Yemen. Based on the descriptive statistics on the data of the current study, the respondents believe that penalties are moderately strict on tax non-compliance behaviour in Yemen. Although the deterrence theory of Becker (1968) proposes that people do not commit crimes because they are afraid of getting caught, the multiple regression results in the current study concluded that the relationship between tax penalties and tax non-compliance behaviour is not significant. This result may be explained by the ongoing war and the political instability in the country, which led to weakness of the governmental power and reduced accountability (Al-Rabae, 2014). As a result, the government is not in a position to enforce rules and so, the penalties do not affect the behaviour of taxpayers in the present situation.

More specifically, the literature evidenced that the results of relationship between penalties and tax non-compliance is mixed, where some studies found that the relationship is negative (Witte & Woodbury, 1985; Cherry, 2001; Reckers, & Iyer, 2008; Sanders, Reckers, & Iyer, 2008; Doran, 2009; Twum, 2014), while other studies concluded that the relationship is positive (Crane & Nourzad, 1995; Morris, 2010 and Azrina *et al.*, 2014), whereas the result of current study is in line with the studies of Pommerehne and Weck-Hannemann (1996), Kamdar (1997) and Kuria, Ngumi and Rugami (2013), which described that the relationship is not significant. Rettig (2011) explained that the tax authorities must enhance voluntary compliance rather than forcing taxpayers to pay their tax. This suggestion is proposed to the Yemeni tax authority as well, where the tax penalties have no significant effect on the behaviour of tax payers.

6.3.7 Research Question 7

The seventh research questions of the current study addressed the moderating effect of Islamic religious perspective. Broadly, the multiple regression result of model 3, which tested the moderating effects of Islamic religious perspective of taxpayers on the relationship between tax non-compliance and its determinants, evidenced that integrating Islamic religious perspective as a moderator in tax non-compliance model strengthened the capacity of the model. Specifically, the change R^2 of the model 3 is 0.101 with value of significant F change is 0.001. Based on the rule of thumb of Ramayah (2014), this result indicates that the Islamic religious perspective has a significant moderating effect on tax non-compliance model. This finding is not surprising for Yemen as a totally Muslim country, because religion provides an essential basis for social interaction, which may have a strong effect on the behaviour

(Mohdali & Pope, 2014). Detailed discussion, concerning the moderating effect of Islamic religious perspective on the relationship between tax non-compliance behaviour and each factor, are presented in the following sub-sections.

6.3.7.1 The Influence of Geopolitical Differences on Tax Non-compliance Behaviour in the Presence of Islamic Religious Perspective

The result of the previous studies indicates that the relationship between tax non-compliance and its determinants is inconsistent. Baron and Kenny (1986) suggested that in case of inconsistent results, moderator is introduced. Since the Yemeni people are all Muslims, thus the moderating effect of Islamic religious perspective, as internal value of the taxpayer, cannot be underestimated, because religion provides an essential basis for social interaction, which may have a strong effect on the behaviour (Mohdali & Pope, 2014).

In the current study, the regression result of models 1, 2 and 3 revealed that geopolitical differences has a significant effect on tax non-compliance behaviour [$(\beta = 0.335; P=0.034)$, $(\beta = 0.345; P=0.038)$ and $(\beta = 0.322; P=0.038)$ respectively]. Also, the result of models 2 and 3 indicated that Islamic religious perspective has a significant impact on tax non-compliance behaviour.

Concerning the interaction effect of Islamic religious perspective with geopolitical differences, it is revealed from model 3 that the relationship is positive and significant with tax non-compliance behaviour ($\beta = 0.134; P=0.001$). Hence, it could be said that the presence of Islamic religious perspective strengthened the relationship between geopolitical differences and tax non-compliance. This result is predicted in the hypothesis, which could be explained by recognizing the impact of

Islamic religious perspective in Yemen as a Muslim country. In other words, the Islamic religious perspective of taxpayers enhanced the impact of geopolitical attitude on tax non-compliance behaviour, and strengthened the relationship between taxpayers' behaviour and geopolitical differences.

6.3.7.2 The Influence of Tax Service Quality on Tax Non-compliance Behaviour in the Presence of Islamic Religious Perspective

The results of model 1, 2 and 3 concluded that the relationship between tax service quality and tax non-compliance was negative [$(\beta = -0.273; P=0.044)$, $(\beta = -0.240; P=0.032)$ and $(\beta = -0.199; P=0.028)$ respectively]. By testing the interaction effect of Islamic religious perspective with tax service quality, the multiple regression result evidenced that Islamic religious perspective weakened the influence of tax service quality on tax non-compliance behaviour ($\beta = 0.014; P=0.814$). So, arguably the presence of Islamic religious perspective changed the relationship between tax service quality and tax non-compliance from significant to non-significant.

In the current study, it is axiomatic that tax service quality, as external factor, may have a strong impact on the behaviour of taxpayers, because taxpayers are affected by the tangible surroundings. So, increasing the quality of tax service leads to decreased level of non-compliance. But when tax service quality interacted with Islamic religious perspective, as internal value of taxpayers, the influence of tax service quality became marginal, as the internal values influence the behaviour of taxpayers more than the sensible things.

6.3.7.3 The Influence of Public Governance Quality on Tax Non-compliance Behaviour in the Presence of Islamic Religious Perspective

The results of model 1, 2 and 3 concluded that the relationship between public governance quality and tax non-compliance was negative [$(\beta = -0.170; P=0.006)$, $(\beta = -0.128; P=0.002)$ and $(\beta = -0.153; P=0.000)$ respectively]. Also, in model 3, the interaction effect between of Islamic religious perspective with public governance quality was investigated. The result of multiple regression pointed out that Islamic religious perspective weakened the influence of public governance quality on tax non-compliance behaviour ($\beta = 0.049; P=0.350$). So, the presence of Islamic religious perspective moderated the relationship between public governance quality and tax non-compliance.

According to Mohdali and Pope (2014), religion always has a strong impact on the behaviour of people more than external factors. Therefore, Islamic religious perspective changed the relationship between public governance quality and tax non-compliance from significant to insignificant. Davis *et al.* (1989) explained that the social influence usually explains the relationships better than social exchange. Therefore, it is concluded that the interaction effect of Islamic religious perspective, as social influence factor, has weakened the influence of public governance as social exchange factor.

6.3.7.4 The Influence of Tax Rate on Tax Non-compliance Behaviour in the Presence of Islamic Religious Perspective

The regression result of models 1, 2 and 3 revealed that tax rate has a positive significant effect on tax non-compliance behaviour [$(\beta = 0.092; P=0.027)$, $(\beta = 0.068; P=0.021)$ and $(\beta = 0.127; P=0.009)$ respectively]. Nevertheless, the literature reported

that the result of the relationship between tax rate and tax non-compliance behaviour were mixed. Specifically, some studies found a positive association between tax rate and tax non-compliance (Clotfelter, 1983; Feinstein, 1991; Christian & Gupta, 1993; Joulfaian & Rider, 1998; Ali, Cecil, & Knoblett, 2001; Park & Hyun, 2003; Peter, 2008; Hai & See, 2011; Mwangi, 2014; Zakariya'u, 2015), whereas other studies concluded that the relationship is significantly negative (Feinstein, 1991; Alm, Sanchez, & De Juan, 1995; Kirchler, Hoelzl & Wahl, 2008). Some other studies reported no significant relationship between tax rate and tax non-compliance behaviour (Allingham & Sandmo, 1972; Porcano, 1988; Trivedi, Shehata, & Mestelmen, 2004; McGee, 2007; McGee & An, 2007; McGee & Bose, 2007; Modugu, Eragbhe & Izedonmi, 2012).

Following the recommendation of Baron and Kenny (1986), Islamic religious perspective was introduced as a moderator. The result indicated that the interaction effect of Islamic religious perspective with tax rate in model 3 has insignificant influence on the model of tax non-compliance behaviour ($\beta = 0.289$; $P = 0.311$). Hence, it could be said that the presence of Islamic religious perspective transformed the relationship between tax rate and tax non-compliance from significant to insignificant. In other words, the presence of Islamic religious perspective in the model weakened the influence of tax rate on tax non-compliance behaviour.

Logically, the pure effect of the tax rate on tax non-compliance is significant, but when it is interacted with Islamic religious perspective, the effect was altered into non-significant effect, because internal value for taxpayers rationally weakened the

effect of tax rate as external factor. In other words, the taxpayers may consider the religious perspective even if the cost of compliance is higher.

6.3.7.5 The Influence of Penalties on Tax Non-compliance Behaviour in the Presence of Islamic Religious Perspective

The results of model 1, 2 and 3 revealed that the relationship between tax penalties and tax non-compliance was statistically insignificant [$(\beta = -0.032; P=0.770)$, $(\beta = -0.021; P=0.782)$ and $(\beta = -0.077; P=0.641)$ respectively]. The previous studies concluded that the result of the relationship between penalties and tax non-compliance is inconsistent – some studies (e.g., Witte & Woodbury, 1985; Doran, 2009; Twum, 2014) found the relationship to be significantly negative, while others (Crane & Nourzad, 1995 and Azrina *et al.*, 2014) found it to be significantly positive, and some others (Pommerehne & Weck-Hannemann, 1996; Kamdar, 1997; Kuria, Ngumi & Rugami, 2013) found no significant relationship between penalty rate and non-compliance.

By testing the interaction effect of Islamic religious perspective, the multiple regression result of model 3 provided evidence that Islamic religious perspective significantly moderated the influence of penalties on tax non-compliance behaviour ($\beta = -0.181; P=0.017$). So, arguably the presence of Islamic religious perspective interacted with the relationship between penalties and tax non-compliance significantly and strengthened the influence of penalties on tax non-compliance behaviour. Reasonably, penalties, as external factor, may have no strong impact on the behaviour of taxpayers. When it is interacted with Islamic religious perspective, as internal value of taxpayers, the relationship was altered to significant. This means

that the influence of penalties is limited, but when it is supported by a religious perspective, the influence became significant.

6.4 Implications of the Study

Based on the results and discussions presented, there are theoretical, methodological and practical implications provided, which are highlighted in the following subsections.

6.4.1 Theoretical Implications

Most of the studies conducted about tax non-compliance have been conducted from the perspective of deterrence theory, which focused on the issue from the economic perspective, while neglecting social, political and psychological aspects. This is considered as one of the weaknesses of deterrence theory in that it does not provide an explanation of all factors affecting the phenomenon of tax non-compliance (Allingham & Sandmo, 1972; Dubin & Wilde, 1988; Riahi-Belkaoui, 2004). Alm (1999) and Riahi-Belkaou (2004) argued that economic variables do not provide a complete understanding and explanation for taxpayers' behaviour. Consequently, some studies extended their examination to cover social and legal perspectives (Jackson & Milliron, 1986; Klepper *et al.*, 1991; Fischer *et al.*, 1992).

As contributions to body of tax knowledge, the current study incorporated new variables in the model of tax non-compliance, which come under the social and psychological theories. The recognition of other determinants of tax non-compliance behaviour in the current study follows the statement of Jackson and Milliron (1986)

and Alm (1999) that other factors outside the basic model may be relevant to understand the decisions of taxpayers.

In the first place, the current study provided evidence of a strong association between taxpayers Islamic perspective with non-compliance behaviour. Although Yemeni community is entirely Muslim, the perceptions and attitudes about some contemporary issues, such as tax, are different (Obaid, 2008). It has been proven that the taxpayer who believes that tax is forbidden is normally more non-compliant, whereas the taxpayer who believes that tax is permissible records low non-compliance. Another contribution to the literature is the findings of the relationship between geopolitical differences and tax non-compliance, where the taxpayers from different geopolitics exhibit different levels of non-compliance. So, in the case of Yemen, it was evidenced that taxpayers from the South are more compliant than taxpayers from the North.

Moreover, the study provided evidence of a strong negative association between the quality of tax service delivery by the tax offices and non-compliance behaviour. This indicates that tax service quality exerts significant influence on tax compliance behaviour. Also, the study reaffirmed the findings of the previous studies concerning the impact of public governance quality on tax non-compliance. It has been established that public governance quality has a significant negative impact on tax non-compliance behaviour. In addition, the study identified the relationship between tax system structure elements and tax non-compliance in Yemen. The findings showed that tax rate has positive significant effect on tax non-compliance, while the relationship between penalties and tax non-compliance is statistically not significant.

Aside from the above relationship, the study tested the influence of business category on the behaviour of taxpayers and discovered that the relationship between business sector and tax non-compliance is also statistically not significant.

The key contribution of the current study is the presence of moderators in the relationship between tax compliance and some of its determinants. The findings in this area satisfied the suggestion from the literature that the relationship between tax compliance behaviour and its determinants are inconsistent, which gives an indication that the relationship may be moderated by certain variables (Kirchler *et al.*, 2007; Al-Ttaffi *et al.*, 2011). Hence, the study examined the moderating impact of Islamic religious perspective on the relationship between tax system structure elements and tax non-compliance. The study provided proof that the presence of Islamic religious perspective, as moderator, influences the model of tax non-compliance. Specifically, three models were introduced in this study. The adjusted R^2 of the models 1 and 2, without moderator, were 21% and 23% respectively, whereas the adjusted R^2 of the model 3, in which the moderator was incorporated, was raised to 33%. Concerning the effect of the moderator in the variables individually, the regression revealed that Islamic religious perspective moderates the relationship between tax service quality, public governance quality, tax rate and penalties with tax non-compliance behaviour.

Finally, arguably most of the researches of the influence of religious aspects on tax non-compliance have been conducted in developed countries such as the USA and Europe (Mohdali, 2013). Therefore, by focusing on a developing country, the current study answered the call for many studies on tax non-compliance to bridge the gap

between developing and developed countries (Andreoni, Erard & Feinstein, 1998; Chau & Leung, 2009; Feust & Riedel, 2009), and also, provided an evidence on the influences of religious, social, political and economic factors on the non-compliance behaviour of taxpayers, which may contribute to the literature of tax non-compliance in developing countries.

6.4.2 Methodological Implications

Besides the theoretical implications, the current study also contributes to the methodological perspective by establishing new measurement of Islamic religious perspective. Specifically, the Islamic religious perspective was employed as a moderator in the current study and was measured using the three Islamic perspectives; (1) totally permissible, (2) permissible under certain circumstances and conditions, and (3) totally forbidden. Also, the current study provided a new measurement of the geopolitical differences in Yemen, as the two geopolitical diverse regions existing in Yemen, namely, North and South are used as a proxy to measure geopolitics in Yemen. It is worth to highlight that the current study is likely to be the first empirical study that divided Yemen to North and South. In addition, the current study employed the hypothetical scenario in order to measure tax non-compliance behaviour, which is considered to be a pioneering study that used this measurement in tax non-compliance in the Middle East region.

Moreover, the literature reviewed concerning tax compliance and non-compliance in Yemen evidenced that the current study is the first one that focused on the SMEs as an important sector that have a significant effect on the economy of the country. Furthermore, the current study covered the major seven cities in Yemen, which

contain approximately 78.4% of SMEs in Yemen. These seven cities are distributed throughout the whole country. This is unlike previous studies, which focused on one single city or governorate, such as Sana'a (Gubran, 2009; Helhel & Ahmed, 2014), Mukalla (Al-Ttaffi, 2009) and Hadramout coast (Aljaaidi *et al.*, 2011).

6.4.3 Practical Implications

On the basis of the findings of this study, several important practical implications are provided for the tax authority and the government in Yemen. The study findings are relevant to policy makers, profession, tax authorities and researchers in Yemen and other developing countries. Particularly, the study provides significant insights to a roadmap that helps in understanding the most influential factors on taxpayers' behaviour in Yemen. This certainly contributes to improving tax collection, which is compatible with the Yemeni government initiatives in fighting the phenomenon of tax non-compliance.

The findings of the current study evidenced that the behaviour of taxpayers is based on their Islamic religious perspectives and attitudes. In other words, the Islamic perspective of taxpayers significantly impacts their behaviour. Therefore, to improve the compliance of taxpayers, the government is recommended to provide more arguments to taxpayers about the importance of payment of tax, by adopting and deploying the perspectives of the Islamic scholars that have a positive perception about tax, such as Nabulsi (2005), who believes that tax has to be paid in exchange for service rendered by the government to its citizens. Also, the findings revealed that Northern people have lower compliance than their Southern counterparts.

Therefore, the government is recommended to deploy tax awareness among the northern citizens.

Concerning the quality of tax service, the finding of the study revealed a negative association between tax service quality and tax non-compliance behaviour, and the descriptive statistics revealed that Yemeni taxpayers had a low perception about the quality of tax service delivery in Yemen. So, the government is proposed to improve the quality of tax service by following the suggestions of scholars and experience of many countries. In this regard, Torgler (2007) suggested that tax authority can improve the compliance of taxpayers by creating cooperation with them. Torgler argued that tax authority must consider itself as service institution and provide a quality service and treat the taxpayers as partners. Moreover, a lot of developed countries such as the USA, the UK, France, Sweden and Denmark applied the new concept of giving more consideration to their tax service requirements and taking care of them as clients (Kirchler, 2007). In terms of public governance quality, similar results and descriptive statistics was found, which suggest that the right direction of public governance towards improving the low perception of taxpayers about the quality of public governance in Yemen would greatly enhance compliance behaviour of taxpayers. So, the government is suggested to improve the quality of public governance to improve the level of tax compliance in Yemen.

As for tax system structure, the findings suggest that tax rate significantly impact tax non-compliance. Also the literature explained that tax rate is considered a major challenge of tax compliance and taxpayers who are aware that their tax rate is higher than average records a high level of tax non-compliance. Therefore, tax rate must be

reasonable and fair. The other element of tax system structure, investigated in the current study, is tax penalties. It was evidenced in the current study that no significant association exists between penalties and tax non-compliance, and hence, the Yemeni tax authority must enhance voluntary compliance rather than forcing taxpayers to pay their tax.

Finally, it is worth mentioning that the Yemeni government suffers from a high volume of deficit in its budget. According to Al-Mutawakel (2014), the deficit in the budget in Yemen is very large and this is compounded by the large volume of tax non-compliance. So, if the government is able to overcome or reduce the amount of tax non-compliance, the budget deficit will be covered. Consequently, eliminating the problem of tax non-compliance will largely support the government and will play an important role in supporting the government to inject sufficient funds to eliminate the deficit, which threatens the economy of the country.

6.5 Limitations and Recommendations for Future Research

Although the current study provides various contributions, including theoretical, methodological and practical contributions, like any other research works, there are a number of limitations associated with it. Nevertheless, these limitations, on the other hand, provide opportunities for future studies to consider.

Given that the influence of Islamic religious perspective is the key contribution of the current study, the influence of paying Zakat was not considered simultaneously with tax. Therefore, further research is recommended to examine the impact of Zakat payment on taxpayers' behaviour. Furthermore, this study contributes to the

knowledge by investigating the moderating role of Islamic religious perspective as internal value, but under the current economic circumstances of Yemen, the economic factors may play an important role in moderating the relationship between tax non-compliance behaviour and its determinants. Such investigations may provide further explanation concerning taxpayers' behaviour for a better understanding of their compliance decisions.

Methodologically, similar to many of behavioural studies, the current study relied on self-reporting of taxpayers, where tax non-compliance was measured by the way of hypothetical scenario. This way of measurement depends on the judgement of respondents which may vary from one person to another. Van Dijke and Verboon (2010) reported that the answers of taxpayers under this method may not be a trustful representation of the actual behaviour. Creswell (2009) suggested the use of mixed method consisting of both qualitative and quantitative researches. Meanwhile, Abdul-Jabbar (2008) recommended the use of official data, which allows researchers to reduce personal bias of respondents and minimizes the limitation of measurement. Thus, general conclusion from the findings of the current study must be taken with caution, with this limitation requiring further study.

Also, this study used a cross-sectional research, which refers to a type of observational study that involves the analysis of data collected from a population or a representative subset at one specific point of time. According to Al-Swidi and Mahmood (2012), this type of research shortcoming includes its non-consideration of the dynamic changes in the environment and the psychological changes of the

respondents that can occur, especially as data is collected during the political crisis in Yemen. For these reasons, generalization of the findings should be done carefully.

Another limitation is related to the data collection, where the data of the study was collected from only the 7 major cities in Yemen. According to Burton *et al.*, (2005), the behaviour of people residing in urban areas may be influenced by social, economic and political environment differently from the people residing in rural areas. Thus, future researchers may need to consider extending tax non-compliance studies to rural areas, where the attitudes towards the government could be different due to the great disparity in the public service between the rural and urban areas, which is likely to cause a difference in the behaviours of taxpayers.

Also, another limitation concerns the statistics of SMEs, as the numbers of SMEs considered were obtained from a 2010 list, which is considered the most updated information obtained from the annual reports of COS, NIS and MIT. Due to prolong crisis, no updated version available since 2010 until the current study is conducted and completed. Further research is recommended to be conducted with updated statistics. Also, the scope of the study is limited to SMEs in Yemen, and hence, the findings may not be generalizable to all taxpayers in Yemen. This limitation opens the opportunity for future research works dedicated to taxpayers on a larger scope covering more than SMEs.

Another further limitation concerns the random sample selection in the strata. Unfortunately the Ministry of Industry and Trade (MIT) did not provide all elements in the strata. Instead, the sample in the cities was selected by MIT. Although the

researcher provided MIT the sectors of the enterprises as a criterion of sample selection, this step is better done by the researcher. Further study is recommended to consider this point.

Another important limitation is concerning the political situation of the country during the period in which the study was conducted, where Yemen suffers from a violent crisis under an unstable political situation, which could have had an effect on the psychological and behavioural status of the citizens and taxpayers in Yemen, and the respondents' confidence on the government. So the answers probably did not express their actual behaviour accurately. Moreover, the quality of public governance and service are naturally in the worst situation due to the crisis. As such, further study is suggested to be done in a better political situation.

Also, other limitation regarding the multi-dimensional variables, particularly, tax service quality and public governance quality. The current study investigated the effect of these variables, as a whole variable, on tax non-compliance. Future researchers may decompose these variables and test the relationship between each dimension and tax compliance behaviour separately, which may provide further details about the possible effects of each dimension on tax non-compliance behaviour.

Finally, the study has not exhausted the likely factors that may influence tax non-compliance behaviour. Alm (1999) argued that no single study can capture the numerous factors that have an effect on tax compliance behaviour. Consequently, there are other factors, which may be relevant to understand the phenomenon of tax

non-compliance behaviour in Yemen, but they have not been tested in the present study. Specifically, the literature indicated that the influence of political stability, revolution and corruption may have influence on the behaviour of the Yemeni taxpayers, but have not been investigated so far. Therefore, the current study also suggests future research works to expand the study model to integrate these factors.

6.6 Conclusion

In conclusion, the current study presented a model of tax non-compliance behaviour that integrates variables from various disciplines and theories, and provided empirical evidence on the relationship between numerous variables and tax non-compliance behaviour. Specifically, the study investigated the relationship between Islamic religious perspective, geopolitical differences, business sector, tax service quality, public governance quality and tax system structure with tax non-compliance behaviour as well as the moderating effect of Islamic religious perspective on the relationship between tax system structure and tax non-compliance behaviour.

The findings of the study revealed that Islamic religious perspective, geopolitical differences, tax service quality, public governance quality and tax rate are significantly associated with tax non-compliance behaviour, whereas business sector and tax penalties have no significant contribution in the model of tax non-compliance. Furthermore, it was found that the interaction effect of Islamic religious perspective with penalties significantly influence tax non-compliance behaviour, while the interaction effect of Islamic religious perspective with tax rate has no significant contribution in the model of tax non-compliance behaviour. Moreover, the findings indicated that the introduction of Islamic religious perspective as a

moderator in tax non-compliance model strengthened the capacity of the model and provided a better prediction of taxpayers' behaviour in Yemen.

In summary, the current study provides several contributions, particularly, to the theory, methodology and practice, and offers explanation on the way of how tax compliance can be enhanced.



REFERENCES

- Abdulasiz, A. (2010). *The marketing on SMEs in Yemen*. Unpublished master thesis, Aden University, Yemen.
- Abdul-Jabbar, H. (2009). *Income tax non-compliance of small and medium enterprises in Malaysia: Determinants and tax compliance costs*. Unpublished doctoral thesis, Curtin Business School, School of Economics and Finance, Curtin University, Australia.
- Abdul-Jabbar, H., & Pope, J. (2008). Exploring the relationship between tax compliance costs and compliance issues in Malaysia. *Journal of Applied Law and Policy*, 1(1), 1-20.
- Abdullahi, S., & Ahmad, H. (2002). *The influence of demographic factors towards tax compliance in UUM* (Research report). Universiti Utara Malaysia.
- Abu-Tabel, E. (1998). *Revenues tax: Empirical and analytical study, comparison between the Egyptian and Yemeni laws*. Dar Al-Nahda Al-Arabia, Cairo, Egypt.
- Abu-Zahra, M. (2005). *Islamic feqeh forum*. Retrieved June 5, 2015, from <http://www.islamfeqh.com>
- Agbadi, S. B. (2011). *Determinants of tax compliance: A case study of VAT flat rate scheme traders in the Accra metropolis*. Unpublished doctoral thesis, University of Science and Technology, Nigeria.
- Aguinis, H., & Gottfredson, R. (2010). Best-practice recommendation for estimating interaction effects using moderated multiple regression. *Journal of Organizational Behaviour*, 32(8), 1033-1043.
- Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes*, 50(2), 179-211.
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social Behaviour*. Englewood Cliffs, NJ: Prentice-Hall.
- Akpo, U. (2009). *The people as government: The importance of tax payment*. Akwa Ibom State Revenue Summit. Uyo: Akwa Ibom State Internal Revenue Service.
- Akter, K., Lanza, E. A., Martin, S. A., Myronyuk, N., Rua, M., & Raffa, R. B. (2011). Diabetes mellitus and Alzheimer's disease: Shared pathology and treatment. *British Journal of Clinical Pharmacology*, 71(3), 365-376.
- Alabede, J. O. (2001). *Improving efficiency of tax administration for effective revenue generation in democratic Nigeria*. SBS National Conference. Damaturu: Federal Polytechnic, August, 15.

- Alabede, J. O. (2012). *An investigation of factors influencing taxpayers compliance behaviour: evidence from Nigeria*. Unpublished doctoral thesis, Universiti Utara Malaysia.
- Alabede, J. O., Ariffin, Z. Z., & Idris, K. (2011a). Public governance quality and tax compliance behaviour in Nigeria: The moderating role of financial condition and risk preference. *Issues in Social and Environmental Accounting*, 5(1/2), 3-24.
- Alabede, J. O., Ariffin, Z. Z., & Idris, K. (2011b). Individual taxpayers' attitude and compliance behaviour in Nigeria: The moderating role of financial condition and risk preference. *Journal of Accounting and Taxation*, 3(5), 91-104.
- Alabede, J. O., Ariffin, Z. Z., & Idris, K. (2011c). Tax service quality and compliance behaviour in Nigeria: Do taxpayer's financial condition and risk preference play any moderating role? *European Journal of Economic, Finance and Administrative Studies*, 35, 90-108.
- Alabede, J. O., Ariffin, Z. Z., & Idris, K. (2011d). Determinants of tax compliance behaviour: A proposed model for Nigeria. *International Research Journal of Finance and Economics*, 78(1), 121-136.
- Al-Ahmadi, M. (2011). *The Influence of the domestic economic growth on the public policy of the state and its impact on the quality of political decisions: evidence from Yemen*. Unpublished doctoral thesis, University of the Organization of Arab States Arab League Educational, Cultural and Scientific Organization, Arab Research and Studies Institute, Cairo.
- Alasrag, H. (2010). *The role of small and medium enterprises in job creation in the Arab countries*. Munich Personal RePEc Archive. Online at <http://mpa.ub.uni-muenchen.de/22300/> MPRA Paper No. 22300.
- Al-Batly, A. (2014). *The financial policies of the new Yemeni government*. Al-Ahaly Net, Retrieved April 30, 2015, from <http://alahale.net>
- Al-Doais, F. A. (2008). *The role of accounting information system in reducing tax evasion n the Republic of Yemen*. Unpublished master thesis, University of Al-Albait, Jordan.
- Ali, A., & Ahmad, N. (2014). Trust and tax compliance among Malaysian working youth. *International Journal of Public Administration*, 37(7), 389-396.
- Ali, M. M., Cecil, H. W., & Knoblett, J. A. (2001). The effects of tax rates and enforcement policies on taxpayer compliance: A study of self-employed taxpayers. *Atlantic Economic Journal*, 29(2), 186-202.
- Alimat, K. (2013). Tax evasion causes, forms and ways to reduce it. *Al-Manarah Journal*, 19 (2), 113-142.
- Aljaaidi, K. (2008). *The perception of Yemeni individuals towards tax evasion as crime*. Unpublished master thesis, Universiti Utara Malaysia.

- Aljaaidi, K. S., Manaf, N. A. A., & Karlinsky, S. S. (2011). Tax evasion as a crime: A survey of perception in Yemen. *International Journal of Business and Management*, 6(9), 190-201.
- Aljamaree, Y., and Algaylee, A. (2007). Financial ministry implements transparency principle to reform the financial regulations and laws. Retrieved August 20, 2015, from <http://www.sabanews.net/ar/news131480.htm>
- Al-Jibreen, A. (2012). *Ask and answer*. Al-Muslim website. Retrieved June 5, 2015, from <http://almoslim.net>
- Al-Khateeb, K. (2000). Tax evasion. *Journal of Damascus University*, 16 (2), 157-186.
- Allingham, M. G., & Sandmo, A. (1972). Income tax evasion: A theoretical analysis. *Journal of Public Economics*, 1(3), 323-338.
- Alm, J. (1999). Tax compliance and administration. *Public Administration and Public Policy*, 7(2), 741-768.
- Alm, J., Bahl, R., & Murray, M. N. (1990). Tax structure and tax compliance. *The Review of Economics and Statistics*, 72(4), 603-613.
- Alm, J., Jackson, B. R., & McKee, M. (1992). Estimating the determinants of taxpayer compliance with experimental data. *National Tax Journal*, 45(1), 107-114.
- Alm, J., McClelland, G. H., & Schulze, W. D. (1992). Why do people pay taxes?. *Journal of Public Economics*, 48(1), 21-38.
- Alm, J., Sanchez, I., & De Juan, A. (1995). Economic and noneconomic factors in tax compliance. *Kyklos*, 48(1), 1-18.
- Al-Marri, K., Moneim M. Baheeg Ahmed, A., & Zairi, M. (2007). Excellence in service: An empirical study of the UAE banking sector. *International Journal of Quality & Reliability Management*, 24(2), 164-176.
- Al-Mutawakel, M. H. (2014). *Energy tax gap and the budget deficit*. -Ahaly Net, Yemen. Retrieved 30 April 2014 from <http://alahale.net/article/16127>.
- Al-Naqeeb, A. (2011). *The path towards independence: Voice of the South*. Retrieved February 13, 2015, from <http://tajaden.org/history/2869.html>
- Al-Omari, E. (2009). *Noor Islam'na forum*. Researcher personal website. Retrieved September 5, 2015, from <http://www.nourislamna.com>
- Al-Rabae, F. (2014). *Failure of the unity between the republics of Yemen: A scientific approach under unity theories*. Madar centre for Studies and Research. Philistine.

- Al-Rubaidi, M. (2004). *Taxation accounting*. Dar Al-feker Al-mua'aser, Sana'a, Yemen.
- Al-Saadi, M. (2014). *International cooperation: Vision and mission*. Al-Thawra Gazette (Issued daily by the Yemeni Prime Minister). Issue of 17 July, 2014. Sana'a.
- Al-Sabri, H. S. (2010). *General sales tax and applied problems in Yemen: An empirical study*. Unpublished doctoral dissertation, College of Economic, University of Damascus, Syria.
- Al-Saqqaf, R. A. (2005). *Brand building strategies of SMEs in Yemen: A grounded research that investigates if Yemeni SMEs follow western theory in brand building practices*. Dar Al-feker Al-mua'aser, Sana'a, Yemen.
- Al-Swidi, A. K., & Mahmood, R. (2011). How does organizational culture shape the relationship between entrepreneurial orientation and the organizational performance of banks?. *European Journal of Social Sciences*, 20(1), 28-46.
- Al-Swidi, A. K., & Mahmood, R. (2012). Total quality management, entrepreneurial orientation and organizational performance: The role of organizational culture. *African Journal of Business Management*, 6(13), 4717-4727.
- Al-Ttaffi, L. H. A. (2009). *Determinants of tax evasion: An empirical evidence from the Republic of Yemen*. Unpublished Master thesis, Universiti Utara Malaysia.
- Al-Ttaffi, L. H. A., Abdul Manaf, N., Aljaidi, K. & McGee, R. (2011). *An investigation of factors influencing tax evasion in Yemen*. The Second Soft Science Conference. November 2011, Vietnam.
- Al-Yasani, A. (2005). *An economic study of the impact of economic reform on the agricultural sector in Yemen*. Unpublished doctoral thesis, College of Commerce, Al-Nailin University, Sudan.
- Americans For Fair Taxation "AFFT" (2007). *What is the difference between statutory, average, marginal, and effective tax rates?*. Retrieved January 25, 2015, from <http://fairtax.org/PDF/WhatIsTheDifferenceBetweenTaxRates.pdf>.
- Andreoni, J., Erard, B., & Feinstein, J. (1998). Tax compliance. *Journal of Economic Literature*, 36(2), 818-860.
- Angur, M. G., Natarajan, R., & Jahera Jr, J. S. (1999). Service quality in the banking industry: An assessment in a developing economy. *International Journal of Bank Marketing*, 17(3), 116-125.
- Arayama, Y., & Miyoshi, K. (2004). Regional diversity and sources of economic growth in China. *The World Economy*, 27(10), 1583-1607.
- Armstrong, J. S., & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research*, 14, 396-402.

- Aronson, E., Akert, R. M., & Wilson, T. D. (2010). *Social psychologies*. Pearson Deutschland GmbH.
- Ashby, J. S., Webley, P., & Haslam, A. S. (2009). The role of occupational taxpaying culture in taxpaying behaviour and attitude. *Journal of Economic Psychology*, 30(2), 216-227.
- Asubonteng, P., McCleary, K. J., & Swan, J. E. (1996). SERVQUAL revisited: A critical review of service quality. *Journal of Services Marketing*, 10(6), 62-81.
- Azrina Mohd Yusof, N., Ming Ling, L., & Bee Wah, Y. (2014). Tax non-compliance among SMEs in Malaysia: tax audit evidence. *Journal of Applied Accounting Research*, 15(2), 215-234.
- Bahaj, A. (2000). *The modern Yemeni history*. Unpublished lecture series, Faculty of arts, Department of History. Hadramout University, Yemen.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychological Review*, 84(2), 191.
- Bankman, J. (2007). Eight truths about collecting taxes from the cash economy. *Tax Notes*, 117, 506-507.
- Barberis, N., Huang, M., & Santos, T. (1999). *Prospect theory and asset prices* (No. W7220). National Bureau Of Economic Research.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Bartik, T. J. (1985). Business location decisions in the United States: Estimates of the effects of unionization, taxes, and other characteristics of states. *Journal of Business & Economic Statistics*, 3(1), 14-22.
- Battiston, P., & Gamba, S. (2016). The impact of social pressure on tax compliance: A field experiment. *International Review of Law and Economics*, 46(2), 78-85.
- Baumann, F., & Friehe, T. (2013). Profit shifting despite symmetric tax rates: A note on the role of tax enforcement. *International Economic Journal*, 27(1), 97-108.
- Bazart, C., & Bonein, A. (2012). Reciprocal relationships in tax compliance decisions. *Journal of Economic Psychology*, 40(1), 83-102.
- Becker, G. S. (1968). Crime and punishment: An economic approach. *Journal of Political Economy*, 76(2), 169-217.
- Besancon, M. (2003). *Good governance ranking: The art of measurement*. Cambridge: World Peace Foundation.

- Bidin, Z., Idris, K. M., & Shamsudin, F. M. (2009). Predicting compliance intention on Zakat on employment income in Malaysia: An application of reasoned action theory. *Jurnal Pengurusan*, 28(1), 85-102.
- Blackburn, S. (2008). *The Oxford dictionary of philosophy*. ISBN 9780199541430.
- Blank, J. (2014). Collateral compliance. *University of Pennsylvania Law Review*, 162 (4), 720-800.
- Blau, P. M. (1964). *Exchange and power in social life*. New York: John Wiley & Sons, Inc.
- Blumberg, B., Cooper, D. R., & Schindler, P. (2011). *Business Research Models*. McGraw-Hill Education.
- Bobek, D. D. (1997). *How do individuals judge fairness and what effect does it have on their behaviour?* (Federal Income Tax, Theory of planned behaviour). Ann Arbor: UMI.
- Bobek, D. D., & Hatfield, R. C. (2003). An investigation of the theory of planned behaviour and the role of moral obligation in tax compliance. *Behavioural Research in Accounting*, 15(1), 13-38.
- Bobek, D. D., Hatfield, R. C., & Wentzel, K. (2007). An investigation of why taxpayers prefer refunds: A theory of planned behaviour approach. *Journal of the American Taxation Association*, 29(1), 93-111.
- Bobek, D. D., Roberts, R. W., & Sweeney, J. T. (2007). The social norms of tax compliance: Evidence from Australia, Singapore, and the United States. *Journal of Business Ethics*, 74(1), 49-64.
- Bogdanov, A., & Rijmen, V. (2014). Linear hulls with correlation zero and linear cryptanalysis of block ciphers. *Designs, Codes and Cryptography*, 70(3), 369-383.
- Bollen, K. A. (1989). A new incremental fit index for general structural equation models. *Sociological Methods & Research*, 17(3), 303-316.
- Boone, J. P., Khurana, I. K., & Raman, K. K. (2013). Religiosity and tax avoidance. *The Journal of the American Taxation Association*, 35(1), 53-84.
- Borrego, A. C., da Mota Lopes, C. M., & Ferreira, C. M. S. (2013). Tax non-compliance in an international perspective: A literature review. *Portuguese Journal of Accounting and Management*, 103(1), 9-41
- Bose, N., Haque, M. E., & Osborn, D. R. (2007). Public expenditure and economic growth: A disaggregated analysis for developing countries. *The Manchester School*, 75(5), 533-556.

- Bradburn, N. M., Sudman, S., & Wansink, B. (2004). *Asking questions: the definitive guide to questionnaire design--for market research, political polls, and social and health questionnaires*. John Wiley & Sons.
- Braithwaite, J. (1999). Accountability and governance under the new regulatory state. *Australian Journal of Public Administration*, 58(1), 90-94.
- Brislin, R. (1986), *The wording and translation of research instruments*. W. J. Lonner, & J. W. Berry (Eds.), *Field methods in cross-cultural research*, 137-201, Beverly Hills, CA: Sage.
- Brown, R. E., & Mazur, M. J. (2003). *IRS's comprehensive approach to compliance measurement*. National Tax Association Symposium. New York: National Tax Association.
- Bryman, A., & Cramer, D. (2009). *Quantitative data analysis with SPSS 14, 15 and 16: A Guide for Social Scientists*. New York: Routledge.
- Burton, H. A., Karlinsky, S. S., & Blanthorne, C. (2005). Perception of a white-collar crime: Tax evasion. *The ATA Journal of Legal Tax Research*, 3(1), 35-48.
- Byrne, B. M. (2010). *Structural Equation Modeling with AMOS; Basic concepts, application and programming* (second edition.). Routledge Taylor and Francis Group
- Camacho Mtz-Vara de Rey, C., Galindo Galindo, M. P., & Arias Velarde, M. A. (2001). Effects of using mean scores in regression models: an example from environmental psychology. *Quality & quantity*, 35(2), 191-202.
- Cameron, A. R., Baldock, F. C., Sharma, P., Chamnanpood, P., & Khounsy, S. (1997). *Random sampling in the absence of a sampling frame: An improved, unbiased, cheaper random geographic coordinate sampling scheme*. In *Epidemiologie et Sante Animale* (special issue—Proceedings of the VIIIth Symposium of the International Society for Veterinary Epidemiology and Economics, Paris, 31-32.
- Campbell, H. F. (2003). *Benefit-cost analysis: financial and economic appraisal using spreadsheets*. Cambridge University Press.
- Campbell, J. Y. (2006). Household finance. *The Journal of Finance*, 61(4), 1553-1604.
- Carapico, S. (1998). *Civil society in Yemen: The political economy of activism in modern Arabia*. Cambridge: Cambridge University Press.
- Caro, L. M., & Garcia, J. A. M. (2007). Measuring perceived service quality in urgent transport service. *Journal of Retailing and Consumer Services*, 14(1), 60-72.

- Cavana, R. Y., Delahaye, B. L., & Sekaran, U. (2001). *Applied business research: Qualitative and quantitative methods*. John Wiley & Sons Australia.
- Central Organization of Control & Audit COCA. (2014). *Annual report*. Retrieved August 1, 2016, from <http://www.arabosai.org>
- Central Organization of Statistics COS. (2013). *Small and Medium Enterprises SMEs*. Retrieved August 1, 2016, from <http://www.cosit.gov.iq/ar/>
- Chan, C. W., & Troutman, C. T. O' Bryan, D.(2000). An expanded model of taxpayer compliance: Empirical evidence from United States and Hong Kong. *Journal of International Accounting, Auditing and Taxation*, 9(2), 83-103.
- Chattopadhyay, S., & Das-Gupta, A. (2002). *The compliance cost of the personal income tax and its determinants*. National Institute of Public Finance and Policy, New Delhi.
- Chau, G., & Leung, P. (2009). A critical review of Fischer's tax compliance model: A research synthesis. *Journal of Accounting and Taxation*, 1(2), 34-40.
- Chen, C., & Kao, Y. (2009). Relationship between process quality, outcome quality, satisfaction and behavioural intentions for online travel agencies: Evidence from Taiwan. *The Service Industries Journal*, 30(12), 2081-2092.
- Chen, M., Pan, C., & Pan, M. (2009). The joint moderating impact of moral intensity and moral judgment on consumer's pirated software use intention. *Journal of Business Ethics*, 90(3), 361-373.
- Cherry, T. (2001). Financial penalties as an alternative criminal sanction: Evidence from panel data. *Atlantic Economic Journal*, 29(4), 96-114.
- Chiang, S. H. (2009). The effects of industrial diversification on regional unemployment in Taiwan: Is the portfolio theory applicable?. *The Annals of Regional Science*, 43(4), 947-962.
- Chiang, W. Y. (2011). To mine association rules of customer values via a data mining procedure with improved model: An empirical case study. *Expert Systems with Applications*, 38(3), 1716-1722.
- Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A partial least squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study. *Information Systems Research*, 14(2), 189-217.
- Christensen, V. G. (2001). *Characterization of surface-water quality based on real-time monitoring and regression analysis*. Quivira National Wildlife Refuge, South-Central Kansas, US Department of the Interior, US Geological Survey.
- Christian, C. W., Gupta, S., & Lin, S. (1993). Determinants of tax preparer usage: Evidence from panel data. *National Tax Journal*, 46(4), 487-503.

- Clotfelter, C. T. (1983). Tax evasion and tax rates: An analysis of individual returns. *The Review of Economics and Statistics*, 65(3), 363-373.
- Coakes, S. J., & Steed, L. G. (2003). *Multiple response and multiple dichotomy analysis*. Milton: John Wiley and Sons Australia Ltd.
- Coakes, S., & Ong, C. (2011). *SPSS version 18 for windows analysis without anguish*. Milton: John Wiley and Sons Australia Ltd.
- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences*. Hillsdale, New York: Lawrence Erlbaum Associates.
- Coleman, C., & Freeman, L. (2002). *The development of strategic marketing options directed at improving compliance of levels in small business in Australian*. New York: Routledge.
- Coleman, F. (2013). *The moderating effects of the ethicality on both morality and religiosity concerning the likelihood of tax evasion* Unpublished doctoral thesis, Louisiana Technical University, USA.
- Concise Oxford English Dictionary. (2011). Main edition Hardcover. Retrieved May 29, 2016, from <https://www.amazon.co.uk/Concise-Oxford-English-Dictionary-Main/dp/0199601089>
- Cooper, D. R., & Schindler, P. S. (2006). *Marketing research*. New York: McGraw-Hill/Irwin.
- Couper, M. P. (2000). Review web surveys: A review of issues and approaches. *The Public Opinion Quarterly*, 64(4), 464-494.
- Crane, S. E., & Nourzad, F. (1986). Tax evasion: An empirical analysis. *The Economics and Statistics*, 68(2), 217-228.
- Creswell, J. (2009). *Research design: Qualitative, quantitative and mixed method approaches*. United Kingdom: Sage Publication Inc.
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874-900.
- Cummings, R. G., Martinez-Vazquez, J., McKee, M., & Torgler, B. (2006). *Effects of tax morale on tax compliance: experimental and survey evidence*. Berkeley Program in Law and Economics.
- Damayanti, T. W., Sutrisno, T., Subekti, I., & Baridwan, Z. (2015). The role of taxpayer's perception of the government and society to improve tax compliance. *Accounting and Finance Research*, 4(1), 180-187.

- Darby, J., Desbordes, R., & Wooton, I. (2010). *Does public governance always matter? How experience of poor institutional quality influences FDI to the South*. CEPR DP, 7533.
- Darrow, A. L., & Kahl, D. R. (1982). A comparison of moderated regression techniques considering strength of effect. *Journal of Management*, 8(2), 35-47.
- Davis, F. D., Bagozzi, R. P. and Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management Science*, 35(8): 982-1003.
- Davis, J. L. (2007). *Firm-level entrepreneurship and performance: An examination and extension of relationships and measurements of the entrepreneurial orientation (EO) construct*. University of Texas at Arlington, Arlington.
- Derwent, J. (2000). *Dismantling the barriers: A pan-European survey on the use of patents and patent information by small and medium-sized enterprises*. New York: Houghton Ltd.
- Deutsch, M. & Gerard, H. B. (1955). A study of normative and informational social influences upon individual judgment. *Journal of Abnormal and Social Psychology*, 51(3), 629-636.
- Devos, K. (2008). Tax evasion behaviour and demographic factors: An exploratory study in Australia. *Revenue Law Journal*, 18(1), 1-23.
- Dhami, S. & al-Nowaihi, A. (2003). Why do people pay taxes? Prospect theory versus expected utility theory. *Journal of Economic Behaviour & Organization*, 64(1), 171-192.
- Diamantopoulos, A., & Winklhofer, H. M. (2001). Index construction with formative indicators: An alternative to scale development. *Journal of Marketing Research*, 38(2), 269-277.
- Dillman, D. A. (2011). *Mail and Internet surveys: The tailored design method--2007 Update with new Internet, visual, and mixed-mode guide*. John Wiley & Sons.
- Dittmer, J. (2013). *Geopolitical assemblages and complexity*. Progress in Human Geography, 0309132513501405.
- Doran, M. (2009). Tax penalties and tax compliance. *Harvard Journal of Legislation*, 46(1), 111-161.
- Dreyer Lassen, D. (2003). *Ethnic divisions and the size of the informal sector* (No. 2003-01). Working Paper Series, EPRU.
- Edlund, J., & Aberg, R. (2002). Social norms and tax compliance. *Swedish Economic Policy Review*, 9(1), 201-231.

- Egwaikhide, F. (2010). Taxation and state-building in a democratic system. *Nigerian Taxation*, 11(1), 35-57.
- Elbanna, S., Child, J., & Dayan, M. (2013). *A Model of Antecedents and Consequences of Intuition in Strategic Decision-making: Evidence from Egypt*. Long Range Planning, 46, 149-176.
- Elffers, H., & Hessing, D. J. (1997). Influencing the prospects of tax evasion. *Journal of Economic Psychology*, 18(2), 289-304.
- Embaye, A. B. (2007). *Essay on tax evasion and government spending in developing countries*. Unpublished doctoral thesis, Georgia State University, Atlanta.
- Emine, D. (2012). Increasing the Productivity of Arab SMEs through Knowledge Management. *Journal of Business & Management* Volume 1(1), 40-51.
- Erard, B., & Feinstein, J. S. (1994). The role of moral sentiments and audit perceptions in tax compliance. *Public Finance*, 49(2), 70-89.
- Eutsler, J., & Lang, B. (2015). Rating scales in accounting research: The impact of scale points and labels. *Behavioural Research in Accounting*, 27(2), 35-51.
- Evans, M. (1987). Moderated regression: Legitimate disagreement, confusion and misunderstanding. *Journal of Information and Optimization Sciences*, 8(3), 293-310.
- Falk, R. F., & Miller, N. B. (1992). *A primer for soft modelling*, Akron, OH, USA: The University of Akron Press.
- Fararah, F. S. (2014). *Islamic microfinance system and customer satisfaction: A study on SMEs sector in Yemen*. Unpublished doctoral thesis, College University of Insaniah, Kedah, Malaysia.
- Fararah, F. S., & Al-Swidi, A. K. (2013). The Role of the Perceived Benefits on the Relationship between Service Quality and Customer Satisfaction: A Study on the Islamic Microfinance and SMEs in Yemen Using PLS Approach. *Asian Social Science*, 9(10), 18-36.
- Fatwa Centre. (2014). *The rule of tax evasion*. Arab Society for Fatwa and Research. Retrieved September 5, 2015, from <http://fatwa.islamweb.net>
- Feinstein, J. S. (1991). An econometric analysis of income tax evasion and its detection. *Journal of Economics*, 22(1), 14-35.
- Feld, L. P., & Frey, B. S. (2007). Tax compliance as the result of a psychological tax contract: The role of incentives and responsive regulation. *Law & Policy*, 29(1), 102-120.

- Feld, L., & Schneider, A. J. (2007). *Tax evasion, black activities and deterrence in Germany: An institutional and empirical perspective*. In Paper prepared for the Annual Congress of the International Public Finance, 27-30.
- Feust, C., & Riedel, N. (2009). *Tax evasion, tax avoidance and tax expenditures in developing countries: A review of the literature*. Report prepared for the UK Department for International Development (DFID).
- Fischer, C. M., Wartick, M., & Mark, M. (1992). Detection probability and tax compliance: A review of the literature. *Journal of Accounting Literature*, 11(2), 1-46.
- Fischer, S. (1993). The role of macroeconomic factors in growth. *Journal of Monetary Economics*, 32(3), 485-512.
- Fishbein, M. (1963). An investigation of the relationship between beliefs about an object and the attitude toward that object. *Human Relations*, 16(3), 233-239.
- Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention and behaviour: An introduction to theory and research. *Philosophy and Rhetoric*, 10 (2), 130-132
- Fjeldstad, O. H., & Semboja, J. (2001). Why people pay taxes? The case of the development levy in Tanzania. *World Development*, 29(12), 2059-2074.
- Fliet, C. (2014). The construction of family values in geopolitical discourse: The ongoing legacy of Adolf Hitler and Britain's 'supreme emergency'. *The Geographical Journal*, 180(1), 65-75.
- Forest, A., & Sheffrin, S. M. (2002). Complexity and compliance: An empirical investigation. *National Tax Journal*, 55(1), 75-88.
- Fragar, R. (1970). Conformity and anti-conformity in Japan. *Journal of Personality and Social Psychology*, 15(3), 203-210.
- Freire-Serén, M. J., & Panadés, J. (2013). Do higher tax rates encourage/ discourage tax compliance?. *Modern Economy*, 4(12), 809-817.
- French, J. R., Raven, B., & Cartwright, D. (1959). The bases of social power. *Classics of Organization Theory*, 2(1), 311-320.
- Galbiati, R., & Zanella, G. (2012). The tax evasion social multiplier: Evidence from Italy. *Journal of Public Economics*, 96(5), 485-494.
- Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction*. Longman Publishing.
- Gaventa, J., & McGee, R. (2010). *Citizen action and national policy reform: Making change happen*. Zed Books.

- George, D., & Mallery, P. (2006). *SPSS for Windows step by step*. Pearson Education India.
- Gilligan, G., & Richardson, G. (2005). Perceptions of tax fairness and tax compliance in Australia and Hong Kong: A preliminary study. *Journal of Financial Crime*, 12(4), 331-343.
- Gökmen, S. R. (2010). *Geopolitics and the study of international relations*. Unpublished doctorate thesis, Middle East Technical University, Turkey.
- Graham, J. R. (1996). Debt and the marginal tax rate. *Journal of Financial Economics*, 41(1), 41-73.
- Gronroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing*, 18(4), 36-44.
- Groves, R. (2006). Non-response rates and nonresponse bias in household surveys. *Public Opinion Quarterly*, 70(5), 646-675.
- Gubran, M. A. (2009). An analytical study of the reality of tax evasion in Yemen. (fourth edition) Annual Conference on Business and Management. Damascus University, Syria.
- Gunasekaran, A. (1999). Agile manufacturing: A framework for research and development. *International Journal of Production Economics*, 62(1), 87-105.
- Güney, A., & Gökcan, F. (2010). The greater Middle East as a modern geopolitical imagination in American foreign policy. *Geopolitics*, 15(1), 22-38.
- Gupta, R., & McGee, R. W. (2010). A Comparative study of New Zealanders' opinion on the ethics of tax evasion: Students versus Accountants. *New Zealand Journal of Taxation Law and Policy*, 16(1), 47-84.
- Gupta, R., & McGee, R. W. (2010). Study on tax evasion perceptions in Australasia. *Australian Tax Forum*, 25(4), 507-534.
- Hai, O. T., & See, L. M. (2011). Intention of tax non-compliance-examine the gaps. *International Journal of Business and Social Science*, 2(7), 79-83.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (fifth edition). Prentice Hall.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (seventh edition). Upper Saddle River, New Jersey: Prentice Hall.
- Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. (2014). Partial least squares structural equation modelling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106-121.

- Hair, J., Money, A., Page, M., & Samouel, P. (2010), *Research Methods for Business*. USA: John Wiley and Sons.
- Hamm, J. L. (1995). *Income level and tax rate as determinants of taxpayer compliance: an experimental examination*. Unpublished doctorate thesis, Texas Technical University, USA.
- Hamzah, G. & Mustafa, Q. (2012). The role of small and medium enterprises in the reduction of unemployment in the Arab countries: case of Algeria. Algerian Conference on Economic and Social Developmen, Algeria.
- Hanefah, M. (1996). *An evaluation of Malaysian tax administrative system and taxpayers perceptions towards assessment system, tax law fairness and tax law complexity*. Unpublished doctoral thesis, Universiti Utara Malaysia.
- Hanefah, M. (2007). *Tax systems, taxpayer compliance and specific tax issues*. Sintok: Universiti Utara Malaysia Press.
- Hanefah, M., Ariff, M., & Kasipillai, J. (2002). Compliance costs of small and medium enterprises. *Journal Of Australian Taxation*, 4(1), 73-97.
- Hasan, A. (2010). *Islamic ask and answer*. Kul Alsalfyen forum. Retrieved September 5, 2015, from <http://audio.islamweb.net>
- Helhel, Y., & Ahmed, Y. (2014). Factors affecting tax attitudes and tax compliance: A survey study in Yemen. *European Journal of Business and Management*, 6(22), 48-58.
- Hidayat, R. N., Handayani, S. R., & Otok, B. W. (2014). Service quality and regional tax regulations influence taxpayer compliance intervening taxpayer satisfaction and behaviour using structural equation modelling approach. *International Journal of Academic Research*, 6(4), 198-203.
- Hindriks, J., Peralta, S., & Weber, S. (2008). Competing in taxes and investment under fiscal equalization. *Journal of Public Economics*, 92(12), 2392-2402.
- Hitt, M., & Ireland, R. (1985). Corporate distinctive competence, strategy, industry and performance. *Strategic Management Journal*, 6(3), 273-293.
- Homans, G. C. (1958). Social behaviour as exchange. *American Journal of Sociology*, 63(6), 597-606.
- Hu, P., Margolis, B., Skolnik, E. Y., Lammers, R., Ullrich, A., & Schlessinger, J. (1992). Interaction of phosphatidylinositol 3-kinase-associated p85 with epidermal growth factor and platelet-derived growth factor receptors. *Molecular and Cellular Biology*, 12(3), 981-990.
- Huda, M. (2005). *SMEs in Yemen*, Unpublished master thesis, Sana'a University, Yemen.

- Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*, 20(2), 195-204.
- Iacobucci, D., Saldanha, N., & Deng, X. (2007). A meditation on mediation: Evidence that structural equation models perform better than regressions. *Journal of Consumer Psychology*, 17(2), 139-153.
- Idris, K. M., Bidin, Z., & Saad, R. A. J. (2012). Islamic religiosity measurement and its relationship with business income Zakat compliance behaviour. *Jurnal Pengurusan (UKM Journal of Management)*, 34(1), 3-10.
- Imam, P. A., & Jacobs, D. (2014). Effect of corruption on tax revenues in the Middle East. *Review of Middle East Economics and Finance Revenues*, 10(1), 1-24.
- Israel, G. D. (2009). *Sampling*. University of Florida.
- Jackson, B. R., & Milliron, V. C. (1986). Tax compliance research: Finding, problem and prospects. *Journal of Accounting Literature*, 5(1), 125-165.
- James, S., Murphy, K., & Reinhart, M. (2005). Taxpayers beliefs and views: A new survey. *Australian Tax Forum*, 20(2), 157-188.
- Jiang, F., Lu, S., Hou, Y., & Yue, X. (2013). Dialectical thinking and health behaviours: The effects of theory of planned behaviour. *International Journal of Psychology*, 48(3), 206-214.
- Job, J., & Honaker, D. (2003). *Short-term experience with responsive regulation in the Australian Taxation Office*. In V. Braithwaite, *taxing democracy: Understanding tax avoidance and evasion*. Aldershot: Ashgate Publishing Ltd, 111-129.
- Jones, C. R. (2009). *Understanding and Improving Use-Tax Compliance: A Theory of Planned Behaviour Approach*. Unpublished doctoral thesis, Department of Accounting, College of Business Administration, University of South Florida.
- Joulfaian, D., & Rider, M. (1998). Differential taxation and tax evasion by small business. *National Tax Journal*, 51(4), 676-687.
- Jun, M., & Cai, S. (2001). The key determinants of internet banking service quality: A content analysis. *International Journal of Bank Marketing*, 19(7), 276-291.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Journal of the Econometric Society*, 47(2), 263-291.
- Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39(1), 31-36.
- Kamdar, N. (1997). Corporate income tax compliance: A time series analysis. *Atlantic Economic Journal*, 25(1), 37-49.

- Kaplan, S. (1983). A model of person-environment compatibility. *Environment and Behaviour* 15(3): 311-332
- Kasipillai, J., & Abdul-Jabbar, H. (2006). Gender and ethnicity differences in tax compliance. *Asian Academy of Management Journal*, 11(2), 73-88.
- Kasipillai, J., Aripin, N., & Amran, N. A. (2003). The influence of education on tax avoidance and tax evasion. *E-Journal of Tax Research*, 1(2), 134-146.
- Kaufman, K., Kraay, A., & Mastruzzi, M. (2008). *Governance matters vi: Aggregate and individual governance indicators for 1996-2006*. Washington D.C.: World Bank Institute, World Bank.
- Kelman, H. (1958). Compliance, identification, and internalization: Three processes of attitude change. *Journal of Conflict Resolution*, 2(1), 51-60.
- Kelman, H. C. (1974). *Further thoughts on the processes of compliance, identification, and internalization. Perspectives on Social Power*. J. T. Tedeschi. Chicago, Aldine Press: 126-171.
- Kerlinger, F.N., & Lee, H.B. (1986). *Foundations of behavioural research*. Third edition, Holt, Rinehart & Winston.
- Khamis, M. R., Mohd, R., Salleh, A. M., & Nawi, A. S. (2014). Do religious practices influence compliance behaviour of business Zakat among SMEs?. *Journal of Emerging Economies and Islamic Research*, 2(2), 1-16.
- Khan, W. A., & Ahmad, P. F. (2014). Causes of tax evasion in Pakistan: A case study on southern Punjab. *International Journal of Accounting and Financial Reporting*, 4(2), 273-294.
- Khlif, H., & Achek, I. (2015). The determinants of tax evasion: A literature review. *International Journal of Law and Management*, 57(5), 486-497.
- Kim, K. H., Al-Shammari, H. A., Kim, B., & Lee, S. H. (2009). CEO duality leadership and corporate diversification behaviour. *Journal of Business Research*, 62(11), 1173-1180.
- Kim, S. C. (2011). *Pastoral care for North Korean refugees and a geopolitical approach to practical theology: A qualitative study*. Unpublished doctoral thesis, Claremont School of Theology, California.
- Kim, S., Kim, H., Her, M., & Kim, H. (2006). Does political intention affect tax evasion?. *Journal of Policy Modeling*, 30(3), 401-415.
- Kirchler, E. (2007). *The economic psychology of tax behaviour*. Cambridge University Press.

- Kirchler, E., & Maciejovsky, B. (2001). Tax compliance within the context of gain and loss situations, expected and current asset position, and profession. *Journal of Economic Psychology*, 22(2), 173-194.
- Kirchler, E., & Wahl, I. (2010). Tax compliance inventory TAX-I: Designing an inventory for surveys of tax compliance. *Journal of Economic Psychology*, 31(3), 331-346.
- Kirchler, E., Hoelzl, E., & Wahl, I. (2008). Enforced versus voluntary tax compliance: The “slippery slope” framework. *Journal of Economic Psychology*, 29(2), 210-225.
- Kirchler, E., Muelbacher, S., Kastlunger, B., & Wahl, I. (2007). *Why pay taxes? A review of tax compliance decisions*. Working paper 07-03, Georgia State University, Atlanta.
- Klepper, S., Mazur, M., & Nagin, D. (1991). Expert intermediaries and legal compliance: The case of tax preparers. *Journal of Law & Economics*, 34(1), 205-229.
- Kline, R. B. (2015). *Principles and practice of structural equation modelling*. New York: The Guilford Press.
- Kornhauser, M. E. (2007). Normative and cognitive aspects of tax compliance: Literature review and recommendations for IRS regarding individual taxpayers. *Florida Tax Review*, 8(6), 601-634.
- Kothari, R., & Sharma, N. (2009). Defining and measuring the effect of service quality in selection of a mutual fund in Indian context. *Journal of Services Research*, 9(2), 173-189.
- Krejcie, R. V., & Morgan, D. W. (1970). *Determining sample size for research activities*. Education Psychological Meas.
- Kuria, K., Ngumi, P., & Rugami, J. (2013). Factors affecting rental income tax compliance among landlords in Kilifi municipality in Kenya. *Prime Journal of Business Administration and Management*, 3(5), 997-1008
- Lassen, D. D. (2003). *Ethnic division and the size of the informal sector*. Working paper, Institute of Economics, University of Copenhagen.
- Leary, M. R. . (2004). *Introduction to behavioural research methods* (fourth edition). USA, Pearson Education.
- Levin, J., & Widell, L. M. (2014). Tax evasion in Kenya and Tanzania: Evidence from missing imports. *Economic Modelling*, 39, 151-162.
- Lewis, A., Carrera, S., Cullis, J., & Jones, P. (2009). Individual, cognitive and cultural differences in tax compliance: UK and Italy compared. *Journal of Economic Psychology*, 30(3), 431-445.

- Lin, L. Y., Wang, J. F., & Huang, L. M. (2011). The impacts of service quality, promotion strategy, perceived value and customer trust on customer satisfaction: An example of the taxpayers of Taipei country tax bureau. *Marketing Review/Xing Xiao Ping Lun*, 8(4), 433-452.
- Lin, W. Z., & Yang, C. C. (2001). A dynamic portfolio choice model of tax evasion: Comparative statics of tax rates and its implication for economic growth. *Journal of Economic Dynamics and Control*, 25(11), 1827-1840.
- Long, S. B., & Swingen, J. A. (1991). Taxpayer compliance: Setting new agendas for research. *Law and Society Review*, 25(3), 637-684.
- Loo, E. C., Evans, C., & McKerchar, M. (2010). Challenges in understanding compliance behaviour of taxpayers in Malaysia. *Asian Journal of Business and Accounting*, 3(2), 145-161.
- Lopata, R. (2003). Geopolitical hostage: The case of Kaliningrad oblast of the Russian federation. *Contemporary Change in Kaliningrad: A Window to Europe*, 33(2), 35-54.
- Macdonald, H. (2002). *Geopolitics and Middle East conflict*. Institute for Svarsstudier
- Madiès, T., & Ventelou, B. (2005). Federalism in an endogenous growth model with tax base sharing and heterogeneous education services. *Papers in Regional Science*, 84(1), 1-19.
- Malhotra, N. K. (2008). *Marketing research: An applied orientation*, (fifth edition). Pearson Education India.
- Malhotra, N. K., Hall, J., Shaw, M. & Oppenheim, P. (2006). *Marketing research: An applied orientation* (third edition). Frenchs Forest: Prentice Hall.
- Manaf, N. A. A. (2004). Land tax administrations and compliance attitudes in Malaysia. Doctoral dissertation, University of Nottingham.
- Manaf, N. A. A., Hasseldine, J., & Hodges, R. (2005). The determinants of Malaysian land taxpayers' compliance attitudes. *e-Journal of Tax Research*, 3(2), 206-221.
- Marks, L. (2000). Exploring regional diversity in patterns of religious participation; Canada in 1901: Historical Methods. *A Journal of Quantitative and Interdisciplinary History*, 33(4), 247-254.
- Marks, S. R. (2000). *The Riddle of All Constitutions: International Law, Democracy, and the Critique of Ideology*. Oxford University Press.

- Marsh, H. W., & Hocevar, D. (1985). Application of confirmatory factor analysis to the study of self-concept: First-and higher order factor models and their invariance across groups. *Psychological bulletin*, 97(3), 562-582.
- Marshall, R., Smith, M., & Armstrong, R. (2005). *Ethical issues facing tax professionals: A comparative survey of tax agents and Big 5 tax practitioners in Australia*. Working Paper 507, 1-37, School of Accounting, Finance and Economics & FIMARC. Edith Cowan University,
- Marthadiansyah, Meutia, I., Mukhtaruddin & Saputra, D. (2013). *Empirical study of taxpayer compliance in tax filing: applying theory of planned behaviour*. Third Annual International Conference on Accounting And Finance AF2013. ISSN 2251-1997. doi: 10.5176/2251-1997.
- Mas'ud, A., Aliyu, A. A., Gambo, E. M. J., Al-Qudah, A. A., & Al Sharari, N. (2014). Tax rate and tax compliance in Africa. *European Journal of Accounting Auditing and Finance Research*, 2(3), 22-30.
- Mason, R., & Calvin, L. D. (1984). Public confidence and admitted tax evasion. *National Tax Journal*, 37(4), 489-496.
- Mawdudi, A. (2005). *Islamic feqeh forum*. Retrieved June 5, 2015, from <http://www.islamfeqh.com>
- McBarnet, D. (2006). *Towards Ethical Compliance: Lessons from Enron*. Global perspectives on ethics and corporate governance. New York, NY: Palgrave Macmillan.
- McGee, M. F., Rosen, M. J., Marks, J., Onders, R. P., Chak, A., Faulx, A. & Ponsky, J. (2006). A primer on natural orifice transluminal endoscopic surgery: Building a new paradigm. *Surgical Innovation*, 13(2), 86-93.
- McGee, R. W. & Bose, S. (2008). *Attitudes towards tax evasion in the Middle East: A comparative study of Egypt, Iran and Jordan*. Working Paper, Chapman Graduate School of Business, Florida International University.
- McGee, R. W. & Ho, S. (2006). *The ethics of tax evasion: A survey of accounting, business and economics students in Hong Kong*. Published in the Proceedings of the International Academy of Business and Public Administration Disciplines (IABPAD), Winter Conference, Orlando, Florida, January 3-6.
- McGee, R. W. (1997). The ethics of tax evasion and trade protectionism from an Islamic perspective. *Commentaries on Law & Public Policy*, 1(1), 250-262.
- McGee, R. W. (2006). Three views on the ethics of tax evasion. *Journal of Business Ethics*, 67(1), 15-35.
- McGee, R. W. (2007). Ethics and tax evasion in Asia. *ICFAI Journal of Public Finance*, 5(2), 21-33.

- McGee, R. W. (2009). *Views Toward Tax Evasion: A Comparative Study of Moldova and Romania*. Working Paper, Chapman Graduate School of Business, Florida International University.
- McGee, R. W. (2012). The ethics of tax evasion in Islam: A comment. *In The Ethics of Tax Evasion*. Springer New York. 159-165.
- McGee, R. W. and Rossi, M.J. (2006). *The ethics of tax evasion: A survey of law and business students in Argentina*. Sixth Annual International Business Research Conference, co-sponsored by the Coggin College of Business, University of North Florida and the School of Management, Warsaw University, February 10-11
- McGee, R. W. Serkan Benk, Adriana M. Ross & Harun Kılıçaslan (2009). An empirical study of ethical opinion in Germany. *Journal of Accounting, Ethics & Public Policy*, 10(2), 243-259.
- McGee, R. W., & Lingle, C. (2006). *The ethics of tax evasion: A survey of Guatemalan opinion*. Presented at the Sixteenth International Atlantic Economic Conference, New York, October 6-9.
- McGee, R. W., & Tyler, M. (2006). *Tax evasion and ethics: A demographic study of 33 countries*. Andreas School of Business Working Paper, Barry University, Miami Shores, FL 33161 USA Available at SSRN 940505.
- McGee, R. W., Benk, S., Yıldırım, H., & Kayıkçı, M. (2011). The ethics of tax evasion: A study of Turkish tax practitioner opinion. *European Journal of Social Sciences*, 18(3), 468-480.
- McGee, R. W., Paláu, S. L., & Lopez, G. A. Y. (2009). *The ethics of tax evasion: An Empirical study of Colombian opinion*. Robert W. McGee, Readings in Business Ethics, 167-184.
- McGee, R. W., Petrides, Y., & Ross, A. M. (2012). Ethics and Tax Evasion: A Survey of Mexican Opinion. *In The Ethics of Tax Evasion* (387-403). Springer New York.
- McGee, R., & Bose, S. (2007). *The ethics of tax evasion: A survey of Australian opinion*. Available at SSRN: <http://ssrn.com/abstract=979410>.
- McGee, R., and An, Y. (2007). *An Empirical Study of Tax Evasion Ethics in China*. Working paper, Andreas School of Business, Florida University.
- McKerchar, M., & Evans, C. (2009). Sustaining growth in developing economies through improved taxpayer compliance: Challenges for policy makers and revenue authorities. *E-Journal of Tax Research*, 7(2), 171-201.
- Medsker, G. J., Williams, L. J., & Holahan, P. J. (1994). A review of current practices for evaluating causal models in organizational behaviour and human resources management research. *Journal of Management*, 20(2), 439-464.

- Meyer, R.F., & Johnson, W.T. (1977). Deterrence as social control: The legal and extralegal production of conformity. *American Sociological Review*, 42(2), 292 - 304.
- Meyers, L., Gamst, G., & Guarino, A. (2006). *Applied multivariate research: Design and interpretation*. London: Sage Publication.
- Miller, D., & Sardais, C. (2011). A concept of leadership for strategic organization. *Strategic Organization*, 9(2), 174-183.
- Milliron, V., & Toy, D. (1988). Tax compliance: An investigation of key features. *The Journal of the American Taxation Association*, 9(1), 84-104.
- Mills, L. F. (1998). Book-tax differences and Internal Revenue Service adjustments. *Journal of Accounting Research*, 36(2), 343-356.
- Ministry of Industry & Trade MIT. (2011). *Small and Medium Enterprises SMEs*. Retrieved June 14, 2015, from <http://www.moit.gov.ye>
- Ministry of Planning & International Cooperation MPIC. (2009). *Annual Report*. Retrieved June 14, 2015, from <http://www.yemen.gov.ye>
- Ministry of Planning & International Cooperation MPIC. (2010). *Annual Report*. Retrieved June 14, 2015, from <http://www.yemen.gov.ye>
- Mishra, S. (2014). Adoption of M-commerce in India: Applying Theory of Planned Behaviour Model. *Journal of Internet Banking and Commerce*, 19(1), 1-17.
- Modugu, P. K., Eragbhe, E., & Izedonmi, F. (2012). Government accountability and voluntary tax compliance in Nigeria. *Research Journal of Finance and Accounting*, 3(5), 69-76.
- Mohdali, R. (2013). *The Influence of Religiosity on Tax Compliance in Malaysia*. Unpublished doctoral thesis, Curtin Business School, School of Economics and Finance, Curtin University, Australia.
- Mohdali, R., & Pope, J. (2012). The effects of religiosity and external environment on voluntary tax compliance. *New Zealand Journal of Taxation Law and Policy*, 18(2), 119-139.
- Mohdali, R., & Pope, J. (2014). The influence of religiosity on taxpayers' compliance attitudes: Empirical evidence from a mixed-methods study in Malaysia. *Accounting Research Journal*, 27(1), 71-91.
- Monteduro, M. T., & Zanardi, A. (2005). The redistributive effects of the PIT decentralization: evidence from the Italian case. *Giornale Degli Economisti E-Annali Di Economia*, 64(2), 215-246.

- Morris, D. (2010). Tax penalties and deterrence: Determining effectiveness and taxpayer perception. *The CPA Journal*, 43(3), 28-33.
- Mottiakavandar, R., Ramayah, T., Haron, H., & Ang, J. (2003). Factors influencing compliance behaviour of small business entrepreneurs. *Tax National*, 1(1), 20-26.
- Murphy, K. (2007). *Procedural justice and the regulation of tax compliance behaviour: The moderating role of personal norm*. Andrew Young School of Policy Studies International Conference. Atlanta: Georgia State University.
- Myers, D. G. (2005). *Social psychology*. New York: McGraw-Hill Inc.
- Nabulsi, M. (2005). *Fatawa*. Retrieved September 15, 2015, from <http://www.nabulsi.com>
- Nagin, D. S. (1998). Criminal deterrence research at the outset of the twenty-first century. *Crime and Justice*, 23(1), 1-42.
- Naseem, N. (2014). Geopolitical value of Gwader for the region (mainly for Pakistan, China and the region). *South Asian Studies*, 29(2), 519-531.
- Naser, K., Jamal, A., & Al-Khatib, K. (1999). Islamic banking: A study of customer satisfaction and preferences in Jordan. *International Journal of Bank Marketing*, 17(3), 135-151.
- National Information System NIS. (2012). *Small and Medium Enterprises SMEs*. Retrieved June 14, 2015, from http://www.yemen-nic.info/study_guide/index.php
- National Institute of Standard and Technology USA. (2010). *E-handbook of statistical methods*. Retrieved July 19, 2016, from www.itl.nist.gov/div898/handbook.
- Newman, J. (2005). *Participative governance and the remaking of the public sphere*. Remaking governance: Peoples, politics and the public sphere, 119-138.
- Noguera, J. A., Miguel, F. J., Llacer, T., & Tapia, E. (2014). Tax compliance, rational choice, and social influence: An agent-based model. *Revue Francaise de Sociologie*, 55(4), 765-804.
- Noguera-Santaella, J. (2016). Geopolitics and the oil price. *Economic Modelling*, 52(2), 301-309.
- Noor, N. A. M., & Kumar, D. (2014). ECO Friendly 'activities' VS ECO friendly 'attitude': travelers intention to choose green hotels in Malaysia. *World Applied Sciences Journal*, 30(4), 506-513.
- Nunnally, J. C., & Bernstein, I. H. (1994). The assessment of reliability. *Psychometric Theory*, 11(4), 248-292.

- O'brien, R. M. (2007). A caution regarding rules of thumb for variance inflation factors. *Quality & Quantity*, 41(5), 673-690.
- Obaid, S. (2008). Minorities in the Arab World. *Albalagh Journal, Yemen, Sana'a*, 6(5), 43-46.
- Okediji, T. O. (2005). The dynamic of ethnic fragmentation: A proposal for an expanded measurement index. *American Journal of Economics and Sociology*, 62(2), 637-662.
- Okusanya, B. O., & Isabu, P. A. (2010). Public secondary school teachers' attitude to family life education in two geopolitical zones of Nigeria: A comparative analysis. *East African Journal of Public Health*, 7(1), 99-102.
- Organization for Economic Co-operation and Development (OECD) (2004), *Establishing an open and non-discriminatory business environment*. Centre for Tax Policy and Administration, Paris.
- Osborne, J. W. (2010). Improving your data transformations: Applying the box cox transformation. *Practical Assessment, Research & Evaluation*, 15(12), 1-9.
- Oskamp, S. (1991). *Attitudes and opinions*. Englewood Cliff: Prentice-Hall Inc.
- Othman, A., & Owen, L. (2001). The multi dimensionality of Carter Model to measure customer service quality (SQ) in Islamic banking industry: A study in Kuwait finance house. *International Journal of Islamic Financial Services*, 3(4), 1-12.
- Ott, K. (1998). Tax administration reform in transitions: The case of Croatia. *Financijska Praksa*, 22(1/2), 1-40.
- Ovute, F. E., & Eyisi, A. S. (2014). The impact of tax systems and environments on federally collectible tax revenue: A study of some selected States of South-East Nigeria. *Research Journal of Finance and Accounting*, 5(5), 91-103.
- Oyelere, R. (2007). *Disparities in labour market outcomes across geopolitical regions in Nigeria: Fact or fantasy?* IZA Discussion Paper No. 3082. Available at SSRN: <http://ssrn.com/abstract=1027690>
- Palil, M. R. (2010). *Tax knowledge and tax compliance determinants in self assessment system in Malaysia*. Unpublished doctoral thesis, University of Birmingham.
- Palil, M. R., & Mustapha, A. F. (2011). Factors affecting tax compliance behaviour in self assessment system. *African Journal of Business Management*, 5(33), 12864-12872.
- Pallant, J. (2013). *SPSS survival manual*. McGraw-Hill Education, UK.

- Parasuraman, A., Berry, L. L., & Zeithaml, V. A. (1991). Refinement and reassessment of the SERVQUAL scale. *Journal of Retailing*, 67(4), 420-451.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4), 41-50.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1994). Alternative scales for measuring service quality: A comparative assessment based on psychometric and diagnostic criteria. *Journal of Retailing*, 70(3), 201-230.
- Park, C. G., & Hyun, J. K. (2003). Examining the determinants of tax compliance by experimental data: A case of Korea. *Journal of Policy Modelling*, 25(8), 673-684.
- Pashev, K. V. (2008). *Taxation and compliance of small business in transition economies: Lessons from Bulgaria*. Taxation and public finance in transition and developing economies, Springer US.
- Pastukhov, O. (2006). International taxation of income derived from electronic commerce: Current problems and possible solutions. *Journal of Science and Technology*, 12(2), 310-342.
- Peerzade, S. A. (2005). Towards self-enforcing islamic tax system: An alternative to current approaches. *Islamic Economics*, 18(1), 3-12.
- Peter, K. (2008). *Falling Tax Evasion: How Much Can Tax Rates and Labour Regulations Explain?*. W. J. Usury Workplace Research Group Paper. Andrew Young School of Policy Studies, Georgia State University.
- Phillip, M., & Sandall, R. (2009). *Linking business tax reform with governance: How to measure success*. Working paper, Investment Climate Department, World Bank Group.
- Pizam, A., & Ellis, T. (1999). Customer satisfaction and its measurement in hospitality enterprises. *International Journal of Contemporary Hospitality Management*, 11(7), 326-339.
- Plumley, A. H. (2002). *The determinants of individual income tax compliance: Estimating the impacts of tax policy, enforcement and IRS responsiveness*. New York: IRS.
- Pommerehne, W. W., & Weck-Hannemann, H. (1996). Tax rates, tax administration and income tax evasion in Switzerland. *Public Choice*, 88(1-2), 161-170.
- Porcano, T. M. (1988). Correlates of tax evasion. *Journal of Economic Psychology*, 9(1), 47-67.

- Quadri, R.K (2010). *Improving voluntary tax compliance within the informal sector in Lagos state*. A paper delivered at the 4th Lagos state taxation stakeholder's conference, Victoria Island, Lagos.
- Ramayah, T. (2014). *Notes for Data Analysis Workshop*. School of Management, Universiti Sains Malaysia.
- Rasheed, S.A., & Padela, A.I. (2013). Islam and Biomedical Ethics. *The Joint Publication Board of Zygon*, 48(3), 1778-1800.
- Ratto, M., Thomas, R., & Ulph, D. (2005). *Tax compliance as a social norm and the deterrent effect of investigations*. Centre for Market and Public Organisation, University of Bristol. UK.
- Raven, B. H. (1993). The bases of power: Origins and recent developments. *Journal of Social Issues*, 49(4), 227-251.
- Reckers, P. M., Sanders, D. L., & Roark, S. J. (1994). The influence of ethical attitudes on taxpayer compliance. *National Tax Journal*, 47(4), 825-836.
- Rettig, C. P. (2011). Enhancing voluntary compliance through the administration of civil tax penalties. *Journal of Tax Practice and Procedure*, 13(11), 17-20.
- Riahi-Belkaoui, A. (2004). Relationship between tax compliance international and selected determinants of tax morale. *Journal of International of Accounting, Auditing and Taxation*, 13(1), 135-143.
- Richardson, G. (2006). Determinants of tax evasion: A cross country investigation. *Journal of International of Accounting, Auditing and Taxation*, 15(2), 150-169.
- Richardson, G. (2008). The relationship between culture and tax evasion across countries: Additional evidence and extensions. *Journal of International Accounting, Auditing and Taxation*, 17(2), 67-78.
- Richardson, M. (2013). *Determinants of Social Security Compliance in a Small Island Developing States: An Analysis of Anguilla*. Central Bank Of Barbados, Research and Economic Analysis Department. CBB Working Paper No. WP/13/12.
- Richardson, M., & Sawyer, A. J. (2001). Taxonomy of the tax compliance literature: Further findings, problems and prospects. *Australian Tax Forum*, 16(2), 137-284.
- Ross, A. M., & McGee, R. W. (2012a). Attitudes toward tax evasion: A demographic study of south African attitudes on tax evasion. *Journal of Economics & Economic Education Research*, 13(3), 13-58.
- Ross, A. M., & McGee, R. W. (2012b). Education level and ethical attitude toward tax evasion: A six-country study. *Journal of Legal, Ethical and Regulatory Issues*, 15(2), 93-138.

- Rotberg, R. (2005). Strengthening governance: Ranking countries would help. *The Washington Quarterly*, 28(1), 71-81.
- Roth, J. A., Scholz, J.T. & Dry-Witte, J. T. (1989). *Taxpayer compliance: An agenda for research*, volume 1. Philadelphia: University of Pennsylvania Press.
- Rothengather, M. R. (2005). Social networks and tax non-compliance in multi-cultural nation: Emerging themes from a focus group study among ethnic minorities in Australia. *International Journal of Enterpreneurial Behaviour*, 11(4), 280-314.
- Rust, R. T., & Oliver, R. W. (1994). The death of advertising. *Journal of Advertising*, 23(4), 71-77.
- Saad, N. (2011). *Fairness perceptions and compliance behaviour: Taxpayers' judgments in self-assessment environment*. Unpublished doctoral thesis. University of Canterbury, Christchurch.
- Sanders, D. L., Reckers, P. M., & Iyer, G. S. (2008). Influence of accountability and penalty awareness on tax compliance. *Journal of the American Taxation Association*, 30(2), 1-20.
- Sarker, N. M. (2014). Arab spring and the contemporary geopolitics of the Middle East. *Peace and Security Review*, 6 (12), 39-62
- Sekaran, U. (2003). *Research methods for business: A skill building approach*. Fourth edition, New Jersey: John Wiley and Sons, Inc.
- Sekaran, U., & Bougie, R. (2010). *Research methods for business: A skill building approach*. Wiley.
- Ser, P. C. (2013). *Determinants of tax non-compliance in Malaysia*. Unpublished master thesis, Universiti Tunku Abdul Rahman, Petaling Jaya, Malaysia.
- Shaltoot, M. (2007). *Islamic feqeh forum*. Retrieved from September 5, 2015, <http://www.islamfeqh.com>
- Sheridan, J. C., & Ong, C. (2011). *SPSS version 18.0 for Windows-Analysis without anguish*. Milton: John Wiley and Sons Australia Ltd
- Slemrod, J. (1985). An empirical test for tax evasion. *The Review of Economic and Statistics*, 67(2), 232-238.
- Slemrod, J. (2009). *Old George Orwell got it backward: Some thoughts on behavioural tax economics*. Working paper 2777, CESIFO.
- Slemrod, J., Blumenthal, M., & Christian, C. (2001). Taxpayer response to an increased probability of audit: Evidence from a controlled experiment in Minnesota. *Journal of Public Economics*, 79(3), 455-483.

- Smith, K. W., & Kinsey, K. A. (1987). Understanding taxpaying behaviour: A conceptual framework with implications for research. *Law and Society Review*, 21(4), 639-663.
- Song, Y., & Yarbrough, T. (1978). Tax ethics and taxpayer attitudes: A survey. *Public Administration Review*, 38(5), 442-452.
- Spicer, M. W., & Becker, L. A. (1980). Fiscal inequity and tax evasion: An experimental approach. *National Tax Journal*, 33(2), 171-175.
- Spicer, M. W., & Lundstedt, S. B. (1976). Understanding tax evasion. *Public Finance*, 31(2), 295-305.
- Sproull, N. L. (2002). *Handbook of research methods: A guide for practitioners and students in the social sciences*. Scarecrow press.
- Stack, S., & Kposowa, A. (2006). The effect of religiosity on tax fraud acceptability: A cross-national analysis. *Journal for Scientific Study of Religion*, 45(3), 325-351.
- Staiger, D. O., & Stock, J. H. (1997). Instrumental variables regression with weak instruments. *Econometrica*, 65(3), 557-586.
- Standing Committee for Scientific Research & Fatwa, Saudi Arabia (1994). *Islamic Question and Answer*. Retrieved April 13, 2015, from <http://www.islam-qa.com>
- Stanley, J. W. (2013). *Theory of Political Economy*. Hardpress Limited.
- Stepić, M. (2011). Postmodern geopolitical challenges of Europe. *Megatrend Review*, 8(2), 69-88.
- Sternburg, T. J. (1993). *An empirical investigation of deterrence theory and influence theory on professional tax preparers' recommendations (tax preparers)*. Ann Arbor: UMI.
- Stiglingh, M. (2014). Service quality framework for the South African revenue service from the perspective of the tax practitioner. *Public Relations Review*, 40(2), 240-250.
- Stock, J. & Yogo, M. (2004). *Testing for weak instruments in linear iv regression, identification and inference for econometric models: Essays in Honor of Thomas Rothenberg*. Available at SSRN: <http://ssrn.com/abstract=1734933>
- Storey, P. J., Mason, H. E., & Saraph, H. E. (1996). Atomic data from the IRON Project. XIV. Electron impact excitation of the Fe XIV fine-structure transition. *Astronomy and Astrophysics*, 30(9), 677-682.
- Stuart, F. I., & Tax, S. S. (1996). Planning for service quality: An integrative approach. *International Journal of Service Industry Management*, 7(4), 58-77.

- Sussman, R., & Gifford, R. (2013). Be the change you want to see: modelling food composting in public places. *Environment & Behaviour*, 45(3), 323-343.
- Sutinen, J. G., & Kuperan, K. (1999). A socio-economic theory of regulatory compliance. *International Journal of Social Economics*, 26(1/2/3), 174-193.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Experimental designs using ANOVA*. Thomson/Brooks/Cole.
- Tanzi, V., & Shome, P. (1993). *A prime on tax evasion*. New York: Working paper, IMF
- Tax Authority of Yemen. (2011) *Law No. (17) of 2010 concerning Income Tax*. Retrieved September 20, 2015, from <http://tax.gov.ye>
- Tayib, M. B. (1998). *The determinants of assessment tax collection: The Malaysian local authority experience*. Unpublished doctoral thesis, University of Glamorgan, United Kingdom.
- Tedds, L. M. (2007). *Keeping it off the books: An empirical investigation of firms that engage in tax evasion*. Law and Accounting Conference. Canada: University of Victoria.
- Tehulu, T. & Dinberu, Y. (2014) Determinants of tax compliance behaviour in Ethiopia: The case of Bahir Dar City taxpayers. *Journal of Economics and Sustainable Development*, 5(15) 260-275.
- Teschke, B. (2006). Geopolitics. *Historical Materialism*, 14(1), 327-335.
- Thornton, J. & Shaub, M. (2013). Tax services, consequence severity, and jurors' assessment of auditor liability. *Managerial Auditing Journal*, 29(1), 50 - 75.
- Tittle, C. R., & Welch, M. R. (1983). Religiosity and deviance: Toward a contingency theory of constraining effects. *Social Forces*, 61(3), 653-682.
- Tolmie, A., Muijs, D., & McAteer, E. (2011). *Quantitative methods in educational and social research using SPSS*. McGraw-Hill Education (UK).
- Torgler, B. (2003). *Tax morale: Theory and analysis of tax compliance*. Unpublished doctoral thesis, University of Zurich, Switzerland.
- Torgler, B., & Murphy, K. (2004). Tax morale in Australia: What shapes it and has it changed over time? *Journal of Australia Taxation*, 7(2), 298-335.
- Torgler, B., & Schaffner, M. (2007). *Causes and consequences of tax morale: An empirical investigation*. Working paper 2007-11, Crema.
- Torgler, B., Schaffner, M., & Macintyre, A. (2007). *Tax compliance, tax morale, and governance quality*. International Studies Program Working Paper, Andrew Young School of Policy Studies, Georgia State University.

- Trivedi, V. U., Shehata, M., & Mestelman, S. (2004). *Attitudes, incentives, and tax compliance*. Department of Economics, McMaster University.
- Tsakumis, G. T., Curtola, A. P., & Porcano, T. M. (2007). The relation between national cultural dimensions and tax evasion. *Journal of International of Accounting, Auditing and Taxation*, 16(2), 131-147.
- Turner, R. N., Crisp, R. J., & Lambert, E. (2007). Imagining intergroup contact can improve intergroup attitudes. *Group Processes & Intergroup Relations*, 10(4), 427-441.
- Tversky, A., & Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and Uncertainty*, 5(4), 297-323.
- Twum, B. E. (2014). Gift tax compliance in Ghana: An empirical study. *Journal of Finance and Accounting*, 2(1), 1-7.
- Umar, M. A., Kasim, R., & Martin, D. J. (2012). *An overview of property tax collection as a tool for a sustainable local government reform in Malaysia*. International Conference on Technology Management, Business and Entrepreneurship, 18-19 December, Melaka, Malaysia.
- United Nation. (2007). *Public governance indicators: A literature*. Washington District of Colombia.
- United Nations Development Program UNDP. (2005). *Program on /Governance in the Arab Region*. Washington District of Colombia.
- Ünver, H. A. (2016). Schrödinger's Kurds: Transnational Kurdish geopolitics in the age of shifting borders. *Journal of International Affairs*, 69(2), 65-99.
- Urusquieta, U., Montenegro, M., Camey, L., Dammert, M., & Castillo, M. (2013). *A reflection and action guide for local violence reduction*. American Friends Service Committee AFSC.
- US Embassy in Sana'a. (2003). *Country Commercial Guide: Republic of Yemen, Fiscal year 2004*. Foreign Commercial Service and the U.S. Department of State. USA.
- Uwaifo-Oyelere, R. (2007). *Disparities in labour market outcomes across geopolitical regions in Nigeria: fact or fantasy?*. Discussion Paper No. 3082. Available at SSRN: <http://ssrn.com/abstract=1027690>
- Van Dijke, M., & Verboon, P. (2010). Trust in authorities as a boundary condition to procedural fairness effects on tax compliance. *Journal of Economic Psychology*, 31(1), 80-91.
- Vaughan, G., & Hogg, M. A. (2005). *Introduction to social psychology*. Pearson Education Australia.

- Verardi, V., & Croux, C. (2008). *Robust regression in STATA*. Faculty of Business and Economics, University of Leuven, Netherland. Available at SSRN 1369144.
- Verboon, P., & van Dijke, M. (2011). When do severe sanction enhance compliance? The role of procedural fairness. *Journal of Economic Psychology*, 32(1), 120-130.
- Wagner, W. (2007). *Using SPSS for social statistics and research method*. California: Pine Forge Press.
- Wallace, R. A., & Wolf, A. (1999). *Contemporary sociological theory: Expanding the classical tradition* (fifth edition). Upper Saddle River: Prentice Hall, Inc.
- Webster, C., & Ivanov, S. H. (2014). Geopolitical drivers of future tourist flows. *Journal of Tourism Futures*, 1(1), 59-69.
- Wenzel, M. (2004). The social side of sanctions: Personal and social norms as moderators of deterrence. *Law and Human Behaviour*, 28(5), 547-567.
- Wenzel, M. (2005). Misperceptions of social norms about tax compliance: From theory to intervention. *Journal of Economic Psychology*, 26(6), 862-883.
- Williams, B., Brown, T., & Onsmann, A. (2012). Exploratory factor analysis: A five-step guide for novices. *Australasian Journal of Para-Medicine*, 8(3), 1-13.
- Witt, J. K. (2011). Action's effect on perception. *Current Directions in Psychological Science*, 20(3), 201-206.
- Witte, A. D., & Woodbury, D. F. (1985). The effect of tax laws and tax administration on tax compliance: The case of the US individual income tax. *National Tax Journal*, 38(1), 1-13.
- Yaniv, G. (1999). The compliance and advance tax payment: A prospect theory analysis. *National Tax Journal*, 52(4), 753-764.
- Yemen Times. (2005). *Auditing body to fight corruption*. As cited in Transparency International's Quarterly Newsletter. Retrieved April 12, 2015, from http://www.transparency.org/content/download/2270/14250/version/1/file/ti_q_jun2005.pdf
- Yemeni News Agency. (2012). *The general budget of 2013*. Retrieved May 20, 2015, from <http://www.sabanews.net/ar/news262356.htm>.
- Yesegat, W. A. (2009). *Value added tax in Ethiopia: A study of operating costs and compliance*. Unpublished doctoral thesis, University of New South Wales.
- Yong, D., & Martin, F. (2016). *Tax compliance and cultural values: The impact of individualism and collectivism on the behaviour of New Zealand small business owners*. Available at SSRN: <http://ssrn.com/abstract=2804417>

Zagare, F. C. (2004). Reconciling rationality with deterrence a re-examination of the logical foundations of deterrence theory. *Journal of Theoretical Politics*, 16(2), 107-141.

Zikmund, W. G. (2003). *Business Research Methods*. Oklahoma: South-Western.





APPENDICES

UUM

Universiti Utara Malaysia

Appendix A

Table for Determining Sample size for a known Population Size

N	S	N	S	N	S	N	S	N	S
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	1000000	384

N = population size, S = sample size

Source: Krejcie & Morgan (1970)

Appendix B
The Questionnaire- English Version

A Survey Questionnaire

Dear Sir \ Madam,

I am conducting a survey of the factors influencing tax compliance behaviour in SMEs of Yemen. This survey is a part of my PhD in Accounting at Universiti Utara Malaysia under the supervision of Assoc. Prof. Dr. Hijattulah Abdul-Jabbar. The result of this study will be useful to regulatory and policy makers of tax rules in order to enhance the government and business owners to improve the cooperation and compatibility in Yemen between them.

Your response will be greatly appreciated, and will assist me in ensuring my research. I hope this research will be of interest to you and to the wider academic and professional community.

Thank you for your participant.

Yours sincerely
Lutfi Hassen Ali Al-taffi
PhD candidate
Universiti Utara Malaysia
E-mail: alttaffilutfi@yahoo.com
Telephone: 006 01112815410

The First Part: This part is to obtain your opinion and attitude about tax compliance, and to express your religious viewpoint about paying tax.

1) Income Reporting for Tax Purpose

Read the following scenario and kindly indicate your opinion (by way of a circle):

Suppose that the annual sales income of Ahmed's enterprise amounted YR130.000, and the total operating expenses amounted YR30.000. The amount which has to be reported for tax purpose is YR100.000. However, Ahmed is almost certain that the tax office will not audit him and would not know if 40% of the taxable income was not reported.

Additionally, he paid YR10.000 to repair his personal car. In preparing the tax return, he is thinking about claiming the costs of repair as if the car was used in his business. Legally,

such a claim is not allowable, but he is almost certain that he will not be audited and that the tax authority would not be able to detect the deduction.

The income Tax Law provides that tax return has to be filed with tax authority within 120 days from commencement of year (January) of assessment, and tax should be paid within 60 days from the date of assessment notice.

1) Indicate the taxable income that Ahmed should include in his report:

(a) YR100.000 (b) YR60.000

(c) Other amount, please specify _____ **TNC1**

2) How much should Ahmed deduct as business expenditure?

(a) YR 30.000 (b) 40.000

(c) Other amount, please specify _____ **TNC2**

3) Which of the dates below should Ahmed file his income tax?

(a) On 30th April or before (b) After 30th April

(c) Other date, please specify _____ **TNC3**

4) How many days after receiving assessment notice should Ahmed pay his income tax:

(a) 60 days or less (b) More than 60 days

(c) Other, please specify _____ **TNC4**

2) Taxpayers View Towards Tax from Islamic Perspective

The Islamic scholars presented numerous viewpoints about responsibility of paying tax. Some of the scholars believe that tax is totally forbidden (Haram), and the government does not have the right to impose tax on its citizens, while some believe that tax is totally permissible (Halal), and the government have the right to impose tax on its citizens, whereas other scholars believe that tax is permissible under certain circumstances and conditions such as natural disasters and deficit in the state budget, therefore, the government have the right to impose tax on its citizens if particular circumstances and conditions are existing.

To what extent do you believe that tax is compatible or incompatible with Islamic rules? (IRP)

Kindly indicate your religious view by choosing only one of the following options:

1	2	3
I believe that tax is totally permissible (Halal)	I believe that tax is permissible under certain circumstances and conditions	I believe that tax is totally forbidden (Haram)

The Second Part: This part enables you to express your perception about quality of tax services, quality of public governance and tax system structure in Yemen. Please indicate your agreement or disagreement with each of the following statements.

Kindly, respond to each of the following statements to indicate your opinion (by way of a tick):

{ 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree }

1) Tax Service Quality

Dimensions	Variable code	No	Statement	The Scale				
				1	2	3	4	5
Reliability	TSQ1	1	I believe that tax office in Yemen offers wide range of services					
	TSQ2	2	I believe that tax office offers in Yemen convenient services in short processing time					
	TSQ3	3	I feel secure when conducting transactions with tax office in Yemen					
	TSQ4	4	I believe that tax office in Yemen meets the taxpayers demands by adding more counter during the peak time					
Responsiveness	TSQ5	5	I feel that tax officers in Yemen are willing to help me when need to enquire about any matters related to tax					
	TSQ6	6	I believe that tax officers in Yemen show high respect when dealing with us					
	TSQ7	7	I believe that tax officers in Yemen have fast and efficient services counters					
Assurance	TSQ8	8	I believe that tax office staff in Yemen are polite and friendly					
	TSQ9	9	I feel that tax office staff in Yemen are always ready to provide advices related to the taxable matters					
	TSQ10	10	I believe that tax office staff in Yemen provide taxpayers with easy access to information they need					

	TSQ1 1	11	I feel that tax office staff in Yemen have knowledgeable and experienced management team					
Empathy	TSQ1 2	12	I feel that I am given the individual attention when dealing with tax office in Yemen					
	TSQ1 3	13	I feel that tax officers in Yemen always response to my interests					
	TSQ1 4	14	I feel that tax office staff in Yemen understand my specific needs					
	TSQ1 5	15	I feel that if I have any problem, tax office in Yemen does whatever required to solve it					
	TSQ1 6	16	I believe that tax office in Yemen has good offices with all required facilities					
Tangibility	TSQ1 7	17	I believe that I can have speedy and efficient transactions when dealing with tax office in Yemen					
	TSQ1 8	18	I believe that tax office in Yemen has good offices to service taxpayers conveniently					

2) Public Governance Quality

Dimensions	Variable code	No	Statement	The Scale				
				1	2	3	4	5
Voice, democracy and accountability	PGQ1	19	I trust the Parliament Council in Yemen in making good laws for Yemen					
	PGQ2	20	I believe that there is a free and fair election in Yemen					
	PGQ3	21	I believe that there is no wastefulness in government expenditure in Yemen					
	PGQ4	22	I have access to the published accounts and annual report of the government in Yemen					
Political stability	PGQ5	23	I believe that political stability is improving in Yemen					
	PGQ6	24	I believe that political protest is not a threat to Yemeni stability					
	PGQ7	25	I believe that territorial and sectarian conflict is not a threat to stability in Yemen					
Government effectiveness	PGQ8	26	I am satisfied with quality of general infrastructure in Yemen					
	PGQ9	27	I feel that Yemeni public servants are not vulnerable to political interference in Yemen					
	PGQ10	28	I am satisfied with the manner the government is handling the health service in Yemen					

	PGQ1 1	29	I am satisfied with the manner the government is handling the education system in Yemen					
Rule of law	PGQ1 2	30	I feel that Yemeni Judiciary is free of interference of other agencies of government					
	PGQ1 3	31	I believe that justice is fairly administered in Yemen					
	PGQ1 4	32	I believe that Yemeni government has an effective power in combating crime					
	PGQ1 5	33	I trust the financial honesty of Yemeni politicians					
Control of corruption	PGQ1 6	34	I believe that the diversion of public funds due to corruption is not common in Yemen					
	PGQ1 7	35	I think that individual and firms, frequently, make extra payments in connection to tax payment, loan application, securing contract etc					

3) Tax System Structure:

Dimensions	Variable code	No	Statement	The Scale				
				1	2	3	4	5
Tax rate	TSS1	36	Tax rate on higher income should be more than tax rate on lower income					
	TSS2	37	The high income taxpayer should pay proportionately more than low income taxpayer					
	TSS3	38	Tax rate should not be the same for all taxpayers					
	TSS4	39	It is fair to non comply with tax if the tax rates are too high					
	TSS5	40	It is unfair to non comply with tax if tax rate is fair					
Penalties	TSS6	41	I think the person who is caught for tax noncompliance, will be forced to pay the tax he owes with interest.					
	TSS7	42	I think that the taxpayer who is caught for tax noncompliance, will be forced to pay substantial fine and pay the tax he owes with interest.					
	TSS8	43	I think the person who is caught for tax noncompliance, will be taken to court and pay the tax he owes with interest.					
	TSS9	44	I think the person who is caught for tax noncompliance, will be taken to court, pay substantial fine and pay the tax he owes with interest.					

The Third Part: This part is to provide the Personal & Business Information

Fill in the blanks with the appropriate answers (by way of tick or circle):

1) Age: _____ years old

2) Gender: () Male () Female

3) Marital Status: **(MST)**

() Single () Married () Others, Please specify

4) Education Level: **(EDU)**

() Before the secondary school certificate

() Secondary school / Diploma certificate

() Bachelor degree and above

5) Period of Business (years) **(POB)**

() Less than 5 () 5 – 10 () 11 – 15 () More than 15

6) Business sector: **(COB)**

() Farmer () Retail trade () Wholesales trade () Industry sector

() service () livestock () others

7) Geographical Location (Governorate): _____ **(GPD)**

===== *Thank you for your cooperation* =====

استب^{۱۰}ا^{۱۱}

[illegible]

2) جودة الخدمة التي كنت تحصلت

نمبر	موضوع	نمبر	موضوع	نمبر				
				1	2	3	4	5
1	موضوع	19	موضوع					
		20	موضوع					
		21	موضوع					
		22	موضوع					
2	موضوع	23	موضوع					
		24	موضوع					
		25	موضوع					
3	موضوع	26	موضوع					
		27	موضوع					
		28	موضوع					
		29	موضوع					
4	موضوع	30	موضوع					
		31	موضوع					
		32	موضوع					
5	موضوع	33	موضوع					
		34	موضوع					
		35	موضوع					

3) (هُكَمْ اِنْ ظَاوُنْ اَضْرَبْ)

نکباد ارغیش	موض المتغیض	شُمل	”کپاساخ	اَند				
				1	2	3	4	5
کپنی آعش تَح	TSS1	36	یث غ اَ یکو کپذی آعشیخ گَ اَذخ اَ کپا طوش کپذی آعشیخ گَ اَذخ اَ خفط فلک آعشئ ەر اَذخ اَ شفع ید اَ یفکطلوش شئ نعت ەر فلک آعشئ ەر اَذخ اَ خفط یث غ اَ یکو عکش آعشیخفغ اتا یح عغغ فلک آعشئ ە					
	TSS2	37						
	TSS3	38						
	TSS4	39	نصاف گَذا صوای آعشیث یرا وانت مَخ آعشییة هریکچ ظذا					
	TSS5	40	لیس م کپنی گَذا صوای آعشیث یرا وا کپذی آعشیخ					
آکپتاخ	TSS6	41	گومذا اَ ملخص از یفتط گیدنو ح گَذا صوای آعشیث عف یثش کفغ آعش ائ ەرغی ح گیه مغ فلذ گَ ز آعشئ ە					
	TSS7	42	گومذا اَ ملخص از یفتط گیدنو ح گَذا صوای آعشیث عف یثش کفغ غشاح ویره مغ آعشئ ە ارغی ح علیه مغ فلذ اَ					
	TSS8	43	گومذا اَ ملخص از یفتط گیدنو ح گَذا صوای آعشیث عف یوخ ز اَ ای ح عفغ آعشئ ە ارغی ح علیه مغ فلذ اَ					
	TSS9	44	گومذا اَ ملخص از یفتط گیدنو ح گَذا صوای آعشیث عف یوخ ز اَ ای ح و یثش کفغ غشاح ویره مغ آعش ائ ەرغی ح گید فلذ اَ					

لَا جُزْعَ لَاشْتِثَ: ص. ^١ زَا' اِعْضَاءُ رُضْيَدَاتٍ ^٢ كَيْ' اِخْ اُخْرَجَ تَتَهَكٍ ^٣ هَ رَاعِ اسْ *

اَوَّافٍ اِغَاخَ تَحِ اَصْح:

1) (لِجَرِّ: _____ ع 2) (لِجُسْ رُوْشْ) (افْضْ))

3) (لِجَاهَاتِ) (اَكْتُ) (قَلْبُ) (رَضُ) (اَخْشَ) . سِطَاكُ

4) (اَلْسُوْنِ اِيچ دُ:) (اَلْ اَنانوج) (ش اَدج اَنانوج / د ت) (ش اَدج اَنانوج اُور يو ط ا)

فق ﴿يَذُوقْ فَتُجَارُ﴾ (أَلْ 5- عَاخ) (5-10 عَاخ) (11-15 عَج)

(طُورِ شَرْقِ 15 ح 6) (عَلَيْهِ لَپْ فِت جَارُ :) (طَسِ اَكْبَرِ) (اِسْفِ مَحْ ذَعْ ضَرِ حِ) (ذَعْ اِسْ جِ ظِ حِ)

(عَلِي ص.اَكْبَر) (عَلِي خُذ) (عَال حَيَوَانِي) (أَخْش).

7) (لَوْ قَضَىٰ غَرَفًا) لَكِنْ قَضَىٰ:

==== شری ش اڑکائی =====

Appendix D

Outliers Results

N	MAH 1	N	MAH 1	N	MAH 1	N	MAH 1
1	39.75375	43	64.90582	85	56.04315	127	26.97285
2	38.87787	44	66.17716	86	73.49510	128	72.31708
3	28.99844	45	71.55388	87	66.83958	129	57.03409
4	48.98061	46	70.72765	88	70.00160	130	73.96338
5	52.13070	47	57.77532	89	63.81870	131	66.29892
6	20.95875	48	64.80719	90	93.36153	132	45.62786
7	44.23376	49	57.91597	91	64.90582	133	71.22934
8	57.12395	50	60.27881	92	20.32033	134	59.74693
9	53.38499	51	58.05397	93	28.01822	135	62.51512
10	59.13288	52	45.09694	94	12.88015	136	66.70888
11	66.39555	53	67.52640	95	23.39600	137	61.73104
12	37.84840	54	61.73104	96	64.60530	138	20.32033
13	63.85655	55	20.32033	97	52.86664	139	59.98289
14	10.56053	56	28.01822	98	3.54509	140	47.97610
15	9.50079	57	12.88015	99	72.89688	141	63.25248
16	63.81870	58	56.04315	100	59.86028	142	11.47158
17	2.44380	59	61.50400	101	37.07905	143	55.99220
18	50.37029	60	60.89259	102	48.51901	144	53.77659
19	2.62996	61	66.28953	103	52.31818	145	20.32033
20	9.27863	62	37.07905	104	60.21467	146	28.01822
21	60.95633	63	48.51901	105	59.83335	147	12.88015
22	5.61447	64	9.59779	106	59.33240	148	19.75636
23	45.08800	65	12.88015	107	68.41688	149	43.28424
24	79.56017	66	19.75636	108	59.05238	150	46.06232
25	9.72300	67	37.22714	109	42.60403	151	4.22590
26	52.92777	68	39.75375	110	44.20260	152	66.83958
27	72.18232	69	38.87787	111	46.93415	153	55.50960
28	60.89026	70	28.99844	112	55.67134	154	81.71708
29	60.52726	71	48.98061	113	20.32033	155	3.54509
30	61.04290	72	52.13070	114	28.01822	156	39.23816
31	5.61447	73	20.95875	115	12.88015	157	48.28342
32	46.59061	74	44.23376	116	56.04315	158	20.51814
33	66.51746	75	57.12395	117	61.50400	159	64.97191
34	47.87322	76	63.25248	118	62.13157	160	43.00322
35	70.84229	77	59.13288	119	51.75104	161	60.42207
36	53.38499	78	64.57140	120	40.27514	162	9.50079
37	64.60530	79	8.95064	121	41.67170	163	2.44380
38	84.52109	80	67.52640	122	44.82827	164	58.15144
39	60.95633	81	61.73104	123	16.28211	165	53.32283
40	4.22590	82	20.32033	124	73.45170	166	69.15588
41	65.00586	83	28.01822	125	66.51746	167	18.52313
42	66.43236	84	12.88015	126	52.74491	168	47.38159
169	65.00586	211	53.14206	253	71.55388	295	62.29498
170	62.38265	212	64.79761	254	70.72765	296	43.76147
171	4.22590	213	53.02873	255	57.77532	297	48.00577
172	48.81847	214	65.99437	256	64.80719	298	39.57460
173	52.15887	215	20.32033	257	57.91597	299	60.27762
174	51.31503	216	28.01822	258	60.27881	300	45.72451
175	72.18232	217	26.26685	259	31.73649	301	67.31026
176	5.61447	218	5.61447	260	37.29455	302	31.14248
177	43.21913	219	72.35640	261	36.19016	303	9.59779
178	52.06878	220	11.47158	262	57.44450	304	55.62936

N	MAH_1	N	MAH_1	N	MAH_1	N	MAH_1
179	5.61447	221	64.71829	263	34.25629	305	45.60333
180	51.62818	222	37.83601	264	30.67208	306	10.56053
181	66.90441	223	52.73279	265	20.33440	307	52.86664
182	60.23106	224	56.52201	266	31.70741	308	12.64726
183	18.86311	225	24.49338	267	37.39037	309	37.22714
184	52.13070	226	50.02921	268	54.73304	310	39.75375
185	20.95875	227	18.42951	269	36.82766	311	38.87787
186	44.23376	228	39.98422	270	65.79628	312	37.12258
187	53.14206	229	58.46297	271	9.27863	313	50.56679
188	39.75375	230	33.28998	272	38.27915	314	46.12658
189	20.32033	231	52.71869	273	40.48749	315	66.54057
190	2.62996	232	28.01265	274	19.25900	316	20.32033
191	39.10172	233	48.60994	275	30.09337	317	28.01822
192	67.39698	234	64.49783	276	64.57140	318	12.88015
193	67.33644	235	64.69433	277	71.35579	319	47.00108
194	54.81996	236	60.01094	278	34.29390	320	53.67913
195	48.26021	237	38.07056	279	60.60483	321	51.55657
196	7.43878	238	15.82662	280	34.44472	322	45.67282
197	69.67690	239	38.87787	281	52.06878	323	43.21886
198	66.29892	240	28.99844	282	5.61447	324	29.29883
199	47.79277	241	48.98061	283	51.62818	325	59.30313
200	60.27762	242	52.13070	284	17.41629	326	12.88015
201	63.85655	243	20.95875	285	33.26983	327	19.75636
202	66.70888	244	44.23376	286	8.95064	328	28.39220
203	68.72848	245	66.11328	287	18.46645	329	43.21886
204	46.59061	246	39.10172	288	9.72300	330	29.29883
205	66.43236	247	67.39698	289	49.21121	331	59.30313
206	47.87322	248	67.33644	290	35.02925	332	12.88015
207	70.84229	249	54.81996	291	20.32033	333	19.75636
208	12.88015	250	48.26021	292	28.01822	334	28.39220
209	19.75636	251	4.22590	293	12.88015		
210	37.22714	252	66.28953	294	62.23519		

Appendix E
Homogeneity Test of Geopolitics Groups

Independent sample test

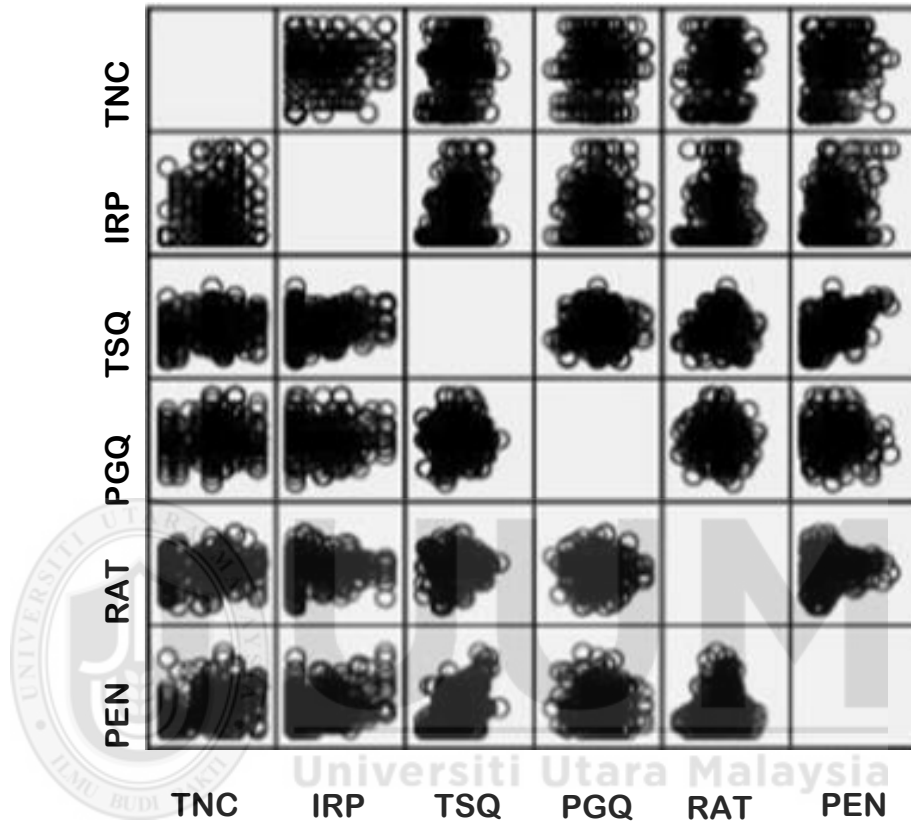
		Levene's Test for Equality of Variances	
		F	Sig.
IRP	Equal variances assumed	.755	.386
	Equal variances not assumed		
TNC	Equal variances assumed	.126	.723
	Equal variances not assumed		
TSQ	Equal variances assumed	.000	.994
	Equal variances not assumed		
PGQ	Equal variances assumed	.001	.972
	Equal variances not assumed		
Rate	Equal variances assumed	.004	.947
	Equal variances not assumed		
Penalties	Equal variances assumed	.022	.882
	Equal variances not assumed		

Group Statistics

Geopolitics		N	Mean	Std. Deviation	Std. Error Mean
IRP	North	194	1.6856	.71917	.05163
	South	136	2.1324	.73846	.06332
TNC	North	194	1.6546	.68990	.04953
	South	136	2.1324	.73846	.06332
TSQ	North	194	2.0869	.64227	.04611
	South	136	2.1029	.65352	.05604
PGQ	North	194	1.4536	.44987	.03230
	South	136	1.5372	.48533	.04162
Rate	North	194	2.0909	.63997	.04595
	South	136	2.1029	.65352	.05604
Penalties	North	194	1.4654	.44477	.03193
	South	136	1.5372	.48533	.04162

Appendix F
Matrix Scatter for Variables

MATRIX SCATTER FOR VARIABLES



TNC = Tax Non-Compliance
 IRP = Islamic Religious Perspective
 TSQ = Tax Service Quality
 PGQ = Public Governance Quality
 RAT = Tax Rate
 PEN = Penalties



UUM

Universiti Utara Malaysia

Appendix H

Hierarchical Multiple Regression Outputs

Model Summary^d

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.483 ^a	.233	.209	.420	.233	8.773	5	324	.000	1.433
2	.509 ^b	.259	.233	1.881	.026	2.913	1	323	.089	
3	.600 ^c	.361	.334	.411	.101	4.122	5	318	.001	

a. Predictors: (Constant), Penalties, PGQ, Geopolitics, TSQ, Rate

b. Predictors: (Constant), Penalties, PGQ, Geopolitics, TSQ, Rate, IRP

c. Predictors: (Constant), Penalties, PGQ, Geopolitics, TSQ, Rate, IRP, PGQ_IRP, TSQ_IRP, Geopolitics_IRP, Penalties_IRP, Rate_IRP

d. Dependent Variable: TNC

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.988	5	1.544	8.773	.000 ^b
	Residual	55.979	324	.491769		
	Total	72.967	329			
2	Regression	392.365	6	32.697	9.236	.000 ^c
	Residual	1122.235	323	3.540		
	Total	1514.600	329			
3	Regression	29.799	11	2.129	12.699	.000 ^d
	Residual	52.797	318	.168		
	Total	82.596	329			

a. Dependent Variable: TNC

b. Predictors: (Constant), Penalties, PGQ, Geopolitics, TSQ, Rate

c. Predictors: (Constant), Penalties, PGQ, Geopolitics, TSQ, Rate, IRP

d. Predictors: (Constant), Penalties, PGQ, Geopolitics, TSQ, Rate, IRP, PGQ_IRP, TSQ_IRP, Geopolitics_IRP, Penalties_IRP, Rate_IRP

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.252	.205		6.113	.000
	Geopolitics	.508	.080	.335	6.331	.034
	TSQ	-.046	.066	-.240	-2.701	.044
	PGQ	-.145	.085	-.128	-2.531	.006
	Rate	.032	.059	.068	1.225	.027
	Penalties	-.016	.153	-.021	-.293	.770
2	(Constant)	1.367	.215		6.357	.000
	IRP	.186	.050	.195	3.707	.009
	Geopolitics	.449	.071	.322	5.181	.038
	TSQ	-.101	.087	-.273	-3.001	.032
	PGQ	-.165	.111	-.170	-2.496	.002
	Rate	.043	.101	.092	1.313	.021
	Penalties	-.024	.173	-.032	-.222	.782
3	(Constant)	1.413	.212		6.665	.000
	IRP	.201	.063	.187	2.007	.009
	Geopolitics	.511	.082	.345	4.722	.038
	TSQ	-.119	.082	-.199	-3.015	.028
	PGQ	-.145	.109	-.153	-2.281	.000
	Rate	.055	.099	.127	1.322	.009
	Penalties	-.031	.182	-.077	-.210	.641
	Geopolitics_IRP	-.109	.044	.134	2.450	.001
	TSQ_IRP	.011	.046	.014	.235	.814
	PGQ_IRP	.038	.040	.049	.936	.350
	Rate_IRP	.221	.060	.289	3.714	.311
	Penalties_IRP	-.137	.058	-.181	-2.389	.017

a. Dependent Variable: TNC