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Personality traits, religiosity, income, and tax evasion attitudes: An exploratory study in Lebanon

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A B S T R A C T

This paper examines tax evasion attitudes and their relationship with personality traits, as moderated by religiosity and income, in a multi-faith cultural context characterized by a weak tax administration. The study explores associations between the big five personality traits (Openness to experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) and tax evasion attitudes, a topic that has received very little attention in previous studies. The results show that conscientiousness is negatively associated with tax evasion attitudes emanating from self-interest (SITE). Religiosity was found to moderate the relationship between extraversion and SITE and between conscientiousness and JSTE (Justice of system tax evasion). Income seems to temper the relationship between extraversion and SITE. Overall, this study shows that the root cause of tax evasion may stem from the taxpayers' perception of the equity of the tax system rather than merely from demographic characteristics or personality traits.

1. Introduction

Tax evasion has been a problem ever since taxes were first imposed (Andreoni et al., 1998). This prevalent issue has long been a topic of interest to academicians, practitioners, and governments given the severe consequences on the economy as a whole. The recent Panama and Paradise Papers scandals reveal the widespread use of tax evasion, even among the most powerful and wealthy individuals (Cox, 2018). A deeper understanding of the determinants of tax evasion is necessary to enhance the tax collection process and lessen the adverse effects of tax evasion.

Tax evasion is a topic extensively covered in the literature, and previous studies included both economic and non-economic perspectives. Economic studies looked at the topic from a purely economic lens, analyzing economic determinants of tax evasion/compliance and discussing law enforcement issues (Davis et al., 2003; Slemrod, 2007). These studies were criticized due to their focus on mere financial benefits and losses. This led to the emergence of a new stream of studies focusing on non-economic determinants of tax avoidance. Non-economic perspective studies investigate the influence of other variables, such as demographics, culture, ethics, social norms, religion, religiosity, and taxpayer's values on tax evasion (Chan et al., 2000; Kirchler & Hoelzl, 2018; Sidani et al., 2014).

Despite this wide coverage, a thorough review of the tax evasion literature reveals a notable gap. Although earlier studies investigated several determinants for tax evasion, in many cases individuals undergoing similar economic and non-economic

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conditions show different attitudes towards tax evasion. The purpose of this study is to investigate a possible reason behind these dissimilar reactions and to uncover new relationships that might explain why people comply with or evade taxes.

Previous research shows that personality plays a role in many aspects of life, such as life satisfaction, career success, job performance, and cyber-plagiarism (Barrick & Mount, 1991; Judge et al., 1999; Ramirez-Correa, 2017). Personality is also associated with ethical decision making (Kohlberg, 1969). The influence of personality traits on accounting and specifically on tax evasion behavior has scarcely been addressed in the literature (Taggar & Parkinson, 2007). Given that the tax evasion/-compliance act initiates from moral and ethical grounds, it is logical to assume that personality might influence tax morale.

Some studies address the relationship between personality and white-collar crime (WCC) (Alalehto, 2003; Turner, 2014). These studies make generalizations regarding the association between WCC and personality traits, but addressing WCC from a broad perspective might not capture the full complexity of tax evasion (Huels, 2017). In fact, WCCs encompass a wide range of illegal activities in addition to tax evasion, such as bribery, money laundering, false claim, mail fraud, security fraud, and antitrust violations (Wheeler et al., 1982). Tax evasion has its specificities because unlike other WCC crimes, many consider it a minor crime that is easy to commit and that can be done in private without necessarily having to manipulate or gain the trust of other parties to cooperate in the non-compliance process. Examples of tax evasion acts include not reporting a part of the income, overstating expenses, exaggerating charitable donations, and making inappropriate tax deduction (Huels, 2017). Taxpayers have the choice of evading or complying when filing their tax return. Thus, social embarrassment does not come into play when analyzing tax evasion, unlike other crimes. Given the specificities of the tax evasion behavior, generalizing the results found in WCC studies to tax evasion might not be appropriate. Further research investigating the specificities of each area and specifically tax evasion is needed. Beyond exploring the potential relationships between personality and tax evasion, this study considers the motives behind tax evasion and the moderating role of religion and income on this association.

Given the areas where additional research is needed, this study contributes to the literature by exploring the association between the widely applied Five-Factor Model (FFM) (McCrae & Costa, 1985), also known as the Big Five, and tax evasion attitudes in a new setting, the Lebanese context. Lebanon is an appropriate setting for studying the variables of interest because 1) it is a culturally and religiously diverse country characterized by an inefficient tax system relying mainly on indirect taxes and 2) it suffers from a high corruption level leading to a lack of tax compliance and a high fiscal evasion gap (Rawwas et al., 1998; The Daily Star, 2018). This combination makes Lebanon a more interesting setting than the usually studied US and European contexts that have a much more organized tax administration and a more elaborate tax system. Another contribution of this study is that, unlike past research on the topic, it takes into consideration the motives behind tax evasion whether emanating from self-interest or from perceptions of injustices in the tax system. The study also investigates the moderating role of income and religiosity on the association between personality traits and tax evasion.

The remaining part of this paper is organized as follows. The next section reviews antecedents of tax evasion reported in the literature. Personality theories are then briefly explored to introduce the FFM. Various personality approaches to tax evasion are presented, leading to the study's hypotheses and research methodology. Finally, the results, discussion, analysis, and implications are presented.

2. Literature review

The literature abounds with studies investigating the antecedents of tax evasion. Most researchers analyzed the economics of tax evasion, such as economic deterrence, fiscal psychology, law enforcement initiatives, and fear of audit and detection, including its influence on tax evasion (Davis et al., 2003; Slemrod, 2007). Other studies considered the non-economic determinants of tax evasion, including 1) the demographics of taxpayers, 2) the influence of ethics and personal moral philosophy on tax evasion (Alm & Torgler, 2011; Sidani et al., 2014), 3) the impact of social norms on tax compliance/evasion (Bobek et al., 2011; Bobek et al., 2012), and 4) the influence of religion and religiosity on tax evasion (Benk et al., 2016; Khalil & Sidani, 2020; McGee, 1999; Torgler, 2006). Some studies also explored the psychological and sociological determinants of tax evasion (Jayawardane, 2015).

Both country case studies and cross-national studies have explored the impact of cultural differences on tax evasion attitudes (Richardson, 2008; Strielkowski & Čábelková, 2015; Tang, 2017; Torgler & Schneider, 2007; Wang, 2012). A survey of existing studies on tax evasion in developing countries prepared by the UK Department for International Development (DFID) concluded that available knowledge on tax evasion in developing countries is limited (DFID, 2009).

A recent longitudinal study by Vo et al. (2020) explores tax evasion in several emerging economies in order to develop a new tax evasion index. Chohan (2020) examines how tax evasion whistleblowing can be used to reduce tax evasion in developing countries, notably in Pakistan. Amoh and Ali-Nakyea (2019) find that corruption activities lead to an increase in tax evasion behavior in Ghana. Recent studies also reveal that certain aspects of corporate governance influence corporate tax avoidance (Kovermann & Velte, 2019).

The literature finds several determinants of tax evasion, including economic factors and non-economic factors. However, in many cases, individuals experiencing similar economic and non-economic conditions react differently towards tax evasion. To investigate the reason behind this divergent behavior, the purpose of this study is to investigate possible relationships that could shed light on why different taxpayers decide to comply with or otherwise evade taxes. Specifically, we investigate the influence of personality traits on tax evasion attitudes. A possible reason for different reactions towards tax evasion behavior could be the personality traits of taxpayers, which differentiate them from one another and drive them to behave in specific ways. Although some recent studies investigated the impact of Machiavellian tendencies on tax evasion (Shafer & Wang, 2018), few studies have explored the relationship between other personality traits and tax evasion (Huels, 2017).

Another contribution of this study is that it takes into consideration the motives of tax evasion while analyzing its relationship with personality traits. Some research studies exploring tax evasion discuss the perception of taxpayers towards the fairness of the tax system (Ariyanto et al., 2020; Jayawardane, 2015; Nickerson et al., 2009; Sidani et al., 2014), but this angle is not yet investigated in relationship with personality traits. The decision to be compliant or to evade taxes is not merely linked to economic factors, it also emanates from taxpayers' perception of the tax system. Some people indeed evade taxes out of pure selfishness; however, many people decide to evade taxes because they perceive the tax system as unfair (Sidani et al., 2014).

Earlier studies that explored tax evasion from an ethical perspective note that evading taxes is justifiable under certain circumstances. Crowe (1944) differentiates between "just taxes" and "unjust taxes". A just tax is one that is imposed by a legitimate authority, collected for a just cause, and fairly distributed among citizens. Crowe also argues that it is an ethical obligation to comply with just taxes but not with unjust taxes. Other studies cite several conditions under which tax compliance is not considered a moral duty, including government corruption, the inability of citizens to pay taxes, and the use of tax proceeds to fund immoral acts rather than to enhance public welfare (McGee, 1999). These studies suggest that tax evasion is justifiable under certain circumstances. They base their argument on the fact that when the end use of the tax proceeds is dubious, the moral legitimacy of tax payment might be questioned.

Taking into consideration the motives behind evading taxes is important in analyzing the relationship between personality traits and tax evasion because the personality traits of taxpayers might drive them to react differently depending on the motive. Individuals having a specific personality trait might be tax compliant if they perceive that the tax system is just, but they might be tempted to evade taxes if they believe that the tax system is not fair and that the tax collected is not properly used. So, while analyzing the association between personality and tax evasion, it is essential to determine whether the tax evasion behavior emanates from a perception of injustice in the tax system, or if it is simply an act of self-interest. Therefore, this study will link personality dimensions to tax evasion attitudes emanating from divergent perspectives. Consistent with Sidani et al. (2014) and Khalil and Sidani (2020), we differentiate between two types of tax evasion attitudes: Justice of system tax evasion (JSTE) that emanates from perceptions of inequity in the tax system, and Self-interest tax evasion (SITE) that is an act of selfishness emanating from the desire to maximize personal benefits.

3. Personality traits

Personality has a prominent influence on one's actions and life decisions (Ackerman, 2017). It represents the traits, characteristics, and peculiarities that drive individuals to behave in a specific way and differentiate them from each other. Personality is shown to have predictive powers in many life and career aspects, including but not limited to success, life satisfaction, job performance, cyber-plagiarism, and technology acceptance (Barrick & Mount, 1991; Judge et al., 1999; Ramirez-Correa, 2017; Ryan & Xenos, 2011; Svendsen et al., 2013). Psychologists have been able to understand personality through the "Big Five" typology (see for example, Borkenau, 1988; John et al., 1988; Digman, 1989).

3.1. Five-Factor model of personality

Psychologists developed the FFM for personality structure that revolves around five dimensions (McCrae & Costa, 1985), which are referred to as the "Big Five". These are Openness to experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism—or OCEAN, a popular acronym used to remember these factors. The appendix lists and describes the Big Five personality traits.

3.2. Big Five personality traits and tax evasion

Early research on WCC generally excluded personality as a determinant of personal criminal activity because it linked personality to social bonds with organizations (Ruggiero, 2000; Sutherland, 1940). Sutherland (1940) supported the belief that personal criminal activity is fostered throughout the learning process and, therefore, is not directly influenced by personality. He declared it wrong to look at personality as the cause of WCC because personality arises from social bonds within organizations. Instead, WCC was thought to be associated with organizational variables (Ruggiero, 2000).

More recently, researchers began to consider personality as a factor affecting unethical behavior in general (Alalehto, 2003; Blickle et al., 2006; Turner, 2014). Very few studies investigate how personality influences tax evasion attitudes. While some studies explored how personality relates to crimes in general among which is tax evasion (Blickle et al., 2006; Turner, 2014), only a single study, to our knowledge, explored the influence of personality on tax evasion thoroughly (Huels, 2017). Conducted in the United States (US), Huels (2017) established a significant positive association between the extraversion trait and tax evasion, but no significant associations were found with other personality traits. Given that personality is seldom analyzed in relationship with tax evasion, we fill this gap in the literature by exploring the relationship between the Big Five inventory traits and tax evasion attitudes emanating from SITE and JSTE.

3.2.1. Openness to experience and tax evasion

Openness to experience is defined as the depth, complexity, and originality of an individual's mental life and experiences (Pervin & John, 1999). A high score on openness to experience indicates that an individual is creative, intellectual, curious, deep, daring, sensible, and attentive to inner feelings. Such people tend to engage in new experiences and dislike routine activities (Ackerman, 2017).

Turner (2014) anticipated that a lower score on openness to experience would be associated with a higher tendency to commit WCCs. He based his reasoning on the sensing-intuitive Myers-Briggs Type Indicator (MBTI) dimension which states that people with a preference for sensing are usually less tolerant towards rule breaking acts than those who have a preference for intuition (Furnham, 1996; McIntyre et al., 1995). People high on openness to experience are known for being sensible and attentive to inner feelings, thus, they have a greater preference for sensing (Furnham, 1996). Accordingly, Turner (2014) argues that people scoring low on openness to experience exhibit lower tendency towards sensing and are, therefore, expected to be more permissive of rule breaking acts such as WCC. On the other hand, Huels (2017) hypothesized that greater openness to experience is associated with a higher tax evasion tendency. His line of reasoning is derived from the fact that individuals scoring high on this trait are generally known for being rebellious and non-conforming (McCrae & Costa, 2003). Thus, they are expected to be more permissive of illegal acts such as the violation of the tax law. While he mentions that not all those scoring high on openness to experience will engage in unethical behavior, he still anticipates that "individuals who demonstrate non-compliance intentions will be more open to experience" (p. 30). Huels (2017) failed to verify this hypothesis.

Given the inconclusive results in the literature, further investigation about the association between openness to experience and tax evasion attitudes is deemed necessary. As the literature proposes contradicting models analyzing the association between openness to experience and unethical behavior, we do not hypothesize a specific direction for the association between the two variables but rather attempt to investigate this relationship. Accordingly, we hypothesize the following:

Hypothesis 1 (*(H1):*). *There is a significant relationship between the openness to experience personality trait and tax evasion attitudes.*

3.2.2. Conscientiousness and tax evasion

Pervin and John (1999) define conscientiousness as a "socially prescribed impulse control that facilitates task-and goal-directed behavior" (p. 117). People scoring high on conscientiousness are more likely to be responsible, reliable, organized, hardworking, and achievement-oriented individuals. They are expected to behave more ethically than those having lower scores on this trait (McCrae & Costa, 2003).

Past research shows that conscientiousness is negatively associated with unethical behavior such as criminal activity (Alalehto, 2003; Turner, 2014), academic cheating (Williams et al., 2010), and cyber plagiarism (Ramirez-Correa, 2017). High conscientiousness was also found to be positively correlated with ethical perceptions in business (Bratton & Strittmatter, 2013). Conscientious individuals are usually expected to behave in a responsible, morally acceptable, and ethical way, and to make decisions that will benefit the community (Huels, 2017).

In the tax evasion context, conscientious people, motivated by their moral beliefs, are expected to have negative attitudes towards tax evasion emanating from self-interest (SITE). The relationship between the conscientiousness personality trait and tax evasion attitudes emanating from JSTE is rather dubious. Although conscientious people are characterized by their inclination towards applying moral principles and abiding by the rules and regulations, they might not necessarily advocate the payment of taxes if they perceive that the withheld tax is unfair, not used for the general public good, or used to finance unethical acts, such as war.

Although Huels (2017) found no association between conscientiousness and tax evasion intentions, given the characteristics of conscientious people and based on the above arguments and on past research analyzing the association between conscientiousness and unethical behavior, we hypothesize the following:

Hypothesis 2a (*(H2a):*). *A high level of conscientiousness is negatively associated with tax evasion attitudes emanating from self-interest* (*SITE*).

Hypothesis 2b (*(H2b):*). *A high level of conscientiousness is not associated with tax evasion attitudes emanating from perceptions of injustice in the tax system* (*JSTE*).

3.2.3. Extraversion and tax evasion

Extraversion is a personality trait that refers to individuals who are sociable, outgoing, talkative, and flexible. Extraverted people do not confine themselves to routine activities, and they take advantage of their social skills to achieve their goals (Raja et al., 2004). They are generally manipulative and tend to dominate and impose their point of view (Alalehto, 2003).

Most research analyzing personality and WCCs shows that people having a high score on extraversion are more likely to engage in unethical behavior and to commit crimes (Alalehto, 2003; Collins & Schmidt, 1993; Turner, 2014). Feeley (2006) also reports that the extraversion personality trait is common among white-collar criminals. Huels (2017) found a positive association between extraversion and taxpayers' non-compliance intentions.

On the other hand, Sackett and Wanek (1996) postulated that the extraversion personality trait is not linked to unethical behavior, corruption, and dishonest activities. Ramirez-Correa (2017) found a negative association between extraversion and cyber plagiarism. Moreover, Khan et al. (2016) were not able to empirically validate their hypothesis suggesting that extroverts are high in idealism. Accordingly, they were not able to verify that extroverts may compromise moral standards to achieve potential benefits.

As previously noted, personality traits impact several life aspects and behaviors and, therefore, might impact tax evasion attitudes. Given the contradicting views on the association between extraversion and tax evasion attitudes, and the inconclusiveness of the literature results, we do not predict a specific directional relationship between the two variables but rather investigate the association by testing the following hypothesis:

Hypothesis 3 (*(H3):*). *There is a significant relationship between the extraversion personality trait and tax evasion attitudes.*

3.2.4. Agreeableness and tax evasion

Agreeable people are known for being good-natured, cooperative, helpful, and forgiving (Goldberg, 1990). They are also considerate, compassionate (Huels, 2017), and usually tend to avoid harming others (Goldberg, 1990). Previous studies show that white-collar criminals score low on this trait (Alalehto, 2003; Turner, 2014), suggesting that agreeableness is negatively associated with criminal acts. In line with these findings, Costa and Widiger (2002) state that agreeable people tend to be compliant and abide by the rules. However, they are consequence-oriented and do not comply at the cost of harming others (Khan et al., 2016). Such behavior shows that agreeable people are more likely to believe in the "situationism" moral philosophy, meaning that they are high on both idealism and relativism. This hypothesis was supported by Khan et al. (2016).

In the tax evasion context, agreeable people are expected to avoid tax evasion emanating from self-interest (SITE) given their ethical and compliant nature. However, given their belief in "situationism", they might not necessarily be tax compliant when they perceive the tax system as unfair or when they believe that the tax collected is not used to promote public welfare. Based on the arguments above and the literature, we hypothesize the following:

Hypothesis 4a (*(H4a):*). *A high level of agreeableness is negatively associated with tax evasion attitudes emanating from self-interest (SITE).*

Hypothesis 4b (*(H4b):*). *A high level of agreeableness is not associated with tax evasion attitudes emanating from perceptions of injustice in the tax system (JSTE).*

3.2.5. Neuroticism and tax evasion

Neuroticism is a personality trait associated with feelings of fear, tension, anxiety, stress, frustration, depression, guilt, and lack of emotional stability (Goldberg, 1990; McCrae & John, 1992). Neuroticism relates to individuals' ability to handle distress and their behavior in such circumstances. Thus, understanding how this personality trait relates to tax evasion attitudes is important. Previous research analyzing the relation between neuroticism and unethical behavior had mixed results.

Some scholars found a positive association between neurotic individuals and illegal behavior (Alalehto, 2003; Ramirez-Correa, 2017). Others were not able to support this relationship (Turner, 2014). On the other hand, Huels (2017) hypothesized that lower neuroticism is associated with higher tax non-compliance. He postulated that neurotic people are usually less inclined towards unethical acts as a result of their low emotional stability which generates a sense of guilt and their fear from punishment when engaging in illegal actions. On the contrary, less neurotic people are emotionally stable and are consequently more comfortable when faced with situations involving unethical choices. The conflicting viewpoints and results in the literature could be explained by the fact that neurotic people adopt a situational ethical code of conduct as proposed by Khan et al. (2016). Given their frustrated and fearful nature, neurotic people make inconsistent ethical choices to avoid the negative consequences of their decisions and, therefore, decrease their nervousness and fear (Watson & Clark, 1984). According to Khan et al. (2016), neurotic individuals state an association with ethical values and principles but in practice are inconsistent in following them given different situations.

Given the contradicting views proposed in the literature, we do not hypothesize a specific directional association between neuroticism and tax evasion. We investigate the association between neuroticism and tax evasion attitudes by testing the following hypothesis:

Hypothesis 5 (*(H5):*). *There is a significant relationship between the neuroticism personality trait and tax evasion attitudes.*

3.3. Moderation variables

The main purpose of this study is to measure the influence of personality traits on tax evasion attitudes. However, as people's attitudes towards tax evasion cannot be exclusively explained by a single factor, other variables such as religiosity and income levels might moderate this relationship—especially in the context under study. Therefore, as suggested by Huels (2017), in addition to exploring the direct effect of personality traits on dependent variables, we investigate the potential moderation effect of religiosity and income levels on this relationship.

Earlier studies proposed that religiosity could, at least partly, provide an explanation to the ethical behavior of some adherents (Jamali & Sidani, 2013) given that it influences ethical values (Kum-Lung & Teck-Chai, 2010) and provides a benchmark to differentiate between good and bad behavior (Benk et al., 2016). Several studies also investigated how religion and religiosity mitigate earnings management, which might also affect tax avoidance. While some studies (Callen et al., 2011) found no significant association between the two variables, several other studies (Du et al., 2015; Kanagaretnam et al., 2015) found that religiosity plays a significant role in earnings management. McGuire et al. (2012) also found a significant negative association between religiosity and irregularities in financial reporting. Accordingly, these studies suggest that religion provides a set of social norms to alleviate unethical behavior, such as tax avoidance (Du et al., 2015).

Khalil and Sidani (2020) also propose that religious people might be less prone to tax evasion attitudes. Several theories support this proposition. According to the social control theory, socialization and social learning might lead to less criminal behavior (Nye, 1958). Given that religious individuals most often belong to a larger community and are associated with like-minded religious people, their behavior is thought to be positively influenced by their religious community, which could reduce delinquent behavior such as tax evasion (Baier & Wright, 2001). Moreover, religious people are usually more involved in coping mechanisms, such as meditation and prayer, which help them achieve better emotional health to better handle stressful events. Better emotional health moderates the relationship between stressful events and delinquent behavior (Agnew, 1992). Thus, religious people are expected to be less involved in tax evasion behavior (Khalil & Sidani, 2020). The rational choice theory also provides an explanation to the potential decline in unethical acts as religiosity increases (Stack & Kposowa, 2006). Religions in general discuss the notions of shame and punishment resulting from inappropriate behavior (Grasmick et al., 1991). Religious people are thought to avoid deviant acts, such as tax evasion, to avoid the shame and embarrassment associated with these acts. They may also argue that paying taxes is a good act that could be rewarded.

Previous studies also proposed income level as a major determinant of tax evasion (Kirchler et al., 2010). Some studies found that tax evasion increases at lower income levels (Porcano, 1988), while others found that individuals at the higher income bracket are more prone to tax evasion (Anderhub et al., 2001). McGee (2012) proposed two different points of view explaining the association between these two variables. According to the first view, in order to avoid over-taxation, high-income individuals will tend to evade taxes. The other point of view assumes that low-income individuals are more prone to tax evasion due to their inability to pay taxes. He investigated the association between income levels and tax evasion in 66 different countries and concluded that although no discernable trend can be ascertained, the level of income impacts tax evasion in most countries. The Paradise Papers scandals (Cox, 2018) as well as a recent study by Alstadsæter et al. (2019) show also that tax evasion is often concentrated among wealthy individuals.

Based on the cited literature, both religiosity and income could influence tax evasion attitudes. We argue, therefore, that while personality traits may impact tax evasion attitudes, the relationship could be tempered by levels of religiosity and income. For example, although conscientious individuals are usually less prone to engage in unethical behavior, those with low income might have to evade taxes given their inability to pay. On the other hand, although individuals having a low conscientiousness level usually have a higher tendency to evade taxes, their high religiosity level might direct them to avoid such delinquent acts.

Accordingly, in addition to assessing the direct impact of personality traits on tax evasion attitudes, this study attempts to understand other moderating factors that could affect this relationship. To investigate whether religiosity and income have a moderating role in the relationship between personality traits and tax evasion, we test the following hypotheses:

Hypothesis 6 (*(H6):*). *Religiosity moderates the relationship between personality traits and tax evasion attitudes.*

Hypothesis 7 (*(H7):*). *Income moderates the relationship between personality traits and tax evasion attitudes.*

4. The Lebanese context

Lebanon is a small Middle Eastern country characterized by its multi-faith culture. It is the most religiously diverse state among all Middle Eastern countries. The two main religions are Islam and Christianity. Muslims constitute around 54% of the population, Christians 41%, and Druze around 5% (US Department of State, 2012). The Lebanese constitution grants Christians and Muslims equal political representation in parliament and government (ICL, International Constitutional Law, 1990). Thus, Lebanon differs from other Middle Eastern countries where Muslims constitutes the dominant majority. Lebanon's cultural and religious mix affects its social and political life and has, at times, led to bitter conflicts, particularly the Lebanese civil war that extended from 1975 till 1990. Since then Lebanon has suffered from a severe corruption problem, recently ranking in the 138th place out of 180 countries according to the Corruption Perceptions Index, where 180th is the most corrupt (Transparency International, 2018).

The tax system in Lebanon is characterized by its heavy reliance on indirect taxes, mostly the value-added tax (VAT). Unlike most well-established economies where the largest proportion arises from direct taxes, 75% of collected taxes in Lebanon are indirect. As noted by Abdo (2017), the Lebanese tax system is unjust since it imposes taxes mostly on consumption (indirect taxation) rather than income and, thus, increases the tax burden on middle- and low-income groups. The Lebanese Association of Taxpayers' Rights (ALDIC) also notes that the Lebanese people are disenchanted with their tax system and perceive it as a burden (ALDIC, n.d.). The inefficient and unfair tax collection system adopted in Lebanon, in combination with the high corruption level, might be a significant cause behind the widespread practice of tax evasion. Lebanon's fiscal evasion gap is quite high and was estimated at around $5 billion in 2018, the equivalent of 10% of Gross Domestic Product (GDP) (The Daily Star, 2018). Earlier studies also noted that the Lebanese culture suffers from corruption, lack of transparency, and reduced ethical sensitivity (Rawwas et al., 1998; Sidani & Gardner, 2000). Overall, Lebanon is a religiously and culturally diversified country suffering from a weak tax administration, a high corruption level, and a lack of tax compliance, which makes it a good setting for studying the variables of interest. Hence, it is a quite different than the more frequently-studied US and European settings.

5. Methodology

5.1. Data collection

We adopted the survey method to collect data on tax evasion and personality traits given the unavailability of reliable databases on the topic. As tax evasion and personality traits are considered as sensitive topics, the study used online self-administered questionnaires to reduce or avoid the averseness to responding to questions. Moreover, to avoid response rate biases, tax evasion questions attempted to measure participant's perception of tax evasion in a specific situation rather than their individual behavior. The snowball sampling technique was used to recruit participants. This technique consists of asking research participants who are initially recruited by the researcher to recruit other subjects from their acquaintances (Naderifar et al., 2017). It is a simple, cheap, and cost-effective technique that allows researchers to easily reach a larger population. However, the snowball sampling technique is criticized for having some limitations, notably sampling bias resulting from the fact that initial subjects usually nominate people from their background that share similar characteristics (Explorable, 2009). As shown in Table 1, the study's sample is diverse in terms of age, gender, religion, education, and income. This diminishes concerns of sampling bias in the data collection process.

After explaining the purpose of the study and ensuring the confidentiality of responses, participants were asked to give their consent regarding data collection and publication before completing the questionnaire. There were 359 participants, of which 21 responses were not valid, and 47 were incomplete. Given that the study investigates tax evasion attitudes of Lebanese taxpayers, all responses received from non-Lebanese residents or from unemployed/non-taxpayers were excluded. The participants were also given the option to discontinue the survey at any point. The respondents that did not complete the four parts of the survey were removed from the analysis. Therefore, we had 291 completed and valid survey responses. Table 1 details the profile of the participants in the study.

Table 1
Profile of the Participants.

	Number	Percentage
Gender		
Male	133	45.7
Female	158	54.3
Religion		
Christian	156	53.6
Muslim	135	46.4
Age		
30 or Below	144	49.5
31–50	128	44.0
Above 50	19	6.5
Education		
High school or less	7	2.4
Undergraduate Degree	51	17.5
Graduate Degree	233	80.1
Income		
Less than US $24,000	128	44.0
US $24,000-US $40,000	70	24.0
US $41,000-US $80,000	73	25.1
Above US $80,000	20	6.9

5.2. Measures

The survey had four parts: part one collected demographic information, part two collected data about tax evasion attitudes, part three measured the personality traits of respondents, and part four measured the religiosity level of respondents. The statements related to each part were presented all together. Once respondents moved to the next section, they could not go back to change their answers to questions in previous sections. This was done in order to further reduce response bias. The statements were presented in the same order for all participants. The study used a measure similar to the one adopted by McGee et al. (2012) and Sidani et al. (2014) to assess tax evasion attitudes in eight different situations (Table 2, Panel A). Some of these were indicators of self-interest (SITE)—one sample item is “Tax evasion is ethical even if a large portion of the money collected is spent on worthy projects”. Other situations were indicators of tax evasion emanating from perceptions of injustice in the tax system (JSTE)—one sample item is “Tax evasion is ethical if tax rates are too high”.

Several personality theories and instruments were used in personality studies, such as the Myers-Briggs Type Indicator (MBTI), the A/B Personality types, and the Big Seven personality traits (Huels, 2017). However, the FFM’s Big Five Inventory (BFI) is by far the most prevailing personality framework. Although this measure is seldom used in tax evasion studies, past research has proven that the BFI is a “superior indicator when answering questions of a causative or exploratory nature” (Turner 2014, p. 64). Given that this study aims to understand the influence of personality on tax evasion attitudes, part three of the survey used a simplified version of the BFI to measure personality traits. Shorter versions of the BFI exist and are used in the literature. Lang et al. (2011) measured the robustness of a 15-item BFI (BFI-S) and concluded: “the short Big Five Inventory (BFI–S) delivers quick and rough, but robust and reliable estimations of the Big Five personality constructs” (p. 549). Therefore, our study used 15 statements to measure the Big Five personality traits, three statements for each trait (Table 2, Panel B). Examples are: I see myself as someone who: “is talkative” (Extraversion), “can be tense” (Neuroticism), “is curious about many different things” (Openness), “has a forgiving nature” (Agreeableness), and “is a reliable worker” (Conscientiousness).

Part four of the questionnaire, which attempted to measure religiosity, was adapted from the Religious Commitment Inventory (RCI-10) (Worthington et al., 2003) and other religiosity surveys (Billiet, 2002; Hardt et al., 2012; Hill & Hood, 1999; Socha, 1999). Ten statements were used to measure religiosity. Examples are “My faith helps me to cope with my problems” (Hardt et al., 2012) and “I regularly take some time for prayer” (Billiet, 2002). A five-point Likert scale (1 = strongly disagree to 5 = strongly agree) was used.

Table 2
Factor analysis results.

Panel A: Factor Analysis of Tax Evasion Attitudes				
	SITEF	**JSTEF**		
Tax evasion is ethical even if a large portion of the money collected is spent on w worthy projects	0.920			
Tax evasion is ethical even if most of the money collected is spent wisely	0.890			
Tax evasion is ethical even if tax rates are not too high	0.880			
Tax evasion is ethical if a large portion of the money collected is spent on p r projects that do not benefit me	0.750			
Tax evasion is ethical if the tax system is unfair		0.900		
Tax evasion is ethical if a large portion of the money collected is wasted		0.860		
Tax evasion is ethical if a large portion of the money collected is spent on p r o projects that I morally disapprove of		0.830		
Tax evasion is ethical if tax rates are too high		0.800		
Panel B: Factor Analysis of Personality Traits				
I see myself as someone who…	**Con**	**Ope**	**Neu**	**Agr**
Is a reliable worker	0.757			
Perseveres until the task is finished	0.718			
Does things efficiently	0.733			
Is Original, comes up with new ideas		0.818		
Is curious about many different things		0.620		
Has an active imagination		0.794		
Can be tense			0.755	
Worries a lot			0.686	
Gets nervous easily			0.798	
Is helpful and unselfish to others				0.724
Has a forgiving nature				0.771
Is considerate and kind to almost everyone				0.696
Panel C: Factor Analysis of Religiosity				
	RELIG			
I take my faith into consideration when making decisions	0.899			
Religious beliefs influence all my dealings in life	0.843			
I regularly take some time for prayer	0.831			
My faith helps me to cope with my problems	0.827			
I believe that man is responsible to God	0.796			
What religion offers me most is comfort when sorrows and misfortune strike	0.735			

Note: Refer to Appendix for description of variables.

5.3. Data analysis

An exploratory factor analysis with varimax rotation was performed on the eight statements measuring tax evasion. The Kaiser-Meyer-Olkin (KMO) measure of sample accuracy (0.853) and the Bartlett's test of sphericity ($P < 0.0001$) confirmed that the factor analysis is proper for the collected data. The factor analysis, which explains 77.04% of the variance, yielded two factors (Eigenvalue > 1).

As anticipated, the two factors were identified (Table 2- Panel A). The *Self-interest tax evasion Factor (SITEF)* comprises four items and had a cronbach alpha reliability of 0.903. This factor reflects tax evasion attitudes emerging from self-interest. The *Justice of Tax system tax evasion Factor (JSTEF)* contains four elements and had a cronbach alpha reliability of 0.884. This factor mirrors tax evasion attitudes emanating from perceptions of injustices in the tax system. SITEF (mean = 2.15) was found to be relatively lower than JSTEF (mean = 2.74).

An exploratory factor analysis with varimax rotation was also conducted on the 15 statements related to personality traits. The factor analysis explained 52% of the variance and yielded four factors (Eigenvalues > 1). Factors 2, 3, and 4 were respectively related to conscientiousness, neuroticism, and agreeableness. However, a close look at factor 1 revealed that openness and extraversion traits loaded on the same factor. Therefore, a factor analysis was conducted on the six items measuring openness and extraversion. The factor analysis showed that two items related to extraversion had double loadings, so they were dropped, and only one statement was kept to measure extraversion (I see myself as someone who is talkative).

The items that survived the analysis were subjected to another factor analysis which resulted in four factors and explained 59% of the variance. KMO measure of sample accuracy (0.714) and Bartlett's test of sphericity ($P < 0.0001$) indicate that the factor analysis is appropriate for the data. According to our expectations, each of factor 1 (Conscientiousness), factor 2 (Openness to experience), factor 3 (Neuroticism), and factor 4 (Agreeableness) comprised three items. Cronbach's alpha reliability was 0.648 for conscientiousness, 0.649 for openness, 0.632 for neuroticism, and 0.591 for agreeableness (Table 2-Panel B). As for the extraversion personality trait, it was measured by one statement (I see myself as someone who is talkative) given that the other two statements had double loadings.

The respondents demonstrated relatively high levels of conscientiousness (mean = 4.258), agreeableness (mean = 4.038), and openness to experience (mean = 3.998). Respondents scored mid-range in terms of neuroticism (mean = 3.554). Correlations between the different variables are presented in Table 3.

An exploratory factor analysis of the ten religiosity statements was conducted. The factor analysis explained 72.96% of the variance. The PCA yielded 3 factors (Eigenvalue > 1). The first factor was clearly related to religiosity. Factor 2 items had double loadings, and factor 3 had low reliability; therefore, they were dropped from the analysis. The six items that survived the analysis (Table 2, Panel C) were subject to another factor analysis which resulted in one factor related to religiosity, entitled religiosity (RELIG). This factor explained 68% of the variance in the model. The KMO measure of sample accuracy (0.891) and the Bartlett test of sphericity ($P < 0.0001$) show that the factor is suitable for the data. Cronbach's alpha reliability for this factor was 0.904. Participants had a relatively high level of religiosity (mean = 3.72 out of 5).

6. Results

The literature suggested several determinants of tax evasion, among which are income and religiosity (Anderhub et al., 2001; Boone et al., 2013; Porcano, 1988; Richardson, 2006; Torgler, 2006). Based on earlier personality studies (Alalehto, 2003; Blickle et al., 2006; Turner, 2014), this study proposes personality traits as an additional predictor of tax evasion attitudes. Therefore, we ran multiple regressions including the Big Five personality traits: Conscientiousness (*Con*), Openness to experience (*Ope*), Neuroticism (*Neu*), Agreeableness (*Agr*), and Extraversion (*Ext*). We additionally include six control variables that are predictors of tax evasion: *GENDER*, *AGE*, *EDU* (Education), *REL* (Religion), *INC* (Income), and *RELIG* (Religiosity). The regression was run for both SITEF and JSTEF. Regression results are exhibited in Table 4. A detailed description of all variables is provided in the Appendix.

Table 3
Spearman's rho correlations of variables.

	JSTEF	SITEF	Con	Ope	Neu	Agr	Ext
JSTEF	1	0.048	−0.15*	0	0.036	0.03	−0.044
SITEF	0.048	1	−0.161**	−0.101	0.078	−0.04	0.056
Con	−0.15*	−0.161**	1	0.03	−0.003	0.02	−0.034
Ope	0	−0.101	0.03	1	−0.001	0.03	0.269**
Neu	0.036	0.078	−0.003	−0.001	1	0.06	0.126*
Agr	0.03	−0.04	0.02	0.03	0.06	1	0.065
Ext	−0.044	0.056	−0.034	0.269**	0.126*	0.065	1

Notes: **Significant at the 0.01 level. *Significant at the 0.05 level. Refer to Appendix for description of variables.

Table 4
Regression results for the personality traits and tax evasion model.

	Dependent Variable is SITEF			Dependent Variable is JSTEF		
	(1)	(3)	(5)	(2)	(4)	(6)
GENDER	−0.057	−0.031	−0.059	−0.081	−0.077	−0.059
AGE	−0.116	−0.113	−0.103	0.107	0.101	0.111
EDU	0.028	0.033	0.064	−0.173***	−0.172***	−0.19***
INC	−0.223***	−0.208***	0.109	−0.197***	−0.196***	−0.251
REL	0.059	0.060	0.053	−0.028	−0.044	−0.017
RELIG	−0.083	0.198	−0.092	0.039	0.256	0.039
Con	−0.147**	−0.169***	−0.23*	−0.077	−0.078	0.110
Ope	−0.072	−0.077	0.071	0.010	−0.007	−0.022
Neu	0.057	0.051	0.059	0.034	0.021	−0.139
Agr	−0.066	−0.037	−0.130	−0.055	−0.032	−0.103
Ext	0.018	0.123	0.59**	−0.100	−0.043	−0.22
Con*RELIG		−0.044			−0.192***	
Ope*RELIG		−0.062			−0.018	
Neu*RELIG		−0.036			0.052	
Agr*RELIG		0.085			0.010	
Ext*RELIG		−0.298*			−0.175	
Con*INC			0.112			−0.211
Ope*INC			−0.203			0.056
Neu*INC			−0.013			0.190
Agr*INC			0.092			0.025
Ext*INC			−0.688**			0.142
Adj R^2	0.099	0.108	0.118	0.048	0.069	0.051

Notes: ***Significant at the 0.01 level. **Significant at the 0.05 level. *Significant at the 0.1 level. Refer to Appendix for description of variables.

6.1. The impact of personality traits on tax evasion

To test the association between tax evasion components (SITEF / JSTEF) and the Big Five personality traits, the following regression equations were estimated:

$$SITEF = \propto_0 + \beta_1 Con_{i,t} + \beta_2 Ope_{i,t} + \beta_3 Neu_{i,t} + \beta_4 Agr_{i,t} + \beta_5 Ext_{i,t} + \delta_i CNT_{i,t} + \varepsilon \tag{1}$$

$$JSTEF = \propto_0 + \beta_1 Con_{i,t} + \beta_2 Ope_{i,t} + \beta_3 Neu_{i,t} + \beta_4 Agr_{i,t} + \beta_5 Ext_{i,t} + \delta_i CNT_{i,t} + \varepsilon \tag{2}$$

In the first regression equation for SITEF (Table 4, model 1), a significant model emerged with $p < 0.001$. Conscientiousness was found as a significant predictor (B (unstandardized coefficient) = -0.148; SE (standard error) = 0.058; Beta (standardized coefficient) = -0.147; significant at 0.05 level) which supports H2a. The other personality traits were not found to be predictors, which does not support H4a.

In the second regression equation for JSTEF (Table 4, model 2), a significant model emerged with $p < 0.05$. All Big Five personality traits were not found to be predictors which leads to the lack of support of H2b. However, we failed to reject the null hypothesis H4b. The results also show no support for H1, H3, and H5.

To understand other moderating factors that would affect the relationship between personality traits and tax evasion, we ran multiple regressions to assess the moderating role of religiosity and income on the relationship between the Big Five personality traits and tax evasion attitudes.

6.2. The moderating role of religiosity

To explore how religiosity moderates the relationship between personality traits and tax evasion, a moderated hierarchical regression for JSTEF and SITEF was run with personality traits as predictors and religiosity as moderator (controlling for *GENDER*, *AGE*, *EDU*, *REL*, and *INC*). In our regression model, we first included the control variables. Second, we include the main predictors which are the Big Five personality traits, followed by the moderator variable, religiosity. Finally, we include the interaction of the main predictors and moderator, which were previously created through the statistical package. The next two regression equations measure the moderating role of religiosity on the relationship between tax evasion (JSTEF/ SITEF) and personality traits.

$$\begin{aligned} SITEF = \propto_0 &+ \beta_1 Con_{i,t} + \beta_2 Ope_{i,t} + \beta_3 Neu_{i,t} + \beta_4 Agr_{i,t} + \beta_5 Ext_{i,t} + \beta_6 RELIG_{i,t} + \beta_7 Con * RELIG_{i,t} + \beta_8 Ope * RELIG_{i,t} \\ &+ \beta_9 Neu * RELIG_{i,t} + \beta_{10} Agr * RELIG_{i,t} + \beta_{11} Ext * RELIG_{i,t} + \delta_i CNT_{i,t} + \varepsilon \end{aligned} \tag{3}$$

$$\begin{aligned} JSTEF = \propto_0 &+ \beta_1 Con_{i,t} + \beta_2 Ope_{i,t} + \beta_3 Neu_{i,t} + \beta_4 Agr_{i,t} + \beta_5 Ext_{i,t} + \beta_6 RELIG_{i,t} + \beta_7 Con * RELIG_{i,t} + \beta_8 Ope * RELIG_{i,t} \\ &+ \beta_9 Neu * RELIG_{i,t} + \beta_{10} Agr * RELIG_{i,t} + \beta_{11} Ext * RELIG_{i,t} + \delta_i CNT_{i,t} + \varepsilon \end{aligned} \tag{4}$$

Beyond previously defined variables: *Con*RELIG* is a proxy for the interaction between *Conscientiousness* and *Religiosity*. *Ope*RELIG* is a proxy for the interaction between *Openness to experience* and *Religiosity*. *Neu*RELIG* is a proxy for the interaction between *Neuroticism* and *Religiosity*. *Agr*RELIG* is a proxy for the interaction between *Agreeableness* and *Religiosity*. *Ext*RELIG* is a proxy for the interaction between *Extraversion* and *Religiosity*.

In the first regression equation for SITEF (Table 4, model 3), a significant model emerged with $p < 0.0001$. The interaction of religiosity and extraversion (B = -0.080; SE = 0.047; Beta = -0.298; $p < 0.1$) was only significant at the 0.10 significance level. Interactions with other personality traits were not significant. This suggests that religiosity has a minor moderating role on the relationship between extraversion and SITE, but plays no moderating role for other personality traits.

In the second regression equation for JSTEF (Table 4, model 4), a significant model emerged with $p < 0.005$. The interaction of conscientiousness and religiosity (B = -0.192; SE = 0.064; Beta = -0.192; $p = 0.003$) was significant. The interactions of other personality traits with religiosity were not significant. This shows a moderator role for religiosity in the relationship between conscientiousness and JSTE, but not for other personality traits. Accordingly, only parts of H6 are supported.

6.3. The moderating role of income

To explore how income moderates the relationship between personality traits and tax evasion, a moderated hierarchical regression for JSTEF and SITEF was run with personality traits as predictors and income as moderator (controlling for *GENDER*, *AGE*, *EDU*, *REL*, and *RELIG*). The following regression equations were used to measure the moderating role of income on the relationship between tax evasion (JSTEF/SITEF) and personality traits.

$$SITEF = \propto_0 + \beta_1 Con_{i,t} + \beta_2 Ope_{i,t} + \beta_3 Neu_{i,t} + \beta_4 Agr_{i,t} + \beta_5 Ext_{i,t} + \beta_6 INC_{i,t} + \beta_7 Con * INC_{i,t} + \beta_8 Ope * INC_{i,t} + \beta_9 Neu * INC_{i,t} + \beta_{10} Agr * INC_{i,t} + \beta_{11} Ext * INC_{i,t} + \delta_i CNT_{i,t} + \varepsilon \tag{5}$$

$$JSTEF = \propto_0 + \beta_1 Con_{i,t} + \beta_2 Ope_{i,t} + \beta_3 Neu_{i,t} + \beta_4 Agr_{i,t} + \beta_5 Ext_{i,t} + \beta_6 INC_{i,t} + \beta_7 Con * INC_{i,t} + \beta_8 Ope * INC_{i,t} + \beta_9 Neu * INC_{i,t} + \beta_{10} Agr * INC_{i,t} + \beta_{11} Ext * INC_{i,t} + \delta_i CNT_{i,t} + \varepsilon \tag{6}$$

Beyond previously defined variables: *Con*INC* is a proxy for the interaction between *Conscientiousness* and *Income. Ope*INC* is a proxy for the interaction between *Openness to experience* and *Income. Neu*INC* is a proxy for the interaction between *Neuroticism* and *Income. Agr*INC* is a proxy for the interaction between *Agreeableness* and *Income. Ext*INC* is a proxy for the interaction between *Extraversion* and *Income.*

In the first regression equation for SITEF (Table 4, model 5), a significant model emerged F with $p < 0.0001$. Conscientiousness (B = -0.231; SE = 0.129; Beta = -0.23; $p < 0.1$) and Extraversion (B = 0.29; SE = 0.129; Beta = 0.59; $p < 0.05$) were found as significant predictors. The interaction of extraversion and income (B = -0.103; SE = 0.046; Beta = -0.688; $p < 0.05$) was significant. No other significant results were found. This shows that income moderates the relationship between extraversion and SITE, but plays no moderating role for other personality traits.

In the second regression equation for JSTEF (Table 4, model 6), a significant model emerged with $p < 0.05$. The interactions of all personality traits with income were not significant. This suggests no moderator role for income in the relationship between personality traits and JSTE. Thus, the results lead to the partial support of H7.

7. Discussion

This study investigated the relationship between personality traits, measured by the FFM, and tax evasion attitudes. The study finds a significant negative association between the conscientiousness personality trait and SITE, but no significant association between conscientiousness and JSTE. It is understandable that conscientious individuals who are characterized by high moral and ethical standards are less inclined towards tax evasion attitudes emanating from self-interest (SITE). This result is in line with prior research that saw a negative association between conscientiousness and unethical behavior (Alalehto, 2003; Turner, 2014; Williams et al., 2010). As anticipated, a non-significant association between conscientiousness and JSTE was found. A possible explanation for this finding is that conscientious individuals who recognize the tax system as unfair might be torn between two moral principles; the first is fulfilling government obligations, and the second is being fair to others. Therefore, conscientious people might depart from classical ethical standards that request compliance with rules to the higher moral principle of fairness. This reasoning is in line with Sidani et al. (2014) who noted that:

Idealists in a weak tax environment seemingly go through a cognitive reframing process where they recognize that the tax system is unfair, and accordingly tax evasion is a way to serve a different moral absolute, that is of equity, rather than another different moral absolute, which is fulfilling obligations to governments. (p. 183).

No significant association was found between agreeableness and both reasons for tax evasion. The lack of a significant association between agreeableness and JSTE was expected as agreeable people tend to avoid harming others, and complying with a tax system characterized by injustice and corruption is not necessarily advocated. However, agreeable people were expected to have negative attitudes towards SITE given their sympathetic and compassionate nature. This assumption was not validated. While the literature does not provide a justification for this finding, it has an explanation in the Lebanese context. As stated earlier, Lebanon suffers from a severe corruption problem, a weak tax administration, and an unfair tax distribution. Over time, this might have led to an overall lack of confidence in the Lebanese government and the Lebanese tax authorities. This enduring issue might have also affected the Lebanese culture which according to prior research now suffers from a lack of moral sensitivity towards tax evasion (Rawwas et al., 1998; Sidani et al., 2006). Despite their considerate nature, agreeable people might not necessarily feel the obligation to comply under such conditions, which could explain the reason for a lack of association between agreeableness and SITE.

Results show a lack of association between openness to experience and both types of tax evasion. The finding is in line with previous studies that failed to establish an association between openness to experience and unethical behavior (Turner, 2014). Similar results were found in the tax evasion context (Huels, 2017). Openness to experience, which designates a person's creativity, originality, and intellectual level (Ackerman, 2017), therefore, seems to have no impact on ethical decision making and tax compliance.

The results failed to find a significant direct association between extraversion and both types of tax evasion attitudes. This is consistent with several literature findings (Khan et al., 2016; Sackett & Wanek, 1996). Conversely, Huels (2017) found a marginal association between extraversion and taxpayer non-compliance intentions "only when looking at the factor loading related to income" (p. 74).

Consistent with prior literature findings, we show that the extraversion personality trait has no direct association with tax evasion. The moderating role of religiosity and income is discussed later in this section.

The findings also show no significant association between neuroticism and both types of tax evasion. This non-significant association could be the result of the adoption of a situational code of conduct by neurotic people as noted by Khan et al. (2016). These authors explain that although neurotic individuals show their compliance with moral values, they are inconsistent in following them depending on the situation. Their inconsistent ethical choices emanate from their desire to decrease the feelings of fear and guilt associated with their decisions (Watson & Clark, 1984). Thus, no specific association can be expected between neuroticism and tax evasion attitudes.

Results show a marginal moderating role for religiosity in the relationship between the extraversion personality trait and SITE (Table 4 model 3). This suggests that the more extraverted people are religious, the more likely they are to express negative attitudes towards SITE. One could argue that religions, in general, encourage their followers to be ethical and to refrain from harming others. The affectionate and loving nature of extraverted people combined with their religious beliefs seems to temper their attitudes towards SITE, given the negative consequences of tax evasion on their fellow citizens and on the economy as a whole.

The findings also show that religiosity moderates the relationship between the conscientiousness personality trait and JSTE (Table 4 model 4). Although the initial model (Table 4 model 2) failed to establish a direct relationship between conscientiousness and JSTE, religiosity seems to play a role in this relationship. The higher their religiosity level, the more conscientious people seem to express negative attitudes towards JSTE. Their religious faith combined with their tendency to apply moral principles seemingly leads to negative attitudes towards tax evasion emanating from injustice in the tax system.

The results also reveal a moderating role for income on the association between extraversion and SITE (Table 4 model 5). In high-income brackets, extraverted people seem to express negative attitudes towards tax evasion emanating from self-interest. This result is in line with earlier studies that saw income level as a major variable affecting tax evasion attitudes (Khalil & Sidani, 2020; Kirchler et al., 2010). Given their affectionate nature, extraverted people are thought to be less inclined towards SITE at high-income levels. However, at low-income levels, their friendly and sensitive trait will not stop their inclination towards SITE when in a harsh financial situation.

8. Conclusion

Given the limited attention that this topic has received in the literature, an exploratory study was conducted to analyze the impact that the Big Five personality traits have on tax evasion attitudes and the moderators of this relationship. We acknowledge that the study led to some significant findings and to several non-significant findings. However, this study is exploratory in nature and contributes to the literature by exploring an under-studied topic that has not been thoroughly investigated in the literature and has never been explored in the Lebanese context. The Lebanese context is a good setting for studying the variables of interest because it is a culturally and religiously diversified country suffering from a high fiscal evasion gap and corruption level. A fundamental component is our linking personality dimensions to tax evasion attitudes emanating from divergent perspectives: self-interest tax evasion (SITE) and justice-oriented tax evasion (JSTE). The results show a significant negative association between the conscientiousness personality trait and SITE. Other personality traits provide little predictive ability. In addition to studying the direct association between personality and tax evasion, the study examined the moderating role of religiosity and income on this association. Religiosity seems to have a moderating role on the association between extraversion and SITE as well as between conscientiousness and JSTE. The study also reveals the moderating role of income in the relationship between extraversion and SITE.

It is evident that some associations stand for tax evasion attitudes emanating from self-interest (SITE) but not for those emanating from injustices in the tax system (JSTE) and vice-versa. Therefore, the relationship between personality traits and tax evasion varies based on the way taxpayers perceive the tax system. One cannot assume that individuals sharing a certain personality trait will be more or less inclined towards tax evasion regardless of the fairness of the tax system. The perception of citizens of the justice of the tax system plays a very important role in their compliance/non-compliance decision. A tax system characterized by a weak tax administration, a lack of transparency, and an unfair tax distribution might be a main driver leading to an increase in tax evasion. Overall, we show that the root of tax evasion stems from the perception of taxpayers of the equity of the tax system rather than simply from demographic characteristics or personality traits.

Given the alarming increase in global tax evasion, this study contributes to the literature by expanding our understanding of the factors leading to non-compliance, which might be helpful to both academicians and policymakers. Particularly, tax authorities and government policymakers have to recognize that people's perception of the fairness of the tax system is one of the main motives behind tax evasion. Therefore, government should undertake several measures to make sure that the tax system abides by the principles of justice and equity. Such measures could include the modernization of the current tax system in Lebanon, which relies mainly on indirect taxes. The reduction of indirect taxes and the adoption of progressivity in the tax rate structure, with rates rising in proportion with income, could be perceived as a more just way of taxation. To increase fairness and consequently tax compliance, the government might make sure that taxes are adapted to citizens' paying capacity and that all citizens are paying their fair shares of taxes. In addition, the government should take measures to increase transparency. Notably, citizens should be given access to fiscal information, which might lead to greater trust in tax authorities and probably to less tax evasion.

Additional research conducted in other cultural and tax contexts should prove useful to more fully understand the relationship between the different personality traits and tax evasion attitudes. Further studies could also explore the potential moderating role of other demographic variables. Another area for future research is to explore the relationship between tax evasion and other personality frameworks. This study explored the moderation effect of religiosity and income on the relationship between personality traits and tax evasion. Additional studies could also investigate the moderating role of personality traits on the association between religiosity and income as independent variables and tax evasion as a dependent variable. Future studies could also explore the possible association between the high corruption level in the context of this study and tax evasion attitudes as suggested by Amoh and Ali-Nakyea (2019).

Tax evasion is a pervasive and growing problem that has drastic economic consequences. Understanding the main drivers behind tax evasion attitudes is essential in reducing such behavior. By identifying factors associated with tax evasion attitudes, this study is a step forward in the quest to further comprehend the determinants of tax evasion.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix

Description of Variables

Variable Name	Abbreviation	Description
Dependent Variables		
Justice of System Tax Evasion Factor	**JSTEF**	JSTEF refers to tax evasion attitudes emanating from perceptions of injustices in the tax system. Based on a Factor analysis of the eight statements related to tax evasion.
Self-interest Tax Evasion Factor	**SITEF**	SITEF refers to tax evasion attitudes emanating from self-interest. Based on a Factor analysis of the eight statements related to tax evasion
Independent Variables		
Openness to Experience	**Ope**	Ope refers to the openness to experience personality trait, one of the domains used to describe human personality under the Big Five classification. Based on Factor analysis of 15 personality statements. High scores mean that an individual is creative, imaginative, daring, original, curious, thinks outside the box, and enjoys variety. Low scores mean that an individual is conventional, conservative, and prefers routine activities.

(*continued on next page*)

(*continued*)

Description of Variables Variable Name	Abbreviation	Description
Conscientiousness	**Con**	Con refers to the conscientiousness personality trait, one of the domains used to describe human personality under the Big Five classification. Based on Factor analysis of 15 personality statements. High scores mean that an individual is organized, hardworking, reliable, consistent, self-disciplined, persistent, planner and predictable. Low scores mean that an individual is less inclined towards applying moral principles and is less directed towards goal achievement. He tends to procrastinate.
Extraversion	**Ext**	Ext refers to the extraversion personality trait, one of the domains used to describe human personality under the Big Five classification. Based on Factor analysis of 15 personality statements. Extravert individuals tend to be sociable, socially confident, friendly, affectionate, talkative and assertive. Introverts tend to be quiet, reserved and thoughtful.
Agreeableness	**Agr**	Agr refers to the agreeableness personality trait, one of the domains used to describe human personality under the Big Five classification. Based on Factor analysis of 15 personality statements. A high score denotes that the subject is kind, moderate, considerate, sympathetic to others, humble, helpful and expects others to be cooperative as well. A low score suggests that the subject tends to be rude, ill-tempered, egocentric, unsympathetic and skeptical of other's intentions.
Neuroticism	**Neu**	Neu refers to the neuroticism personality trait, one of the domains used to describe human personality under the Big Five classification. Based on Factor analysis of 15 personality statements. Individuals having a high score tend to be moody, nervous, anxious, unconfident, and insecure. Those who show a low score are usually calm, relaxed and confident.
Religiosity	**RELIG**	RELIG refers to the degree to which an individual adheres to certain religious values, beliefs, and practices on a daily basis. Based on Factor analysis of 10 religiosity statements.
Age	**AGE**	Age is a categorical variable reflecting age groups where 1 equals age 30 or below, 2 equals ages 31–50, and 3 equals ages above 50.
Gender	**GENDER**	A binary variable coded 0 for Male and 1 for female.
Education	**EDU**	A categorical variable reflecting educational levels where 1 equals High school or less, 2 equals an Undergraduate Degree, and 3 equals a Graduate Degree.
Income	**INC**	A categorical variable reflecting income levels where 1 means Less than US $24,000, 2 means US$24,000-US$40,000, 3 means US$41,000-US$80,000, and 4 means above US$80,000.
Religion	**REL**	A binary variable reflecting religious affiliation of participant where 0 equals Christian and 1 equals Muslim.

Source: Adapted from Ackerman (2017) and Huels (2017).

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