

# TAX AUDIT AND TAX COMPLIANCE, DOES RELIGIOSITY MODERATE?

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### ABSTRACT

The purpose of this paper was to investigate the impact of tax audit on tax compliance and examine the moderating effect of religiosity on the associations between tax audit and tax compliance in Pakistan. In this study, 400 questionnaires were distributed by using convenience sampling to actual as well as potential taxpayers of Pakistan, after which a total of 247 useable questionnaires were deemed suitable for analysis. Partial least squares structural equation modelling (PLS SEM) was devised using SmartPLS 3 to validate the measurement model and structural model and the predictive relevance of the study's model. The findings showed that tax audit was positively associated with the level of tax compliance. They also demonstrated significant moderating effect of religiosity on the relationship between tax audit and tax compliance. Tax authorities and policymakers in developing majority societies in developing countries and in other South Asian countries, especially in Pakistan may use the results to focus their interest on the formulation of policies founded on the outcomes of the study to strengthen revenue collection. This study extended the deterrence theory in the context of tax compliance by studying the effect of tax audit on tax compliance as well as the proposed moderating effect of religiosity in the purview of deterrence theory on tax compliance. The study explored the said relationships among actual as well as potential taxpayers in socio-cultural context of Pakistan. Moreover, the suitability for the use of PLS-SEM as a statistical tool in investigating the above-mentioned relationships was also discussed.

**Keywords:** Pakistan, Religiosity, Deterrence theory, Tax compliance, Tax audit



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## 1. INTRODUCTION

Taxation is a major factor that a government considers while taking financial decisions. (Gilligan & Richardson, 2005; Hanlon, Maydew, & Thornock, 2015). Tax collection is the backbone of the projects of public finance such as development and maintenance of infrastructure as well as providing the general public with necessary facilities and amenities. This spending is essential for economic growth of a country (Alm & Torgler, 2006; Gangl, Torgler, & Kirchler, 2016; Miskam, Noor, Omar, & Abd Aziz, 2013). Therefore, researchers have focused on tax compliance thanks to its significance and active role in financial development (Alon & Hageman, 2013; Andreoni, Erard, & Feinstein, 1998; Khelif, Guidara, & Hussainey, 2016; Torgler & Schneider, 2007; Torgler, Schneider, & Schaltegger, 2010).

Despite being essential, even the developed countries fail to achieve hundred-percent tax compliance. This is because there always remains a fraction of wealthy and powerful public that is considered 'hard to tax'. This fraction always tends to evade or avoid to dispose the actual tax liability through different sinister means such as under-declaration of the wealth and wrong calculation of the tax liability (McGee, Ho, & Li, 2008). Therefore, tax evasion and avoidance exert an adverse effect on the economy, especially keeping in view the fact that tax noncompliance is such a major issue worldwide, that the actual volume of the tax money evaded is colossal (Farrar, Kaplan, & Thorne, 2019). Precisely, it was estimated that the amount of tax evasion in United States surpassed 3.1 trillion Dollars in 2011 (Murphy, 2011).

Today, the fluctuating oil prices as well as shifting of the world energy needs towards green energy sources have forced the Arab countries to think of alternate revenue sources, especially, taxation, in order to overcome the gigantic budgetary deficits (Alm, 2019). Randlane (2016) indicated that under-calculation of tax liability as well as avoiding the tax liability by other illegal measures cost the governments billions of dollars every year. As a necessary result of the tax evasion, the burden is ultimately put to the general public, which faces compromise on quality service delivery as well as many essential projects of public benefit. Hence, in order to act in larger public interest, the governments have to combat the tax noncompliance tooth and nail (Feld & Schneider, 2010; Zhang, Andrighetto, Ottone, Ponzano, & Steinmo, 2016).

Furthermore, the act of not complying with tax obligations incurs economic expenses and encumbers governments. In fact, its existence lies at the core of several fundamental matters in the field of public economics. One prominent consequence is the reduction of tax revenues, consequently impacting the tax burden on law-abiding taxpayers and the provision of public services to citizens (Alm, 2012). Tax non-compliance engenders inequity between individuals who adhere to tax regulations and those who disregard them, as it transfers the tax responsibility onto the former group. Consequently, this disparity creates an incentive for additional non-compliance (Feinstein, 1991).

The phenomenon of businesses opting for smaller sizes in order to facilitate non-compliance (Nur-Tegin, 2008) and diverting resources towards non-productive endeavors, such as establishing financial subsidiaries to conceal non-compliance (Alm, 2014; Slemrod, 2007), leads to a decrease in productivity. Non-adherence to regulations can also impede economic growth, as it hinders countries' ability to effectively provide essential public goods, develop infrastructure, and foster the growth of human capital (S. Johnson, Kaufmann, McMillan, & Woodruff, 2000). The existence of this phenomenon necessitates the allocation of governmental resources towards the identification of non-compliance, the quantification of its extent, and the imposition of penalties on those engaged in such activities (Alm, 1999).

Ultimately, it has an impact on the precision of macroeconomic data. In a broader context, comprehending the genuine ramifications of taxation necessitates the inclusion of tax evasion as a crucial factor (Alm, 2018). Hence, governments prioritize the enhancement of tax compliance due to the significant reliance on tax revenue to finance a substantial portion of public expenditures (Chung & Trivedi, 2003a). Consequently, considerable attention has been devoted by policymakers and academic researchers to the issue of tax non-compliance (Lee, 2017).

In order to deter tax non-compliance, multiple factors have been considered in literature. Tax audit is one of the most significant factors in this regard. Tax audit is the systematic study and scrutiny of tax self-assessments, accounting records, vouchers, invoices, and other pertinent documents for the goal of assessing a person's actual and fair tax due. In Pakistan, a tax audit can be either a desk audit (going into fewer details) or a full-fledged audit (requiring in-depth investigations) under Section 177 of the Income Tax Ordinance 2001 (Ordinance, 2001). Tax audit is regarded as the most effective weapon in the arsenal of tax authorities for curbing tax evasions and avoidances (Harelimana, 2018; Jackson & Milliron, 1986).

Unlike a traditional audit of a company, where the auditor is not always looking for something fishy in a person's financial matters, rather a tax auditor is more likely to catch some tax evasion or avoidance and create a demanded income tax (Chau & Leung, 2009). As a result, the greater the number of tax audits, the greater the likelihood of tax compliance (Sarwar et al., 2023). Allingham and Sandmo (1972) pioneered research into the relationship between tax audit and tax evasion. The study's findings revealed that tax auditing had a significant and positive impact on tax compliance. Many subsequent studies, including Feld and Larsen (2012), Alm and McKee (2006), Chung and Trivedi (2003b) and Witte and Woodbury (1985), reported similar findings. A significant adverse impact of tax audit on tax compliance has been observed as well (Feld & Frey, 2007; Mittone, 2006; Slemrod, Blumenthal, & Christian, 2001); however, a few previous studies, such as Spicer and Thomas (1982) and Wärneryd and Walerud (1982), also reported that there was no sign for any effect of tax audit on tax compliance.

Further, In order to counter tax non-compliance, religion has been observed as an effective factor (Boone, Khurana, & Raman, 2013). Weber and Kalberg (1930) first investigated the relationship between religiosity and economic development. Although it was believed that there is no connection between religion and economy (Tomes, 1985); nonetheless, later researches found evidence that the religiosity of the people and economy are not irrelevant of one another; where religion was seen to be affecting the economic progress significantly (Riahi-Belkaoui, 2004). Based upon the databases of the European Values Survey and the World Values Survey, empirical investigations indicated that in developed countries, religion is found to be positively impacting the economic development (Carsamer & Abbam, 2023).

Possible reason behind this effect may be the development of sense of identifying good from evil inside a person by religion. This arguably keeps a person from indulging into malpractices including financial corruption and tax evasion. However, due to limited availability of relevant data, the positive effect of religion on tax compliance is available but mostly regarding the developed economies. And hence, there is dearth of such evidence regarding the developing economies, including Pakistan. Religion instills a sense of embarrassment before the fellow human beings and also before the God as well as a fear of punishment in a person. This fear and embarrassment keeps a person from doing evil deeds including monetary malpractices and tax fraud (Grasmick, Bursik Jr, & Cochran, 1991).

Torgler and Murphy (2004) observed a significantly low crime rate as well as high tax compliance in the countries where religiosity was observed to be significantly high. The possible reason might be that the people in those countries paid their tax liabilities because they considered it their religious as well as ethical responsibility (Benk, Yüzbaşı, & McGee, 2017). Mohdali and Pope (2014) investigated the effect of religiosity on tax compliance in Malaysia and observed that effect of religiosity on compliance of tax laws was significantly positive. Torgler (2003) also revealed that religiosity exerted a significant positive impact on tax collection. While studying the effect of religion on tax payments among the self-employed people of Türkiye, Benk, Budak, Yüzbaşı, and Mohdali (2016) observed that religion has a significantly positive effect on tax compliance, whereas, only the interpersonal religious-commitment exerted positive effect on tax compliance if the religiosity at community level was disintegrated. McCleary and Barro (2003) argued that religiosity gives rise to constructive behavioral traits like work ethics as well as honesty that help improve economic progress and productivity. Strielkowski and Čábelková (2015) revealed that the people who went to church regularly or more often tend to be more tax compliant.

Concluding, it can be observed that in Pakistan, the allocation of public funds is heavily reliant on tax revenue, which serves as a crucial factor in the process of budgetary appropriation for the public sector. A total of Rs. 6148 billion in taxes was collected during the fiscal year 2021-2022 in Pakistan (DGRA, 2023). Notwithstanding the recent implementation of diverse fiscal measures by the Pakistani Government aimed at augmenting domestic revenue, Pakistan continues to grapple with a substantial issue of tax non-compliance. Specifically, an estimated annual loss of Rs. 1 trillion is attributed to tax evasion (Express-Tribune, 2023).

In conclusion, it is imperative to emphasize the necessity of further research on the topic of tax compliance. Therefore, the study aimed to investigate the effect of tax audit on tax compliance. The study also took into account the moderating effect of religiosity in this regard. The study examined the above-mentioned variables in the socio-cultural context of Islamic Republic of Pakistan.

This present study offers multiple contributions to the existing body of literature on taxation. First, this study provides empirical evidence of application of deterrence theory for improvement of tax compliance in socio-economic context of Pakistan. The previous research has investigated the elements influencing tax compliance by merging many relevant factors in

deterrence theory (Ariel, 2012; Verboon & van Dijke, 2012b). Nonetheless, no single model has been able to explain for noncompliance behavior completely. Furthermore, no study has extended the theory of deterrence to include the effects of religiosity as a moderator of tax compliance, despite the fact that this social related factor may be one of the key determinants that influence tax compliance and may be significant for understanding tax compliance in Pakistan. In fact, Wenzel (2004) proposed that social variables could have a significant impact on deterrence techniques. As a result, the current study extends deterrence theory with religiosity serving as a moderating element in tax compliance within Pakistan. Currently, there is a lack of comprehensive investigations regarding the factors that significantly influence tax compliance among taxpayers in Pakistan. The existing tax literature highlights the necessity for conducting research on influence of tax audit on tax compliance in Pakistan, especially when the relevant previous studies have produces mixed results regarding this determinant.

Furthermore, although previous studies have examined determinants of tax-compliance by integrating various pertinent factors within the framework of deterrence theory (Ariel, 2012; Verboon & van Dijke, 2012a), however, up until now, there has not been a singular model that has successfully provided a comprehensive explanation for noncompliance behavior. Furthermore, it is worth noting that there still exists a need in the extant research to integrate religiosity as a moderating factor in deterrence theory with regards to tax compliance.

Moreover, considering that religiosity is a significant social factor that may influence compliance of tax laws, it was needful to investigate its potential role as a determinant in understanding tax compliance in the context of Pakistan. According to (Wenzel, 2004), there is evidence to suggest that social determinants can significantly influence the effectiveness of deterrence procedures. Therefore, the current study aims to enhance deterrence theory by examining the role of religiosity as a moderating variable in the context of tax compliance in Pakistan.

The rest of the paper is organized in following manner. Section II encompasses review of literature as well as formulation of hypotheses. Section III describes the research methodology and design in detail. The empirical results are presented in Section IV. Whereas Section V presents the discussion about findings. Finally, Section VI gives concluding discussion about the study.

## **2. LITERATURE REVIEW**

### *Tax compliance*

Every country worldwide has its own unique tax policies and legislation specifically designed to meet the wants and suitability of its society. The existence of these variations makes it extremely difficult to establish a universally agreed-upon practical definition of tax compliance. Tax compliance is often shown by the willingness of taxpayers to fulfil their tax obligations. This compliance can be either mandatory or optional. Tax non-compliance occurs when a taxpayer fails to adhere to tax regulations and fulfil their obligation to pay taxes. This lack of compliance may be intentional. Tax compliance refers to a taxpayer's dedication to the purposes and goals of both society and the government in terms of enforcing tax laws (James & Alley, 2002).

Some researchers have divided tax compliance into different categories; for instance, committed compliance refers to the willingness of a taxpayer towards payment of taxes without grumble; capitulated compliance, on the other hand, indicates the taxpayers who capitulate and discharge their taxes as a result; while creative compliance includes activities pertaining to lessen the tax liability within the boundaries of the tax law (McBarnet, 2009). The above-mentioned dimensions of tax compliance show that commitment of a taxpayer results in voluntary compliance whereas efficient audits and penalties indicate the tools of enforced compliance (Kirchler, Hoelzl, & Wahl, 2008).

Tax compliance is taken as the dependent variable in the current study. Voluntary tax compliance motivates behavioral intentions of a taxpayer to pay its taxes due. Parallel to tax-morale, as discussed earlier, voluntary tax compliance leads to the inclination that stems from the moral obligation of a taxpayer to the general public (Wahl, Kastlunger, & Kirchler, 2010). This attitude is a self-employed tax compliance attitude that is developed in the taxpayers. While Enforced tax compliance describes the coercive measures of tax authorities in order to enforce the tax laws by the means of prosecution system of a state.

According to research in the tax compliance field, effective collection of taxes includes the application of coercive power and authority, persuasion, moral principles, and a feeling of the fairness of the tax system (Kessler, 2016). Nevertheless, is no agreement on the reasons why individuals pay or do not pay taxes. Deterrence theory was one of the first models used to explain tax compliance behavior (Jackson & Milliron, 1986). The deterrence theory proposes, among several other things, that the danger of being caught is a more potent deterrent for illegal conduct than punishment and that increasing the perception of the possibilities of



getting caught aids in the reduction of crime (Becker, 1968). The Becker model of the economics of crime inspired the concepts of deterrence theory. Becker advocated that the level of tax noncompliance be determined by criteria such as audit and penalties.

### *Tax audit*

A systematic examination and scrutiny of tax self-assessments, accounting records, vouchers, invoices, and other relevant documents for the purpose of calculating true and fair tax liability of a person is called tax audit. In Pakistan, tax audit may refer to a desk audit -going in to less details- or a full-fledged audit under section 177 of the Income Tax Ordinance 2001, demanding in-depth investigations. In order to contain the tax evasions and avoidances, tax audit is considered to be the most effective weapon in the arsenal of tax authorities (Harelimana, 2018; Jackson & Milliron, 1986).

Unlike the conventional audit of a company, in which auditor is not always after something fishy in the financial affairs of a person, a tax officer is highly likely to catch some tax avoidance or evasion and create a recoverable tax demand (Chau & Leung, 2009). Therefore, the more the number of tax audits, the more there will be tax compliance. Allingham and Sandmo (1972) pioneered the investigations of relationship between tax audit and tax avoidance. The findings of the study showed that tax audit significantly and positively affected the tax compliance. Many subsequent studies reported the similar results; for instance Feld and Larsen (2012), Alm and McKee (2006), Chung and Trivedi (2003b) and Witte and Woodbury (1985). Oppositely, there also have been reported a significant negative effect of tax audit on tax compliance (Feld & Frey, 2007; Mittone, 2006; Slemrod et al., 2001); however, a few previous studies, for example Spicer and Thomas (1982) and Wärneryd and Walerud (1982), also reported that there was no sign for any effect of tax audit on tax compliance.

Different types of taxes have been considered in the previous studies. With reference to excise duty or Federal Excise Duty (FED), tax audit was reported to have a positive effect on the FED evasion (Sinnasamy & Bidin, 2017). This was opposite of tax penalty that was found to have a significantly negative effect on excise duty evasion (Miskam et al., 2013). While some of the researchers observed that the tax audit increased tax compliance (Woodward & Tan, 2015); some scholars have claimed that no significant relation was found between tax audit and tax compliance (Faridy, Copp, Freudenberg, & Sarker, 2014; C. Johnson, Masclet, & Montmarquette, 2010).



As clarified from the above discussion, the literature on tax audit provided mixed results. Whereas, that literature lacks insight on the role of tax audit in fostering tax compliance in Pakistan. Therefore, the above discussion led the researchers to the following hypothesis:

*H<sub>1</sub>: Tax audit has significant effect on tax compliance*

### **Religiosity**

Weber and Kalberg (1930) were the first to investigate the impact of religiosity on economic advancement and development. Despite the viewpoint of certain researchers, such as Tomes (1985), who argue that religion or religiosity is fundamentally unrelated to the economic. However, subsequent studies have shown that religiosity and religious practices are not necessarily unrelated to economic development, as previously believed. In fact, recent research has provided evidence of a significant correlation between religiosity and economic development (Riahi-Belkaoui, 2004).

Several research and surveys have been done to collect extensive data on the variable of religiosity. Two notable surveys are the World Values Survey and the European Values Survey. By utilising these and similar surveys, the empirical studies have discovered a notable correlation between religious beliefs and economic progress in developed countries. The likely cause for this impact could be because, irrespective of the religion being observed or, at the at least, adopted by an individual, it is their religious devotion that directs them to distinguish between what is morally right and morally wrong.

The Holy Quran says in Verse 10 of Chapter 90: “النَّجْدَيْنِ وَهَدْيَيْنَاهُ” meaning: “*And (have We not) shown him (the human being) the two highways? (of right and wrong)?*” (The Holy Qur'an, 2008). Once humans acquired the ability to distinguish between good and evil, they were compelled to opt for the road of moral virtue. The same is stated in Verse 34 of Chapter 41 of the Holy Quran as: “أَحْسَنُ هِيَ الَّتِي دَفَعُ السَّيِّئَةَ لَا وَالْحَسَنَةَ تَسْتَوِي وَلَا” translated: “*Good and evil can never be equal; (therefore) repel evil deeds with good ones*” (The Holy Qur'an, 2008).

Moreover, this has also been testified in the book of Genesis 3:22 of the Holy Bible (ESV/181) as: “*Then the Lord God said, “Behold, the man has become like one of us in knowing good and evil. Now, lest he reach out his hand and take also of the tree of life and eat, and live forever”* (The Bible, English Standard Version (ESV), 2001). Similarly, Isaiah 5:20 (ESV/336) says: “*Woe to those who call evil good and good evil, who put darkness for light and light for darkness, who put bitter for sweet and sweet for bitter!*” (The Bible, English Standard Version (ESV), 2001).

Hence, the religiosity potentially keeps a person from indulging into malpractices for monetary gains, therefore, from tax fraud and evasion (Shaukat et al, 2024). Most of the literature on religiosity and tax compliance is related to the developed economies, and there is dearth of literature associated with the developing countries (Carsamer & Abbam, 2020). Therefore, true in case of Pakistan. Unlike the monetary or physical penalties and punishments, religion acts in a quite different way. It directly affects the inner-self or the moral sense of a human being. A person feels internally ashamed and embarrassed as a result of committing or even thinking of committing a bad deed; tax fraud for instance; and that contriteness keeps him from indulging in the tax evasion in the future (Grasmick et al., 1991).

The studies found evidence that the crime rate was observed to be low and payment of taxes was noted to be high in the countries where religiosity was prevailing at a higher level among the masses (Torgler & Murphy, 2004). Benk et al. (2017) justified this happening, stating the reason that the taxpayers discharged their due tax liability because of considering it a moral as well as a religious duty. While investigating the effect of religion on tax compliance behaviors within Malaysia, Mohdali and Pope (2014) observed that there is a significant positive effect of religiosity on tax compliance; while the possible reason behind this relationship might be that religiosity of the Malaysians is considered to be strong and they believe in the concept of altruistic-giving.

Torgler (2003), likewise, observed that tax compliance was affected positively by religiosity along with confidence as well as pride in institutions of government. While investigating the effect of religious sentiments on tax morale in Turkish people, it was observed that religiosity significantly and positively affected the tax compliance; however, when collective religiosity of the people fades away, it was the interpersonal religious sentiment that stirred the individuals towards tax compliance (McGee, Devos, & Benk, 2016). McCleary and Barro (2003) provided evidence that religiosity promoted honesty, due diligence and ethics in conduct, that led to improvement in productivity level, and hence, ultimately enhanced economic development and growth.

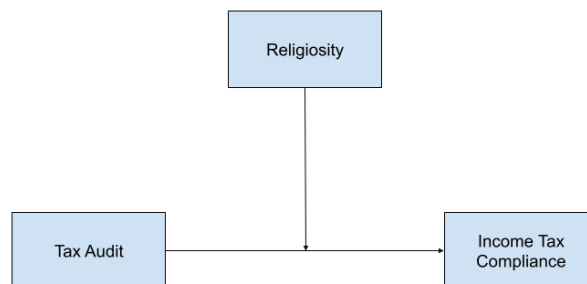
While Strielkowski and Čábelková (2015) revealed that practicing religious-persons discharged their tax liability voluntarily and maintained high tax morale. Although many studies in the past have investigated the effect of religion on tax compliance, tax avoidance and tax evasion, for instance, Carsamer and Abbam (2020), Khalil and Sidani (2020) and

Benk et al. (2017); however, these studies have investigated the direct effect of religiosity on tax compliance.

In contrast, previous studies have identified various factors that may potentially influence the relationship, such as religion (Alshira'h & Abdul-Jabbar, 2020b). Hence, this study posits that religiosity could serve as a moderating variable in order to enhance comprehension of the varied outcomes observed in the associations between tax compliance and tax audit. Based on the presented argument, it can be posited that the degree of religiosity among taxpayers may have an influence on their conduct, regardless of the certainty of a tax audit (Sarwar & Khan 2022).

In essence, religiosity may serve as a moderating factor in the relationship between tax compliance and the tax audit. This gives rise to the development of the subsequent hypothesis:

*H<sub>2</sub>: Religiosity moderates the relationship between tax audit and tax compliance*



*Figure 1: Conceptual Framework*  
Source: Author

### 3 METHODOLOGY

The researchers employed a closed-ended structured questionnaire that was adapted to suit the specific circumstances of Pakistan in order to collect data from the intended participants. Table 1 shows the items as well as their source regarding endogenous and endogenous variables of the study. Demographic variables encompassed in this study were gender, age, level of education, registration with the Federal Board of Revenue in Pakistan (FBR), and filing status, which refers to whether an individual is a filer or a non-filer. The study's population consisted of two groups: the actual taxpayers, who were individuals registered with the Federal Board of Revenue Pakistan (FBR) and possessing a valid National Tax

Number/NTN, and the potential taxpayers, who were individuals not registered with the FBR and lacking a valid National Tax Number/NTN.

It is reported that a mere 4.2 million individuals completed the process of submitting their income tax return as on 2023 (Sarfaraz, 2023). Due to the time-consuming and expensive nature of collecting fresh hand responses, as well as the significant level of accessibility required, the convenience sampling technique was chosen to administer the questionnaire. The utilization of convenience sampling technique is deemed appropriate in situations where there are limitations in terms of time, cost, and accessibility or outreach (Denscombe, 2009). The aforementioned assertion is supported by several comparable studies (Carsamer & Abbam, 2020; Mohdali & Pope, 2014; Nkundabanyanga, Mvura, Nyamuyonjo, Opiso, & Nakabuye, 2017; Yuniarta & Purnamawati, 2020).

A total of four hundred questionnaires were distributed, of which two hundred and eighty-six responses were received. Upon conducting a more thorough examination, a total of two hundred and forty-seven responses were deemed suitable for analysis. This finding suggests a response rate of sixty-two percent. One potential bias that was taken into consideration in the design of the questionnaire was the respondents' ability to accurately envision tax compliance based on the items or wordings utilized in the questionnaire. Therefore, a pilot study was conducted in order to incorporate several crucial aspects into this research. These include the opportunity to eliminate ambiguity and enhance the clarity of certain instrument items, as well as the ability to make any required modifications based on the findings of the pilot study.

Furthermore, the researcher administered the questionnaire to six individuals with expertise in tax accounting within the academic community, three individuals who hold positions as business owner-managers, and ten tax authorities in Pakistan. The tax authorities included officers ranging from inspectors to deputy commissioners, as well as additional commissioners of inland revenue. These individuals were asked to review the questionnaire and provide feedback, which was used to enhance the accuracy and the items underwent evaluation in order to identify any potential construction faults, assess the flow of the content, detect ambiguity, and examine the sequencing of the information. Subsequently, the questionnaire underwent necessary revisions.

Moreover, participants were provided with reassurances regarding the confidentiality of their responses and involvement in order to ensure the reliability of their opinions. Furthermore,

the questionnaire elucidated the advantages and objectives of the study in order to foster a feeling of sincerity among the participants, thereby encouraging them to furnish candid responses.

The questionnaire comprised a total of 27 questions and statements, excluding the demographic inquiries. The researchers utilized a Likert-type scale with five points to assess both the dependent and independent variables. We employed Harman's single factor test was used to assess if there presented any common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The unrelated factor analysis procedure encompassed both the independent and dependent variables. The findings of the study revealed that the data exhibited a multifactorial structure and a limited shared bias.

*Table 1: Measurement of variables*

Variable	Items	Source
Tax Compliance (TC)	When I pay my taxes as required by the regulations, I do so... <ol style="list-style-type: none"> <li>1. because I pay my taxes voluntarily.</li> <li>2. without spending a long time thinking how I could reduce them.</li> <li>3. because to me it's obvious that this is what you do.</li> <li>4. even if tax audits did not exist.</li> <li>5. to support the state and other citizens.</li> <li>6. because I like to contribute to everyone's good.</li> <li>7. because for me it's the natural thing to do.</li> <li>8. because I regard it as my duty as citizen.</li> <li>9. even though I know that others do not do that.</li> <li>10. because I am sure I am doing the right thing.</li> </ol>	Wahl et al. (2010)
Tax Audit (TA)	<ol style="list-style-type: none"> <li>1. Persons pay the correct amount of tax when there are greater enforcement and monitoring.</li> <li>2. The likelihood of audits encourages me to comply with the tax law.</li> <li>3. Persons registered with FBR are often subject to tax authority audits and inspections.</li> </ol>	Faridy, Copp, Freudenberg, and Sarke (2014)
Religiosity (R)	<ol style="list-style-type: none"> <li>1. I often read books and magazines about my religion.</li> </ol>	Worthington Jr et al. (2012)

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2. I make financial contributions to my religious organizations.
  3. I spend time trying to grow in understanding of my religion.
  4. My religion is especially important to me because it answers many questions about the meaning of life.
  5. My religious beliefs lie behind my whole approach to life.
  6. I enjoy spending time with others of my religious affiliation.
  7. Religious beliefs influence all my dealings in life.
  8. It is important to me to spend periods of time in private religious thought and reflection.
  9. I enjoy working in the activities of my religious affiliation.
  10. I keep well informed about my local religious group and have some influence in its decisions.
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*Source: Authors' design*

### ***Measurement***

All three variables present in this study were derived from previous studies. All variables were measured using a Likert-type scale consisting of five points. In terms of religiosity, respondents were asked to indicate the extent to which statements align with their personal beliefs, using a scale ranging from 1 (not at all true of me) to 5 (totally true of me). Conversely, for the remaining two variables, participants were requested to express their level of agreement with statements on a scale ranging from 1 (strongly disagree) to 5 (strongly agree). The three items of tax audit were derived from Faridy, Copp, Freudenberg, and Sarke (2014). The measurement of religiosity consisted of ten items that were adapted from Worthington Jr et al. (2012). Similarly, the measurement of tax compliance also comprised ten items that were adapted from Wahl et al. (2010). Table 1 presents a comprehensive overview regarding measurement of the variables under consideration.

### ***Data Analysis***

Since the current was based upon a causal-comparative model involving regression analysis. For this purpose, different approaches have been devised by the researchers. Some researchers, for instance Maine, Florin Samuelsson, and Uman (2022) and Ponomareva, Uman, Broberg, Vinberg, and Karlsson (2020) and have opted for linear moderating regression analysis. However, the current study employed Partial Least Squares Structural

Equation Modelling (PLS-SEM) analysis method using SmartPLS data analysis software to investigate the proposed hypotheses and analyses the research model. PLS-SEM is a statistical tool that is increasingly recognized and employed by researchers for the analysis of empirical data across diverse academic disciplines, such as tax compliance (Farouk, Idris, & Saad, 2018). PLS-SEM possesses the capability to simultaneously examine multiple relationships (Ringle, Sarstedt, & Straub, 2012). PLS-SEM is a suitable approach for investigating intricate models characterized by a large number of items, variables, and associations (Chin, 2010). In addition, it should be noted that PLS-SEM has the ability to analyses datasets with limited sample sizes (Hair Jr. et al., 2014).

According to Hair Jr., Sarstedt, Hopkins, and Kuppelwieser (2014) normality distribution is not significant in in PLS-SEM, However, it can still prove beneficial in various scenarios where alternative methods are not applicable. Additionally, it is worth noting that PLS-SEM follows a two-stage process (Hair Jr. et al., 2014). This process involves the measurement model, also known as the outer model, and the structural model, also referred to as the inner model. The external model examines the dependability and accuracy of the constructs and indicators, whereas the internal model assesses the importance of the proposed relationships.

*Table 2: Convergent validity and reliability assessment*

<b>Latent Construct</b>	<b>Items</b>	<b>Loading</b>	<b>CA</b>	<b>CR</b>	<b>AVE</b>				
Tax Compliance (TC)	TC1	0.827	0.831	0.868	0.671				
	TC2	0.816							
	TC4	0.835							
	TC5	0.747							
	TC6	0.593							
	TC8	0.878							
	TC9	0.795							
	TC10	0.817							
	Tax Audit (TA)	TA1				0.583	0.712	0.799	0.598
		TA2				0.881			
TA3		0.618							
Religiosity (R)	R1	0.629	0.809	0.874	0.601				
	R2	0.712							
	R3	0.799							



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R4	0.867
R5	0.886
R6	0.719
R7	0.694
R9	0.771
R10	0.834

Note: TC3, TC7 and R8 were deleted because of low AVE

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*Source: Authors' calculations*

The evaluation of the measurement model in this study was conducted with consideration for both convergent validity and discriminant validity. Convergent validity refers to the degree to which the indicators used to measure variables accurately represent those variables and are capable of positively correlating with other measures of the same variables (Hair Jr. et al., 2014). The assessment of convergent validity involved the evaluation of indicators' loadings, composite reliability, and average variance extracted (AVE). According to the findings displayed in Table 2, the loadings of the indicators, as well as the values of Cronbach's alpha (CA) and composite reliability (CR), surpass the minimum threshold of 0.40 and 0.70, respectively (Hair Jr. et al., 2014).

However, certain tax compliance items (TC3, TC7) and a religiosity item (R8) were excluded from the analysis due to their low indicator loadings and in order to enhance the composite reliability. Moreover, the rule of thumb proposed by Kenny (1979) and Kline (2023) regarding the recommended number of items, specifically a minimum of two items, was adhered to. This criterion was upheld even after eliminating certain items, as all constructs still consisted of at least three items. Therefore, it can be concluded that the study yielded satisfactory results in terms of convergent validity.

Following the confirmation of convergent validity, the subsequent step entailed the assessment of discriminant validity using Fornell-Larcker's criterion, as proposed by (Hair Jr. et al., 2014). The discriminant validity of the latent constructs was assessed through the examination of the square roots of the average variance extracted (AVE) and the correlation coefficients between variables. According to the findings presented in Table 3, it can be observed that the square roots of all the average variance extracted (AVE) values were higher than the diagonal values in their corresponding rows and columns. This suggests the presence of discriminant validity at the variable level. In summary, it can be inferred that the

measurement model has successfully met the criteria for reliability, as well as convergent and discriminant validity, both at the level of indicators and variables.

*Table 3: Discriminant validity assessment*

	TC	TA	R
TC	0.820		
TA	0.173	0.773	
R	0.088	-0.058	0.775

*(Source: Authors' calculations)*

The measurement model was assessed using the PLS-SEM technique in order to determine the  $R^2$  value and assess the extent to which the exogenous variables explain the variance. According to (Hair Jr. et al., 2014), the  $R^2$  coefficient signifies the proportion of variance in the endogenous construct (dependent) that can be explained by one or more exogenous constructs (independent). The  $R^2$  value of 0.133 exhibited by the two constructs suggests that approximately 13.3% of the variability in tax compliance can be accounted for by tax audit. Furthermore, the inclusion of the moderating effect of religiosity resulted in an increase in the  $R^2$  value, which reached 0.251. This finding demonstrates that a significant portion, specifically 25.1%, of the variability in tax compliance can be attributed to the influence of tax audit, with the additional indirect impact of religiosity.

The primary aim of conducting the structural model test is to assess the impact of the exogenous variable and moderating variable on the endogenous variable. The statistical significance of the path coefficients was determined using the bootstrapping method, which involved generating 5000 re-samples. Table 4 and Figure 1 present the path coefficients ( $\beta$ -values), t-values, and p-values for all the proposed hypotheses. In general, the findings presented in Table 3 demonstrate a significant relationship between tax audit ( $\beta = 0.231$ ,  $t = 3.786$ ,  $p < 0.01$ ) with tax compliance. These results provide support for hypothesis  $H_1$ . The analysis of bootstrapping demonstrated the anticipated moderating impact of religiosity on the relationship between tax compliance and its tax audit, as shown in Table 4 and Figure 2.

*Table 4: Hypotheses testing results*

Hypothesis	Relationship	Path Coefficient	t-value	p-value	Decision
$H_1$	TA $\rightarrow$ TC	0.231	3.786	0.000**	Supported
$H_2$	$R \times TA \rightarrow TC$	0.126	2.275	0.021*	Supported

Notes: \*  $p < 0.05$ ; \*\*  $p < 0.01$ , (one-tailed)

(Source: Authors' calculations)

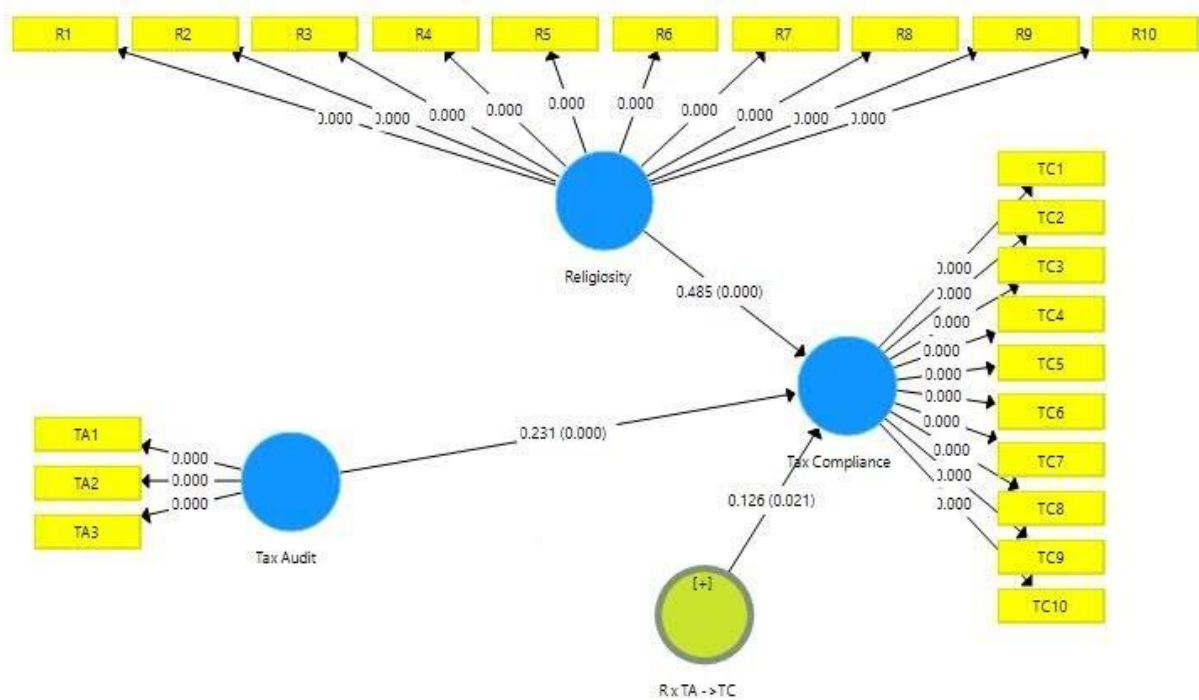


Figure 2: Partial least square boot strapping

Source: SmartPLS output

Hypothesis H<sub>2</sub> posited that the degree of religiosity serves as a moderating factor in the association between tax audit and tax compliance. The findings of the study provided evidence in favor of this hypothesis, with a significant positive relationship observed ( $\beta = 0.126$ ,  $t = 2.275$ ,  $p < 0.05$ ). This suggests that religiosity played a moderating role, suggesting that a heightened level of religiosity amplifies the positive association between tax audit and tax compliance.

The second question pertains to the predictive relevance  $Q^2$ . As per the recommendation of Joseph F Hair, Black, Babin, and Anderson (2010), it is advised that researchers employing PLS-SEM should employ measures to indicate the predictive relevance of the model in evaluating the quality of models. Sattler, Völckner, Riediger, and Ringle (2010) proposed the utilization of blindfolding as a method to assess the predictive validity ( $Q^2$ ) of the structural model. According to the research conducted by Joe F. Hair, Ringle, and Sarstedt (2011), a positive value for the cross-validated redundancy measure ( $Q^2$ ) indicates that the model has confirmed predictive relevance. According to the established criterion, the cross-validation

redundancy measure ( $Q^2$ ) for the endogenous variable was determined to be 0.084, indicating that the model possesses predictive relevance (refer to Table 5).

Table 5: Construct cross-validated redundancy ( $Q^2$ )

Endogenous latent variable	SSO	SSE	1-SSE/SSO
Tax Compliance	1376.001	1262.042	0.084

Source: Authors' calculations

#### 4 DISCUSSIONS OF FINDINGS

The main aim of this study was to examine the relationship between tax audit and tax compliance. Additionally, the study sought to examine the potential moderating influence of religiosity on the association between tax audit and tax compliance. As previously mentioned, the results indicate that tax audits have a substantial impact on tax compliance. This finding aligns with previous studies that have emphasized the crucial role of tax audits in promoting tax compliance (Harelimana, 2018; Jackson & Milliron, 1986). According to Allingham and Sandmo (1972), there is a positive correlation between the frequency of tax audits and the level of tax compliance. The same findings were also reported by Feld and Larsen (2012), Alm and McKee (2006), Chung and Trivedi (2003b), and Witte and Woodbury (1985).

One plausible inference may be that the taxpayers conducted a comparative analysis of the costs associated with undergoing an audit, alongside the challenges posed by tax compliance. Moreover, it can be argued that the potential cause of this phenomenon is the apprehension among individuals regarding the commencement of tax audits conducted by tax authorities, which heavily depend on such audits for the purpose of revenue generation. The primary objective of deterring non-compliance typically involves instilling fear through the implementation of measures that heighten the likelihood of a tax audit (Forest & Sheffrin, 2002). Consequently, the findings of this study suggest that there is a pressing need to prioritize and strengthen the implementation and enforcement of audit procedures in the context of tax filing.

The present findings of this study provide empirical support for the theoretical predictions put forth by Allingham and Sandmo (1972) in the field of deterrence theory. The researchers endeavored to investigate the relation between tax audit and tax compliance. The utilization of statistical modelling has resulted in the determination that taxpayers have the option to either fully report their taxes or choose not to do so.

The use of threats and fear can effectively diminish non-compliance among taxpayers, thereby incentivizing them to accurately report their revenue in a truthful manner. This observation further illuminates the phenomenon in Pakistani society where individuals, arguably, exhibit a higher propensity to comply with the law primarily driven by the apprehension of initiation of an audit by tax department. Governments have the authority to initiate audit and impose sanctions consequently for instances of tax non-compliance with the intention of serving as an effective deterrent. However, it is crucial for governments to carefully consider the potential for abuse by corrupt tax auditors or unnecessary initiation of audits in case of the taxpayers who have made genuine, unintentional errors (Alleyne & Harris, 2017). Regarding the moderating influence of religiosity, the findings indicate a statistically significant and positive correlation with tax audit. Hence, this finding suggests that the impact of religiosity amplifies the relationship between tax audit and tax compliance. Therefore, in the presence of religiosity and an escalation in tax audits, it is more probable that taxpayers in Pakistan would exhibit greater compliance with tax collections. The results may not be surprising, particularly in the context of an Eastern nation such as Pakistan, as religion holds considerable influence over the daily lives, thoughts, and behaviors of individuals within the socio-cultural framework of the country.

## **5 CONCLUSION, LIMITATIONS AND FUTURE RESEARCH**

The topic of tax compliance has been the subject of extensive research; however, the question regarding the underlying motivations behind individuals' tax payment behavior remains incompletely addressed. Tax compliance is an imperative concern for governments across the globe. In order to stimulate economic growth and foster development, it is anticipated that taxpayers will adhere to tax legislation. Nevertheless, the existing literature has not adequately examined the determinants linked to tax compliance. Tax compliance studies typically examine factors that may enhance tax compliance and decrease tax non-compliance.

This study aimed to investigate the potential effect of tax audit on tax compliance through direct relationship. Additionally, the study investigated the potential moderating influence of religiosity on the association between tax audit and tax compliance. This study can be regarded as one of the notable investigations conducted in Pakistan, with a specific focus on the influence of religiosity as a moderating factor. This study aimed to address the existing gap in the literature pertaining to tax compliance. The scarcity of tax compliance studies in this particular context renders this finding particularly significant. The results of this study

provide empirical support for the proposition that tax audits have a significant impact on enhancing tax compliance. These findings are consistent with previous research conducted by Harelimana and Nyabirande (2018), Jackson and Milliron (1986), Allingham and Sandmo (1972), Feld and Larsen (2012), Alm and McKee (2006), Chung and Trivedi (2003a), and Witte and Woodbury (1985).

Moreover, the study's results indicate a significant correlation between religiosity and tax audit. The findings are aligned with that of Alshira'h and Abdul-Jabbar (2020a). Hence, there exists a positive correlation between the level of religiosity among taxpayers and their compliance with tax laws. Therefore, it can be argued that religious appeals aimed at promoting higher tax compliance would likely yield discernible outcomes in nations characterized by elevated levels of religiosity. It can be anticipated that nations exhibiting elevated levels of religiosity would demonstrate greater levels of tax compliance compared to those nations with lower levels of religiosity.

The findings of the current study have various implications, specifically for tax authorities and policymakers responsible for the formulation and implementation of tax legislation. Hence, it is imperative for tax authorities to consider augmenting operational inspections as a means to enhance the efficacy of tax auditors, while concurrently implementing amicable remedial measures. It is crucial to propose that tax authorities should initiate adequate audits foster religious sentiments among taxpayers that motivate them to fulfil their tax obligations with integrity. Governments may devise plans to mobilize religious scholars, clerics as well as other religious and spiritual figures in order to instill tax-responsibility into masses as reinforced by recommendations of the study.

In spite of its contributions, the research, however, is not without limitations. Of note, the study had drawn the sample using convenience sampling. Though justified, it might have exerted adverse effect on the generalizability of the results. Further studies may follow a different sampling design; probability sampling, for instance. Moreover, considering the possibility of revealing incriminating information and the sensitive nature of tax matters, the research focused on assessing real-life actions rather than individuals' behavioral intentions. It is recommended that future studies incorporate the measurement of individuals' behavioral intention with regards to tax compliance. While this study may serve as a theoretical foundation for future research endeavors, it is important to note that its scope is restricted to the specific geographic region in which it was conducted.

Future research should aim to expand the existing model by incorporating additional factors, such as tax compliance cost, financial condition, and patriotism, in order to investigate their relationship with tax compliance. The study framework serves as a foundation for future similar studies, enabling the expansion of generalizability and facilitating a more comprehensive exploration of individuals' opinions and emotions pertaining to the subject of investigation. This approach may also facilitate the identification of discrepancies in the viewpoints and understandings of the prevailing dominant social systems in order to uphold power dynamics between taxpayers and tax authorities. Future research endeavors could potentially enhance and corroborate the applicability and validity of these findings through their implementation across diverse contexts.

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