Role of Tax Administration System and Public Governance on Taxpayers' Compliance Behavior, Moderating role of Religiosity

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Abstract

Considering the fact that direct tax collection and tax to GDP ratio in Pakistan is very low and the budget dificit is covered using debts, which further increases the dificit in the next years. It was needed to study the tax administration system of Pakistan and its impact of compliance behavior. This study is focused on determination of the impact of tax administration system and quality of public governance on individual taxpayers' compliance behavior, in the presence of religiosity as a moderating variable. Survey method was employed and 625 questionnaires were distributed using a self-administered questionnaire from the individuals across the five major cities of Pakistan. The response rate was 66% and 412 appropriate questionnaires were returned from the respondents. Results of this study showed that tax administration system and quality of public governance has a strong and direct impact on taxpayers' compliance behavior whereas, religiosity has an inverse and weak impact on taxpayers' compliance behavior. Furthermore, religiosity moderates the relationships of tax administration system from positive to negative and weaken the relationship between public governance and tax compliance behavior.

Keywords: Income Tax, Tax Compliance Behavior, Tax Administration System, Public Governance, Religiosity

Introduction

This study is about the determination of reasons of noncompliance behavior of taxpayers, as it is a serious issue in Pakistan. Further, any legislation without proper consultation with taxpayers may also be a worthless exercise, as in the past many changes in the tax department and legislation related to fiscal policy have not brought considerable improvement. Coherent with most researches, the data is collected through survey method. A number of studies have been conducted in the past using archival empirical, survey, field experiment and closed laboratory methods to investigate the attitude of compliant and noncompliant behavior (Durham, Manly, & Ritsema, 2014), but mostly, survey method was employed by the researchers to build theories and tax models (Razak & Adafula, 2013; Armstrong, Blouin, Jagolinzer, & Larcker, 2015; Alabede, 2012; Chan, Troutman, & Bryan, 2000; Fischer, Wartick, & Mark, 1993).

Tax revenue is the biggest source of funds for a government that is needed for development, public service, relieve poverty, and to establish social and physical infrastructure leading towards long-term growth (Lustig, Pessino, & Scott, 2014). However, developing countries including Pakistan have been facing a challenge in generating revenues from domestic growth (Khan & Ahmad, 2014). The challenges faced by Pakistan include informal sectors, small tax base, weak governance, low administrative capacity, ineffective per capita income and most importantly tax avoidance by the business class (Ahmed, Talpur, & Liaquat, 2015). According to a research by Amin, Nadeem, Parveen, Kamran, and Anwar (2014), 50% of the tax revenue remained uncollected by the Government of Pakistan due to high corruption. In Pakistan, most of the persons having taxable income not only evade tax but also do not register with the tax department (Kirchler, Lorenz, Torgler, & Ganlge, 2015).

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Every person whose income is above a certain level or who owns assets of specific nature, is required to file income tax return. In Pakistan, section 120 of Income Tax Ordinance, 2001 provides a list of those persons who are required to file income tax return. The list includes a person holding National Tax Number (NTN), having taxable income, in possession of a 1000 CC car or above, having immovable property of 250 square yards in an urban area or 500 square yards in a rural area, have a flat in an urban area or a flat of 2000 square feet in a rural area, or who is a partner in a partnership firm, a company or a non-profit organization. In this regard, FBR has issued 3,388,188 NTN certificates, which means at least these persons should file income tax returns. However, there are only 1,010,402 persons who filed income tax returns for the tax year 2015, which is slightly higher than the previous years. Despite the fact that in Pakistan, Tax Reforms Commission, under the supervision of FBR, has suggested a number of tax reforms over the years to increase tax compliance rate but statistics show that contribution of direct taxes in the total gross revenue is still low. FBR has also established Broadening Tax Base (BTB) department to netting the potential taxpayers and make such investigations as required by FBR (FBR, 2016). Although FBR is trying to increase its tax base, however, still there is a deficit. The Government of Pakistan is decreasing this deficit by decreasing its expenditures and reliance on external loans. Although, deficit has been decreased but not minimized (Ministry of Finance, 2017).

Table 1 Analysis of Ten Years of Federal Budget of Pakistan

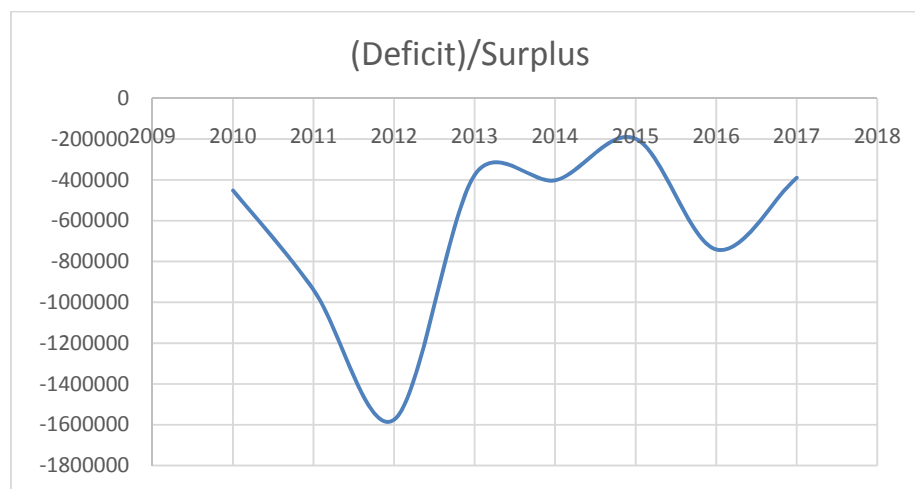| Year	Resources	Expenditure Rupees (millions)	(Deficit)/Surplus
2010	2,107,149	2,559,367	(452,218)
2011	2,170,537	3,109,732	(939,195)
2012	1,902,815	3,478,353	(1,575,538)
2013	3,681,022	4,057,292	(376,270)
2014	3,832,739	4,235,111	(402,372)
2015	4,279,705	4,478,535	(198,830)
2016	4,099,828	4,841,197	(741,369)
2017	4,713,686	5,103,780	(390,094)

(Source: Author's Compilation)

Figure 1. Budgeted Deficit and Surplus (Source: Author's Compilation)

The data in Table 1 shows that Pakistan is continuously facing a budgeted deficit and is forced to take local or foreign debts, which again put the burden on its economy. There is a need increase the tax base to minimize budgeted deficit. There are several studies that were conducted around the globe testing their hypotheses with respect to indirect and direct impact of social norms, personal norms and subjective norms that have influence on taxpayers' behavior along with testing the attitudinal variables related to tax payer behavior (Chan, Troutman, & Bryan, 2000; Cummings, Vazquez, McKee, & Torgler, 2009; Razak & Adafula, 2013; Hallsworth, 2014; Umar, Derashid, & Ibrahim, 2016). Similar studies were not conducted in Pakistan due to various economic, political and social constraints.

Therefore, this research focuses on exploring various factors that affect taxpayers' behavior. Furthermore, the impact of tax administration and public governance on tax compliance behavior is also checked and significant variables are highlighted. To find out the facts regarding reasons behind the behavior of noncompliance, quantitative data is collected using survey method.

The gap found in the research done so far has led towards establishing the following research questions:

1.   What is the influence of ineffective tax administration system on taxpayers' compliance behavior?

2.   Whether the quality of public governance can incline taxpayers towards tax compliance?

3.   How religiosity moderates the relationship of taxpayers' behavior on tax administration system and public governance?

In the light of all these questions stated above the specific objectives of the research are given below:

1.   To find the effect of tax administration system on taxpayers' compliance behavior

2.   To find the impact of public governance on taxpayers' compliance behavior

3.   To find the moderating effect of religious thoughts on the causal relationship between taxpayers' behavior and tax administrative system, and public governance

From the literature reviewed and the underpinning theories used in this research the following hypotheses are developed:

H_1: Effective tax administration system significantly influences taxpayers' compliance behavior

H_2: Taxpayers' perception of good governance has a direct relationship with their tax compliance behavior

Moderation effect of the religiosity, the moderator variable is checked alone, on the dependent variable by the independent variables.

H_3: The people from different sects of religion show different tax compliance behavior.

Literature Review

Compliance behavior of individuals is influenced by a number of economic, social, and psychological factors. Common factors include tax rates, penalties, taxation knowledge, financial conditions, risk preferences, taxpayers' morale, tax evasion attitude, public governance, perceived tax services, and religiosity (Ali & Ahmad, 2014; Alm, 2012; Alabede, Ariffin, & Idris, 2011). Electronic resources show a number of other factors responsible for taxpayers' compliance behavior. However, tax administration and quality of public governance were focused by most of the researchers. Inconsistency of findings have been observed in different studies, that is why, religiosity as a moderator is added in this research (Lau, Choe, & Tan, 2013). The moderating effect

of religiosity on tax administration system and quality of public governance was not assessed before. Palil, Akir, and Ahmad, (2013) mentioned that only two studies have yet tested the impact of religiosity on taxpayers' compliance behavior and there was a need to test this variable in secular and religious countries. Some researchers and authors believe that concealment of government taxes is not immoral to the society rather payment of zakat, which is mandatory under the Islamic law suffices (McGee, 1998). So, the impact of religiosity is very important and hence it cannot be ignored.

The lack of homogeneity in the findings regarding taxpayers' compliance behavior, suggested that researchers added some other factors outside the model. Five studies showed that penalties and fines have a negative relationship with taxpayers' compliance behavior. Similarly, some other studies showed a positive relationship between tax audit and taxpayers' compliance behavior and a study also showed their negative relationship (Marandu, Mbekomize, & Ifezue, 2015).

Tax Administration System and Compliance Behavior of Taxpayers

Tax system structure includes the probability of detection, penalty, tax rates and complexity of tax system (Fischer, Wartick, & Mark, 1993). These factors were added in Fischer's model. The increasing penalties and probability of detection can increase the compliance rate (Allingham & Sandmo, 1972). It was found that the involvement of government audits and low tax rates reduce the noncompliance (Graetz & Wilde, 1985). It was also observed that penalties and sanctions are necessary for the betterment of tax compliance and it is important to study some social factors (Jackson & Millron, 1986). Penalties should be high where the probability of detection is low and in case of low penalties, the detection probability is high (Devos, 2014). Vague information about low detection probability and sanctions decreases tax compliance behavior (Srinivasan, 1973). The randomness of tax audit and fear of tax assessment can increase tax compliance behavior (Devos, 2014). By increasing penalties and sanctions can only be increased to some extent, so there was a need to reconsider this fact that, only by deterrence tax compliance cannot be increased (Devos, 2014). Whereas, some studies found that deterrence had a negative or negligible impact on taxpayers' compliance behavior (Frey & Feld, 2002; Vazquez & Rider, 2005). Tax compliance and tax evasion are strongly associated to tax structure of a country (Alm, Bahl, & Murray, 1990; Annan, Bekoe, & Amponsah, 2014). Three important roles are played by a good tax system: development of a country, equal distribution of wealth, and revenue (Marandu, Mbekomize, & Ifezue, 2015). In a study in Nigeria it was found that the main cause of tax evasion Nigeria was complex tax administration system (Muhrtal & Ogundeji, 2013). Main factors of tax evasion in India were high and complex tax rates, complex tax system structure, corruption, ineffective behavior of tax personnel, and unproductive law enforcement (Chandrappa, 2016). In Yemen the most critical factors responsible for noncompliance with tax laws were ineffective taxation system and high tax rates along with other factors (Helhel, 2014). The most serious problem of noncompliance of tax and lower tax base in developing countries like Pakistan is complex tax system, which obliges tax professionals towards not complying with tax laws by saving their time and money in the form of consultancy fee and facing the tax department. Taxpayers think that if they would file tax return the chances of being caught by the tax officials will be high (Awan & Hannan, 2014). Lack of supervision by the tax department over the people increases noncompliance and by increasing the supervision a country can improve tax compliance (Gangl, Torgler, Kirchler, & Hofmann, 2014). Only deterrence was not the reason to increase tax compliance but tax policymakers should consider both issues relating to deterrence and non-deterrence. However,

researchers showed that deterrence has a more significant impact than non-deterrence but a win-win situation should be maintained between the taxpayers and government (Hallsworth, 2014).

Researchers relating to tax structure found that tax compliance may be increased by introducing favorable tax rates, timely supervision by the tax department, simplifying the tax laws, increasing the audit, implementation of tax penalties and the announcement of tax policies publically. Public confidence is necessary to introduce new amendments. Simple tax structure may increase the tax base in a country.

Public Governance and Compliance Behavior of Taxpayers

Good governance means, "the negotiation by all the stakeholders in an issue (or area) of improved public policy outcomes and agreed governance principles, which are both implemented and regularly evaluated by all stakeholders" (Bovaird & Löffler, 2003). Public governance is the management, supply, and delivery of political goods to the citizens of a country (Rotberg & Gisselguist, 2009). Taxpayers' behavior was influenced by ethical perception and ethical perception was affected by the public governance. In Nigeria, the level of public goods and services was low resulting in noncompliance by the taxpayers. Public governance can be achieved by good taxation system in a country. Nevertheless, governance issues may have a positive or negative impact on the taxpayers' compliance behavior (Kiow, Salleh, & Kassim, 2017). Due to the governance issue, tax compliance behavior of the taxpayers in Nigeria was low (Umar, Derashid, & Ibrahim, 2016). Lack of governance over financial resources also affected the taxpayers' compliance behavior. Low public governance resulted in low taxpayers' morale and low taxpayers' compliance (Muhrtal & Ogundeji, 2013). Governance is a non-economic factor and results showed that it is negative and insignificant (Ching, 2013). Quality of public governance has a direct impact on taxpayers' compliance behavior (Ovute & Eyisi, 2014; Cummings, Vazquez, McKee, & Torgler, 2009). It is also found that public governance has a significant positive impact on the taxpayers' compliance behavior but no moderating impact of the financial condition and risk preferences (Alabede, Ariffin, Zaimah, & Idris, 2011).

Religiosity and Taxpayers' Compliance Behavior

The definition of religiosity by McDaniel and Burnett (1990) is, "a belief in God accompanied by a commitment to follow principles believed to be set by God". It is found that religiosity has a weak relationship with taxpayers' compliance behavior, however, it has moderated the relationship of the independent and dependent variable. This variable is least tested before as put by some researchers (Palil, Akir, & Ahmad, 2013). Religiosity plays an important role due to the cultural and other factors, a strong belief in religion can change the taxpayers' attitude (Palil, Akir, & Ahmad, 2013). It was found that religiosity has a significant and direct impact on volunteer tax compliance scheme and a weak relationship with enforced tax compliance scheme in Malaysia (Ali, 2013). Other researchers also found that relationship between tax evasion and ethics has been moderated by religiosity (Lau, Choe, & Tan, 2013).

Due to the inconsistency of the research results, the actual level of compliance cannot be explained by the theories of tax compliance and there is a need to test the moderation effect of its determinants on tax compliance (Alabede, Ariffin, Zaimah, & Idris, 2011; Dubin, Graetz, & Wilde, 1987). Different studies suggested that tax determinants should be tested by the moderation impact if any prevailed (Kirchler, 2007; Baron & Kenny, 1986). Religiosity has moderates the relationship between demographic variables and tax compliance (Lau, Choe, & Tan, 2013). Religiosity positively moderates the relationship of tax knowledge, tax compliance and tax compliance behavior (Palil, Akir, & Ahmad, 2013).

A number of stakeholders are interested in tax compliance behavior of people of the country. The list of stakeholders includes government, economists, accountants, psychologists, and sociologists, as they are somehow concerned about the noncompliance behavior of people. As one theory cannot cater to the noncompliance behavior of people, so there is a need to include different theories from economics, sociology, psychology, and anthropology to understand this issue (Alm, 2012; Jackson & Millron, 1986).

This study has thereupon used Deterrence Theory and Social Exchange Theory to investigate the tax compliance behavior. The tax compliance model derived from deterrence Theory was established by Becker (1968) and is based on the economics of crime approach (Erlend, Slemrod, & Thoresen, 2015). The theory analyzes the deterrent effects of threats and sanctions of punishments on unwanted illegal behavior. The theory states that an individual is a rational being attempting to increase utility, this is not a desire to do crime rather the difference between the benefit and cost leads it towards this criminal behavior. Many studies have incorporated Deterrence Theory in their research relating to taxpayers' compliance behavior and concluded that taxpayers calculate the related benefit attached with tax evasion and compare it with the expected cost to be incurred. As in some countries their governments increased penalties and audits, the tax compliance rate also increased (Hamm, 1995; Erlend, Slemrod, & Thoresen, 2015; Jackson & Millron, 1986). The first researchers who used Deterrence Theory in his model were Allingham and Sandmo (1972) and they developed A-S Model describing that individuals evaded tax due to a rational decision between risk and uncertainty. Taxation administration system was very much derived from Deterrence Theory.

Social Exchange Theory states that the change and stability are based upon the process of negotiation exchange between individuals and human relationships in a social framework formed, which is further based upon subjective cost-effective monitoring and comparisons of cost and reward alternatives related to relationships (Damayanti, Sutrisno, Subekti, & Baridwan, 2015). People consistently repeat the actions that reward them and their actions are thus based on value. The theory with respect to the tax compliance states that relationship between taxpayers and government and subsequent relationships formed on the exchange value basis where individual taxpayers have the expectation that government will respond by giving benefits in public service, rule of law, accountability, participatory democracy, quality governance and corruption control (Damayanti, Sutrisno, Subekti, & Baridwan, 2015).

The Social Exchange Theory somewhat traces its own routes into the most basic concept of trade which is a Barter System. Interestingly, these theories put the modern human into the same place where he was thousands of years back, by stating that every individual forms and breaks most social relationships on the basis of the analysis, which involves cost paid and/or benefits received.

Framework and Analysis
The data were collected through self-administered questionnaires, which were adapted from Alabede (2011). As it is commonly emphasized that sample size should be adequate to get generalize the results (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014; Alabede, 2012)**,** thus an adequate sample is taken. 625 questionnaires were distributed to make a high response in data collection process (Sekaran & Bougie, 2010). According to PennState (2016), the suitable sample should be 398 at 95% confidence level with 50% variability for a population above 10 million. The sample size should be increased, at least 50%, to avoid non-response bias (Salkind, 1997). The sample size was increased by 57% to avoid non-response issue and 625 questionnaires were distributed instead of 398. We received 447 filled questionnaires, out of which 412 were used and

35 questionnaires were rejected due to wrong filling, missing of some important information, and some minor missing figures (Aminu & Shariff, 2015).

The sampling frame included all employees of all listed companies of Pakistan Stock Exchange, employees of Federal and Provincial Governments, and self-employed individuals located in five trade markets of big cities of Pakistan. This study has tried to remove the limitations of other studies by collecting data from non-filers, self-employed and individuals not bearing NTN. For the generalization of results, high rate of response was required as put by researchers (Hussey & Hussey, 1997). At first stage private and government organizations were randomly selected, ten questionnaires were distributed to the employees of each organization who were at the payroll of the organization. The demographic information of the respondents is given in Table 2. Table 3 shows the distribution of questionnaires in big cities of Pakistan.
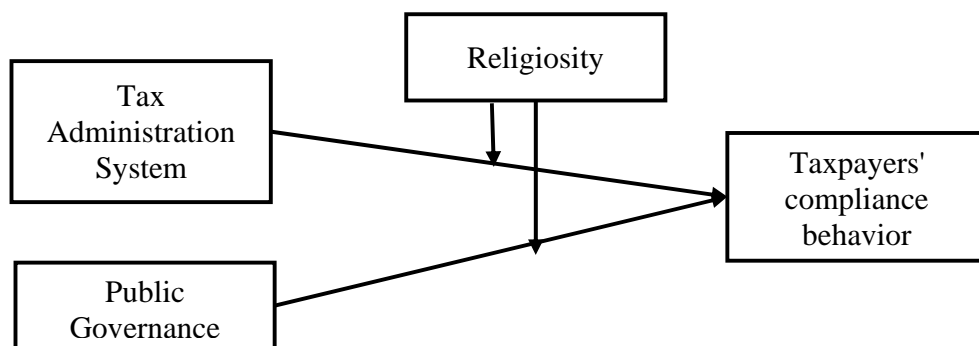

Figure 2. Schematic Diagram

Figure 2 shows the model of research where tax administration system and public governance has been taken as independent variables and religiosity as moderator.

Table 2 Demographic Information of Taxpayers

Category	Frequency	Percentage
Qualification		
No formal education	27	6.55%
Under matric	10	2.43%
University Graduate	63	15.29%
University Master	124	30.10%
Professionals	188	45.63%
Gender		
Male	321	77.91%
Female	91	22.09%
NTN Holders		
Having NTN	335	81.31%
No NTN	77	18.69%
Filer / Non-Filer		
Filer	219	53.16%
Non-Filer	193	46.84%

Filer Hired Consultants		
Yes	208	95%
No	11	5%
Age		
20-30	88	21.36%
31-40	208	50.49%
41-50	104	25.24%
51-60	12	2.91%

(Source: Author's Compilation)

Table 3. Geographical Distribution of Respondent

Response Rate of the						
No. of distributed	125	125	125	125	125	625
Returned	98	111	94	77	67	447
Returned and usable	95	102	87	71	57	412
Returned and excluded	3	9	7	6	10	35
Questionnaires not	27	14	31	48	58	178
Response rate %	78.4%	88.8%	75.2%	61.6%	53.6%	71.52%
Usable response rate %	76%	81.6%	69.6%	56.8%	45.6%	65.92%

(Source: Author's Compilation)

Results and Discussion

Before collection of data and actually using it for running the statistical tests, reliability and validity of the instrument were checked and research findings were reported. Mahalanobis D2 test was run to check and deal with the outliers in the data. According to Mahalanobis D2, the value equal to or above 112.31 shows multivariate outliers and should be eliminated from the data (Aminu & Shariff, 2015). No value was above the threshold.

As the results were drawn from Smart PLS 3.2.7 through bootstrapping, it does not assume that data is normally distributed because it based on nonparametric procedures (Efron & Tibshirani, 1993). Although PLS-SEM does not require normality of the data, like multiple regression models, still it is important to make sure that data is not much away from the normality (Hair, Black, Babin, & Anderson, 2010). VIF was checked for the possibility of multicollinearity in the data. VIF values are shown in Table 4. All values are below five, which shows that there is no multicollinearity.

Table 4VIF Values for Multicollinearity

Variables	CB
TAS	1.484
PG	1.484
RLG	1.003
TAS X RLG	1.649
PG X RLG	1.650

CB= Compliance Behavior, TAS = Tax Administration System,   RLG = Religiosity

PLS-SEM requires that before the assessment of inner model (structural model), the outer model must be assessed for its validity (Aminu & Shariff, 2015). Measurement of components was

dealt in the outer model, which suggests how well the items (indicators) are associated and load with each respective constructs. For evaluating the outer model validity and reliability are the main criteria in PLS-SEM analysis (Hair, Ringle, & Sarstedt, 2013). The relationship between the constructs relies on the reliability and validity of the measurement of their components (Hair, Ringle, & Sarstedt, 2013). The outer model is assessed by computing individual item reliability, convergent reliability and discriminant validity (Aminu & Shariff, 2015). Individual reliability means indicator reliability and internal consistency reliability and these can be measured by composite reliability (Aminu & Shariff, 2015).

Convergent validity can be checked by evaluating the Average Variance Extracted (AVE). Fornell-Larcker criterion was used to check the discriminant validity (Wong, 2013; Hair, Ringle, & Sarstedt, 2013). Consistencies of results among same set items are usually used to measure the internal consistency (Hair, Ringle, & Sarstedt, 2013). Composite reliability does not presume loading indicator of the construct, unlike Cronbach's Alpha, the benchmark value must be more than 0.60 (Hair, Ringle, & Sarstedt, 2013; Wong, 2013). The value of Cronbach's Alpha more than 0.70 is most appropriate (Hair, Ringle, & Sarstedt, 2013). The value of CR above 0.60 shows the average internal consistency of elements, but the value more than 0.70 up to 0.90 is most desirable (Nunnally & Bernstein, 1994). After examining the results of Cronbach's alpha and CR for all constructs it is depicted in Table-5 that all scores of Cronbach's Alpha and CR were above the benchmark values (Hair, Ringle, & Sarstedt, 2013; Henseler, Ringle, & Sinkovics, 2009). The score of CR in this research ranges between 0.848 to 0.938, which shows the trustworthiness of underlined measurement models.

The next step was the evaluation of the convergent validity, which means how items of the same constructs are theoretically related to each other (Henseler, Ringle, & Sinkovics, 2009). It showed the degree of association between a measure of the same constructs (Hair, Ringle, & Sarstedt, 2013). For measuring and identifying the convergence of elements, AVE benchmark value should be 0.50 and above (Hair, Ringle, & Sarstedt, 2013; Henseler, Ringle, & Sinkovics, 2009) AVE score of 0.50 shows sufficient convergent validity means good relationship, the latent constructs shows indicator's half of the variance and depicts the sufficient convergent validity (Hair, Ringle, & Sarstedt, 2013).

Table 5 Loading, Reliability and Convergent Validity Values

Variables	Items	Loading	Cronbach's	CR	AVE	Discriminant
Compliance Behavior	CB1	0.839	0.885	0.921	0.744	YES
	CB2	0.867				
	CB3	0.869				
	CB4	0.875				
Tax Administration System	TAS10	0.969	0.773	0.848	0.643	YES
	TAS11	0.949				
	TAS15	0.855				
	TAS18	0.052				
Public Governance	PG31	0.859	0.912	0.938	0.790	YES
	PG32	0.891				
	PG33	0.897				
	PG34	0.907				

Fornell-Larcker criterion is the most conventional approach for checking the discriminant validity and cross loading is more liberal and convenient method for the measurement of discriminant validity (Hair, Ringle, & Sarstedt, 2013). The discriminant validity was evaluated by matching the value of correlations presented in Table 6. The said table depicted the score of Fornell-Larcker criterion test with the score of AVE square root for constructs.

Table 6. Discriminant Validity

	CB	PG	TAS
CB	0.863		
PG	0.769	0.889	
TAS	0.812	0.569	0.802

CB= Compliance Behavior, TAS = Tax Administration System, RLG = Religiosity

Table 7. R-Square and Adjusted R-Square

	Model 1	Model 2	Model 3
R-Square	0.798	0.799	0.803
Adjusted R - Square	0.797	0.797	0.801

The results of model 1 (figure 3 and 4) indicate the value of R-square 0.798, while the model 2 (figure 5 and 6) indicates the results of R-Square 0.799 by adding one more variable i.e. religiosity, the value of R-square has shown a bit but not a significant increase. Model 3 (figure 7 and 8) shown the moderating impact of religiosity on the independent variables TAS & PG and dependent variable taxpayers' compliance behavior and R-square has been increased from 0.798 to 0.803. After this step, but before the analysis of inner model (measurement model), the contribution of the indicators was assessed through outer factor loading. Factor loading means the interaction of the identified factors with the variables (Armor, 1973). Outer loading benchmark value should be 0.50 or above but value greater than 0.40 and less than 0.70 should be considered carefully and the critical items should be deleted if after the deletion of items, the CR and AVE value of remaining items increase (Hair, Ringle, & Sarstedt, 2013). Eight items were deleted but no construct was eliminated as the minimum number of indicators were present (Hair, Ringle, & Sarstedt, 2013). Table 5 showed that all the loading values are above the recommended threshold of 0.50 which, indicated that the indicators have contributed much in explaining the constructs. There was no discriminant validity problem existed, as the value of the indicators of outer loading was higher than all its cross-loadings (Aminu & Shariff, 2015). After getting satisfaction from the reliability and validity of the outer model, the inner model was evaluated.

Table 8. Direct Relationship of Independent Variables

Variables	Original	Sample	Standard	T Statistics	P Values
TAS -> CB	0.553	0.553	0.030	18.732	0.000*
PG -> CB	0.454	0.454	0.029	15.734	0.000*

CB= Compliance Behavior, TAS = Tax Administration System, RLG= Religiosity (* P<.01)
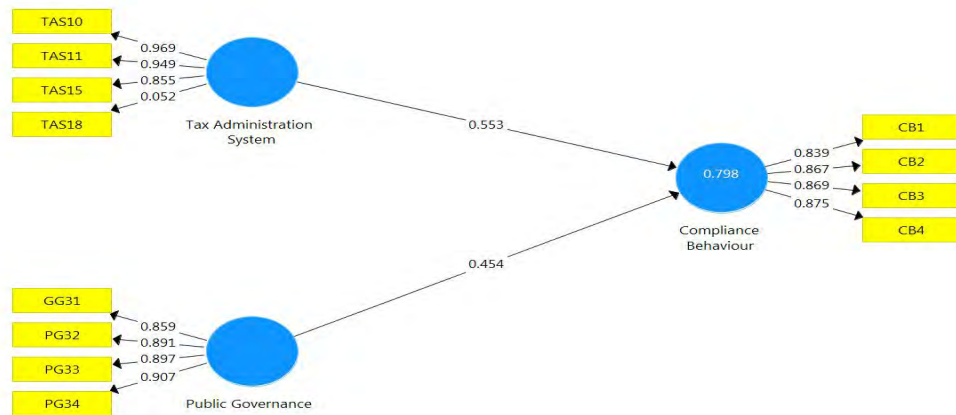
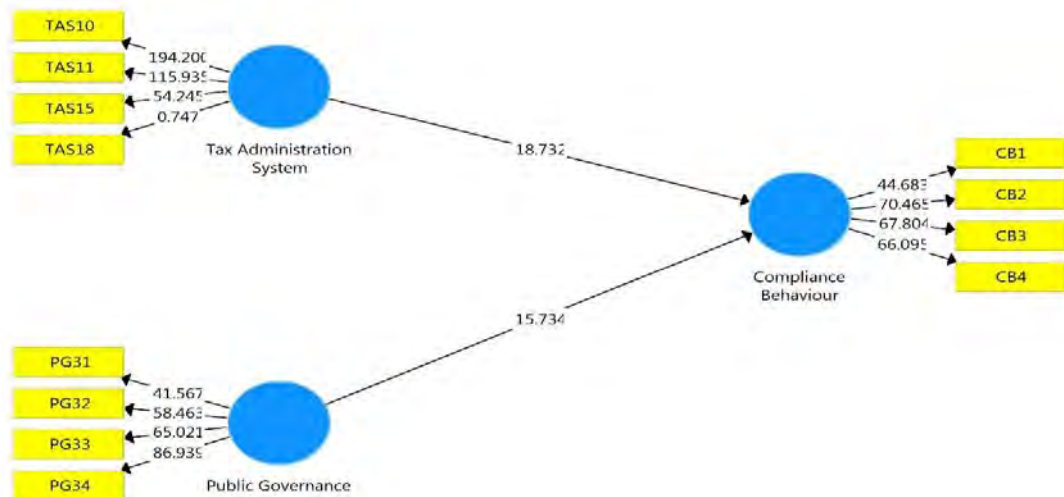**Figure 3. PLS Algorithm Direct Relationship**

Figure 4. PLS-SEM Bootstrapping Direct Relationship

Path coefficients of independent and dependent variables are shown in figure 3, which were derived from Smart PLS 3.2.7 software. Figure 4 has shown PLS-SEM bootstrapping direct relationships results. The results of direct relationships showed that both exogenous variables, Tax Administrations (TAS) and Good Governance (GG) have a positive and significant impact on dependent variable at P-value <0.05 and t-value above 1.96. With respect to H_1, results suggest that prevailing tax administration system has a significant and positive impact on the taxpayers' behavior towards compliance (β 0.553; t=18.732; p<0.000); Many studies showed positive and significant relationship of tax administration system with taxpayers' compliance behavior (Helhel, 2014; Chandrappa, 2016; Alstadsæter & Jacob, 2013) whereas, penalties and threating are insignificant to taxpayers' compliance behavior (Mohdalia, Isa, & Yusoff, 2014). With respect to H_2, results, data revealed that public governance has also a very strong and positive impact on the taxpayers'

compliance behavior towards compliance (β 0.454; t=15.734; p<0.000); therefore, H_2 was supported. By increasing the level governance position and transparent political policies, the tax compliance may be increased. Many studies showed that governance has a significant relationship with taxpayers' compliance behavior (Umar, Derashid, & Ibrahim, 2016; Cummings, Vazquez, McKee, & Torgler, 2009; Alabede, Ariffin, & Idris, 2011).

Before assessing the moderation effect on the dependent and independent variables, first of all the direct impact, of the independent variable and moderator, was assessed on the dependent variable, and then moderator was added (Garcia, Kenny, & Ledermann, 2015; Bennett, 2000).

Table 9. Direct Relationship of all Independent Variables and Moderators

Variables	Original	Sample Mean	Standard	T Statistics	P Values
TAS -> CB	0.554	0.555	0.029	18.930	0.000*
PG -> CB	0.454	0.453	0.029	15.633	0.000*
RLG -> CB	-0.015	-0.015	0.025	0.622	0.534

CB= Compliance Behavior, TAS = Tax Administration System RLG Religiosity (*P<.01)

TAS was remained supported with an increase in the t-value from 18.732 to 18.930 and β–value changed from 0.553 to 0.554 with no change in p-value. PG was also shown a strong and positive relationship with CB where t-value decreased from 15.734 to 15.633 with no change in β–value and p-value. The religiosity showed a negative and weak relationship with compliance behavior (β -0.015; t=0.622; p>0.534). In Paris, religiosity has a weak relationship with tax frauds or tax compliance (Welch, et al., 2005). The new independent variable showed an insignificant relationship with taxpayers' compliance behavior which means that in Pakistan the religiosity has an insignificant impact on taxpayers' compliance behavior.
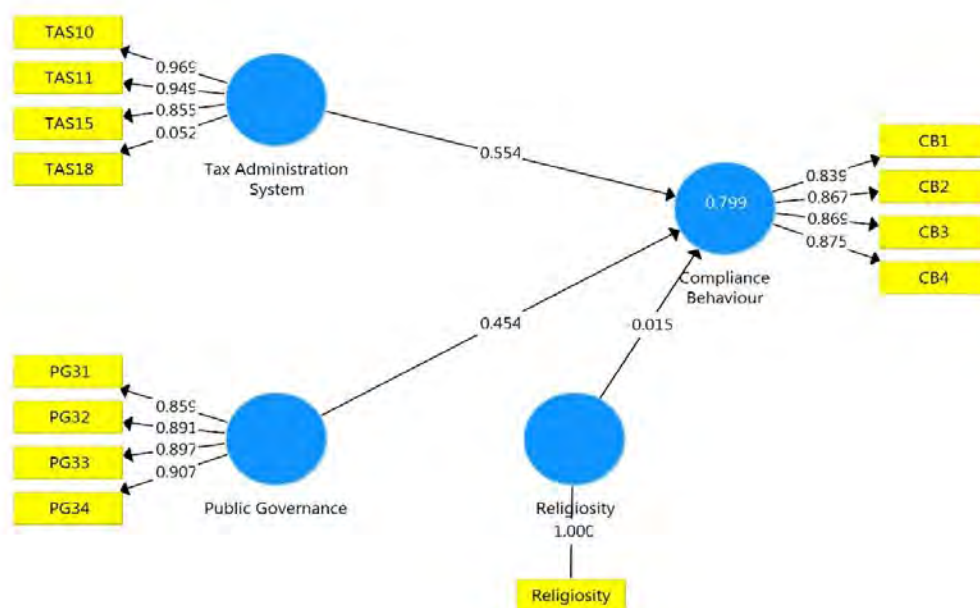

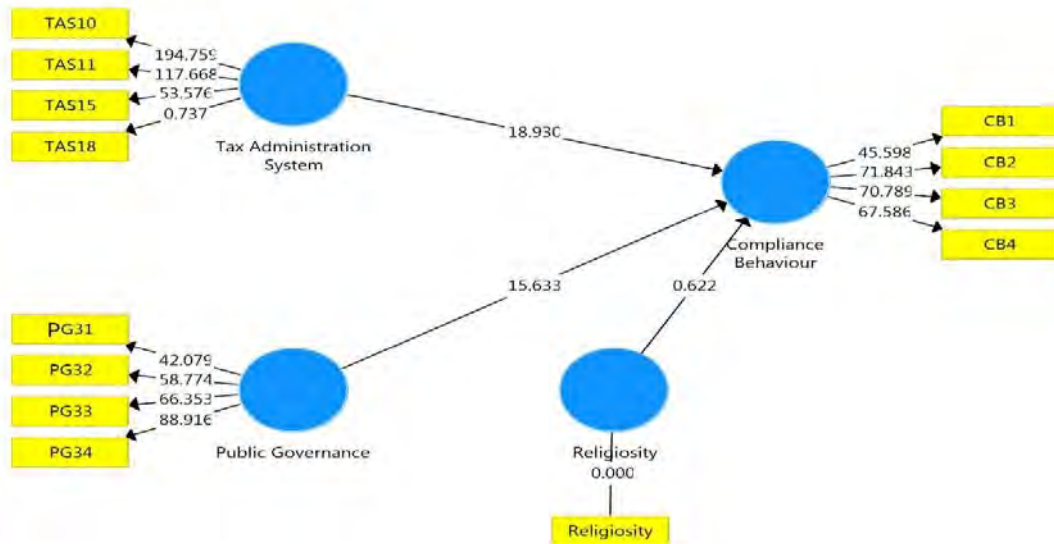**Figure 5. PLS Algorithm Direct Relationship**

Figure 6. PLS-SEM Bootstrapping Direct Relationship

Table 10.Moderating Impact of Religiosity

Variables	Original	Sample	Standard	T Statistics	P Values
TAS -> CB	0.551	0.552	0.029	19.227	0.000**
PG -> CB	0.458	0.458	0.029	15.933	0.000**
RLG -> CB	-0.013	-0.012	0.023	0.534	0.594
TAS X RLG -> CB	-0.084	-0.083	0.033	2.516	0.012*
PG X RLG -> CB	0.061	0.061	0.033	1.819	0.069

CB= Compliance Behavior, TAS = Tax Administration System, RLG Religiosity (* P≤.05 ** P<.01)

Data in table 10 showed religiosity strong moderating impact on public governance and tax administration system. In the presence of religiosity, the relationship of PG has been weakening and became insignificant (β 0.061; t=1.819; p>0.069). Whereas religiosity did not disturb the significant level of tax administration rather, the relationship was changed from positive to negative (β -0.084; t=2.516; p>0.012) and its significant values have also been changed from stronger to the weaker position but within the significant level.
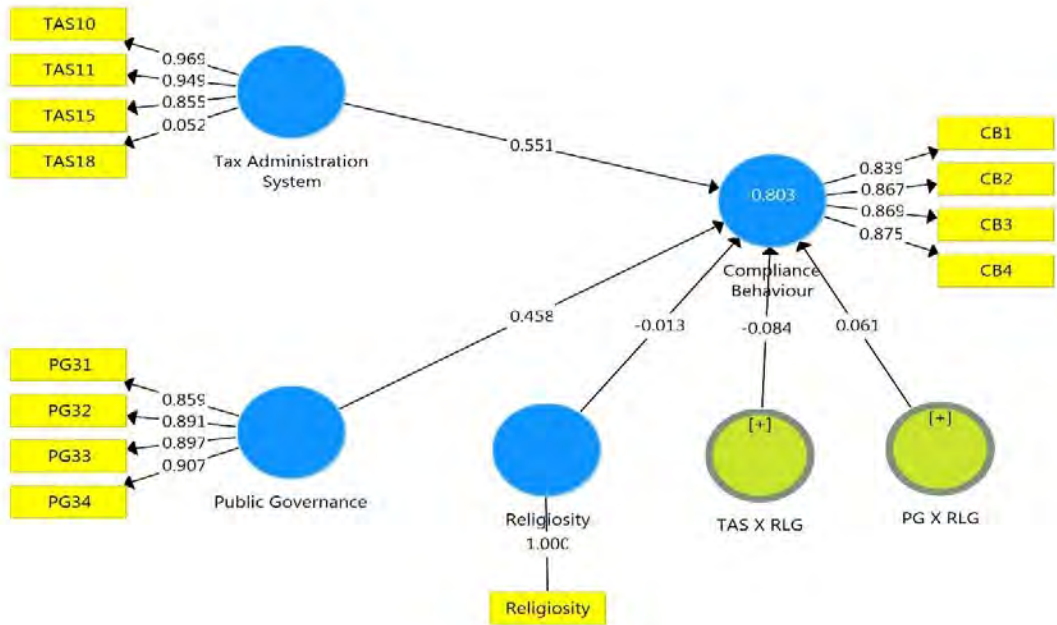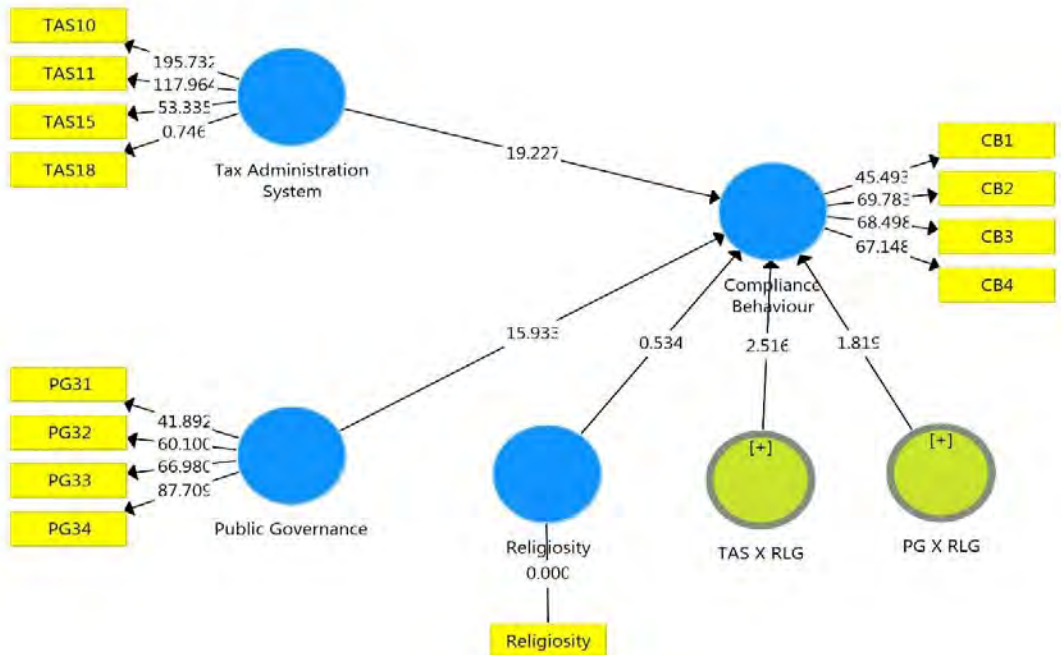
Figure 7. PLS-SEM Algorithm Moderator

Figure 8. PLS-SEM Bootstrapping Moderator

Conclusion

This study shows that only deterrence is not sufficient to increase taxpayers' compliance behavior in Pakistan, rather there is a need to improve the quality of public governance in the country (Alabede, Ariffin, & Idris, 2011). However, Pakistan is an Islamic country and in Islam, the concept of Zakat is very important. This study also shows that religiosity has a weak and negative impact on taxpayers' compliance behavior but it has a moderating impact on the tax administration system and quality of public governance. This study has validated the suggestions of Jackson & Millron (1986) that some other factors were present in the Fischer's model of compliance behavior. This issue should also be considered by the Federal Board of Revenue to increase the tax base.

Future researchers may consider financial conditions, risk preferences, and some other factors as moderator to test the taxpayers' compliance behavior. Above mentioned constructs can be considered as independent variables as well. Future research can be exploratory in nature or triangulation to confirm the results of the current study.

Reference

Ahmed, V., Talpur, M., & Liaquat, S. (2015). *Towards a Fair and Just Fiscal Policy in Pakistan.* London: SDPI.

Alabede, J. O. (2012). An investigation of factors influencing taxpayers' compliance behaviour: Evidence from Nigeria. *Journal of Management Studies, 8*(1), 86-97.

Alabede, J. O., Ariffin, Z. B., & Idris, K. M. (2011). Determinants of tax compliance behaviour: A proposed model for Nigeria. *International Research Journal of Finance and Economics, 78*(1), 121-136.

Ali, A., & Ahmad, N. (2014). Trust and tax compliance among Malaysian working youth. *International Journal of Public Administration, 37*(7), 389-396.

Ali, N. R. (2013). *The Influence of Religiosity on Tax Compliance in Malaysia.* Curtin: Curtin University.

Allingham, M. G., & Sandmo, A. (1972). Income tax evasion: A theoretical analysis. *Journal of Public Economic, 1*(3), 323-328.

Alm, J. (2012). Measuring, explaining, and controlling tax evasion: lessons from theory, experiments, and field studies. *International Tax and Public Finance, 19*(54), 54-77.

Alm, J., Bahl, R., & Murray, M. N. (1990). Tax structure and tax compliance. *The Review of Economics and Statistics, 72*(4), 603-613.

Alstadsæter, A., & Jacob, M. (2013). *The effect of awareness and incentives on tax evasion.* Oxford: Oxford University Center for Business Taxation .

Amin, A., Nadeem, A. M., Parveen, S., Kamran, M. A., & Anwar, S. (2014). Factors affecting tax collection in Pakistan: An empirical investigation. *Journal of Finance and Economics, 2*(5), 149-155.

Aminu, I. M., & Shariff, M. N. (2015). Determinants of SMEs performance in Nigeria: A pilot study. *Mediterranean Journal of Social Sciences, 6*(1), 156-166.

Annan, B., Bekoe, W., & Amponsah, E. N. (2014). Determinants of tax evasion in Ghana: 1970-2010. *International Journal of Economic Sciences and Applied Research, 6*(3), 97-121.

Armor, D. J. (1973). Theta reliability and factor scaling. *Sociological methodology, 5*(1), 17-50.

Armstrong, C. S., Blouin, J. L., Jagolinzer, A. D., & Larcker, D. F. (2015). Corporate governance, incentives, and tax avoidance. *Journal of Accounting and Economics, 60*(1), 1-17.

Awan, A. G., & Hannan, A. (2014). The determinants of tax evasion in Pakistan-a case study of Southern Punjab. *International Journal of Development and Economic Sustainability, 2*(4), 50-69.

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), 1178-1182.

Bennett, J. A. (2000). Mediator and moderator variables in Nursing reserch: Conceptual and statistical differences. *Research in Nursing and Health, 23*(1), 415-420.

Bovaird, T., & Löffler, E. (2003). Evaluating the quality of public governance: indicators, models and methodologies. *International Review of Administrative Sciences, 69*(3), 313-328.

Chan, C. W., Troutman, C. S., & Bryan, D. O. (2000). An expanded model of taxpayer compliance: Empirical evidence from the United States and Hong Kong. *Journal of International Accounting, Auditing and Taxation, 9*(2), 83-103.

Chandrappa, M. (2016). Tax evasion and black money in india: causes and remedies. *International Journal of Management Research & Review, 6*(10), 1376-1381.

Ching, S. P. (2013). *Determinants of tax non-compliance in Malaysia.* Kaula Lumpur: Univerisity Tunku Abdul Rahman .

Cummings, R. G., Vazquez, J. M., McKee, M., & Torgler, B. (2009). Tax morale affects tax compliance: evidence from surveys and an artefactual field experiment. *Journal of Economic Behavior & Organization, 70*(3), 447-457.

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.

Devos, K. (2014). Do penalties and enforcement measures make taxpayers more compliant? the view of Australian tax evader. *Journal of Business and Economics, 5*(2), 265-284.

Dubin, J. A., Graetz, M. J., & Wilde, L. L. (1987). Are we a nation of tax cheaters? new econometric evidence on tax compliance. *The American Economic Review, 77*(2), 240-245.

Durham, Y., Manly, T. S., & Ritsema, C. (2014). The effects of income source, context, and income level on tax compliance decisions in a dynamic experiment. *Journal of Economic Psychology, 40*(1), 220-233.

Efron, B., & Tibshirani, R. J. (1993). *An Introduction to Bootstrapping .* New York: Chapman and Hall.

Erlend, E., Slemrod, J., & Thoresen, T. (2015). Taxes on the internet: deterrence effects of public disclosure. *American Economic Journal: Economic Policy, 7*(1), 36-62.

FBR. (2016). *FBR Quarterly Review .* Islamabad: FBR Research Division .

Fischer, C. M., Wartick, M., & Mark, M. M. (1993). Detection probability and tax compliance:A review of the literature. *Journal of Accounting Literature, 11*(2), 1-46.

Frey, B., & Feld, L. (2002). *Deterrence and morale in taxation: An empirical analysis.* Munich: University of Freiburg.

Gangl, K., Torgler, B., Kirchler, E., & Hofmann, E. (2014). Effects of supervision on tax compliance: evidence from a field experiment in Austria. *Economics Letters, 123*(3), 378-382.

Garcia, R. L., Kenny, D., & Ledermann. (2015). Moderation in the actor–partner interdependence model. *Personal Relationships, 22*(1), 8-29.

Graetz, M. J., & Wilde, L. L. (1985). The economics of tax compliance: fact and fantasy. *National Tax Journal, 38*(3), 355-363.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (Seventh Edition ed.). New Jersey : Prentice Hall.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Editorial partial least squares structural equation modeling: rigorous applications, better results and higher acceptance. *Long Range Planning, 46*(1), 1-12.

Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review, 26*(2), 106-121.

Hallsworth, M. (2014). The use of field experiments to increase tax compliance. *Oxford Review of Economic Policy, 30*(4), 658-679.

Hamm, J. L. (1995). *Income level and tax rate as determinants of taxpayer compliance: an experimental examination.* Texas: Texas Tech University Library.

Helhel, Y. A. (2014). Factors affecting tax attitudes and tax compliance: a survey study in Yemen. *European Journal of Business and Management, 6*(22), 48-58.

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. *Advances in International Marketing, 20*(1), 277-319.

Hussey, J., & Hussey, R. (1997). *Business Research: A Practical Guide for Undergraduate and Postgraduate Students.* London: Macmillan Business.

Jackson, B. R., & Millron, V. C. (1986). Tax compliance research: finding, problem and prospects. *Journal of Accounting Literature, 5*(1), 125-165.

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), 273-293.

Kiow, T. S., Salleh, M. F., & Kassim, A. A. (2017). The determinants of individual taxpayers' tax compliance behaviour in peninsular Malaysia. *International Business and Accounting Research Journal, 1*(1), 26-43.

Kirchler, E. (2007). *The Economic Psychology of Tax Behaviour.* New York: Cambridge University Press.

Kirchler, E., Lorenz, C., Torgler, B., & Ganlge, K. (2015). Wealthy tax non-filers in a developing country: taxpayer knowledge, perceived corruption and service orientation in Pakistan. *Social Sciences Research Network, 12*(1), 1-27.

Lau, T. C., Choe, K. L., & Tan, L. P. (2013). The moderating effect of religiosity in the relationship between money ethics and tax evasion. *Asian Social Science, 9*(11), 213-220.

Lustig, N., Pessino, C., & Scott, J. (2014). *The Impact of Taxes and Social Spending on Inequality and Poverty in Argentina, Bolivia, Brazil, Mexico, Peru and Uruguay: an Overview.* Washington: Department of Economics, Tulane University.

Marandu, E. E., Mbekomize, C. J., & Ifezue, A. N. (2015). Determinants of tax compliance: A review of factors and conceptualizations. *International Journal of Economics and Finance, 7*(9), 207.

McGee, R. W. (1998). The ethics of tax evasion in Islam: a comment. *Journal of Accounting, Ethics and Public Policy, 1*(2), 162-169.

Ministry of Finance. (2017). *Economic Survery of Pakistan.* Islamabad: Government of Pakistan.

Mohdalia, R., Isa, K., & Yusoff, S. H. (2014). The impact of threat of punishment on tax compliance and noncompliance attitudes in Malaysia. *Procedia social and behavioral sciences, 164*(1), 292-300.

Muhrtal, T. O., & Ogundeji, M. (2013). Professionals' perspective of tax evasion: some evidence from Nigeria. *Universal Journal of Accounting and Finance, 1*(2), 35-41.

Nunnally, J., & Bernstein, I. (1994). *Psychometric Theory* (3rd ed.). New York: McGraw-Hill.

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.

Palil, M. R., Akir, M. R., & Ahmad, W. F. (2013). The perception of tax payers on tax knowledge and tax education with level of tax compliance: a study the influences of religiosity. *ASEAN journal of economics, management and accounting, 1*(1), 118-122.

Razak, A., & Adafula, C. J. (2013). Evaluating taxpayers attitude and its influence on tax compliance decisions in Tamale, Ghana. *Journal of Accounting and Taxation, 5*(3), 48-57.

Rotberg, R. I., & Gisselguist, R. M. (2009). *Strengthening African governance: Index of African gov-ernance results and rankings.* Harvard Kennedy School. Harvard: The Program on Intrastate Conflict and Conflict Resolution.

Salkind, N. J. (1997). *Exploring Research.* New Jersey: Prentice Hall.

Sekaran, U., & Bougie, R. (2010). *Research Methods for business: A skill Building Approach.* West Sussex : John Wiley & Sons Lt.

Srinivasan, T. N. (1973). Tax evasion: A model. *Journal of public economics, 2*(4), 339-346.

Umar, M. A., Derashid, C., & Ibrahim, I. B. (2016). Income tax noncompliance in Nigeria and the moderating effect of public governance quality: a suggested framework. *Mediterranean Journal of Social Sciences, 7*(6), 339-348.

Vazquez , J. M., & Rider, M. (2005). Multiple model of tax evasion: Theory and evidence. *National Tax Journal, 58*(2), 286-316.

Welch, M. R., Xu, Y., Bjarnason, T., Petee, T., O'Donnell, P., & Magro, P. (2005). But everybody does it…: The effects of perceptions, moral pressures, and informal sanctions on tax cheating. *Sociological Spectrum, 25*(1), 21-52.

Wong, K. K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin, 24*(1), 1-32.