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Original Research

Investigating the Impact of Financial Managers' Personality Traits on Tax Fraud; Concerning Gender and Type of Firm

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Abstract

Tax fraud is the legal minimization of tax liability through appropriate financial planning techniques, which often involve techniques, accounting methods, and fraudulent transactions, and pursue little or no purpose other than creating a tax advantage. There is no doubt that tax fraud is a legal way to reduce the amount of tax, and individuals with different personality traits can take dissimilar procedures to reduce the amount of tax. In this study, the impact of personality traits on tax fraud concerning gender (male and female) and type of firm (listed and non-listed) is investigated. The statistical population of the study includes all financial managers of listed and non-listed firms in 2020 who are not exempt from taxes. Information about personality traits was collected through a questionnaire and SPSS software version 21 was used to test the hypotheses. The results suggest that the personality traits of neuroticism, extraversion, flexibility (openness to experience), and agreement have a positive and significant effect on tax fraud. In contrast, the personality trait of conscientiousness has a negative effect on tax fraud. This effect was also observed in both male and female financial managers. The results also indicate that the effect of personality traits of neuroticism, extraversion, and agreement on tax fraud in the managers of listed firms is positive and the effect of personality traits of flexibility (openness to experience) and conscientious is nega-tive on tax fraud, but the effect of personality trait of neuroticism is negative and the effect of flexibility (openness to experience) on tax fraud in listed firms is not statistically significant. In non-stock firms, personality traits of neuroticism, ex-traversion, flexibility (openness to experience), and agreement have a positive and significant effect on tax fraud, and the personality trait of conscientiousness has a negative effect on tax fraud.

1 Introduction

These Governments rely on income from taxes to function. Tax evasion therefore affects them directly. In recent years, the Iranian government's revenue strategy has been moving in a direction that will be more tax-dependent due to sanctions on oil purchases; therefore, paying taxes plays a very important role in the country's macro-economy. However, firms often try to avoid paying

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taxes by using strategies. Although tax compliance has been studied, the literature does not exhaustively elucidate the factors that affect tax compliance and tax morale. The article contributes to closing the gap by investigating whether personality is a factor influencing tax morale and ultimately tax fraud. Generally, tax fraud means making illegal arrangements to hide or ignore tax debt [47]. The current fight against tax fraud is confronted with some significant challenges. Fraudsters adopt ever growing complex structures and operate in an organized fashion. An important technique of tax fraud is the intentional misrepresentation of information in tax declarations to decrease the amount of tax liability. Tax fraud can broadly be categorized as the evasion of direct and indirect taxes and has a direct impact on society: the unfair redistribution of wealth; tax increases; cuts in public services and the hampering of economic growth [61]. Attitudes towards paying taxes have been a common subject of research. Most taxpayers tend to pay taxes, although there is a small probability that tax evasion will be revealed. Despite this, the extent of tax evasion is still considerable [42]. Needless to say, the tax gap includes not only evasion caused by carousel fraud [66], but also tax evasion arising from other taxes within the shadow economy, possible errors, as well as unpaid taxes due to insolvency [42]. The tendency to pay or avoid paying taxes has been the subject of several studies [9,17,19,25,30,41,55] but the question has not been exhaustively answered yet. Tax compliance is a complex behavioral issue [12]. Understanding the processes through which individuals make a compliance decision is important in designing effective policies and tools for reducing tax evasion and tax avoidance. It does appear, though, that tax compliance is positively related to tax morale [22]. Tax morale can be defined as ‘the intrinsic motivation to pay taxes that arises from the moral obligation to pay taxes or the belief in contributing to society by paying tax [12]; the same definition is used by Torgler and Schneider [60]. According to Weck [63], there is a strong relationship between tax morale and the size of the shadow economy. Torgler [4] concluded that tax morale significantly reduced tax evasion, Alm and Torgler [4]found a strong negative correlation between the size of the shadow economy and the degree of tax morale in selected countries (the United States and 16 European countries). The factors that have an impact on tax morale have not yet been fully and adequately identified. Hanousek and Palda [22] concluded that tax evasion is lowest among those who believe that they are getting good quality government services for the taxes they pay. Alm and Torgler [4] argue that tax morale is likely to be influenced by factors such as perceptions of fairness, trust in the institutions of government, the nature of the fiscal exchange between taxpayers and government, and a range of individual characteristics. Tax morale is likely to differ across countries because of cultural differences across those countries. Experimental research as well as other surveys have been conducted with the aim of cultural differences [20,54,56] . Strumpel [54] and Schmolders [49], from the Cologne School of Tax Psychology, have tried to explain economic phenomena not only by economic factors but also from the point of view of social psychology, and they conducted research focused on tax morale. Both researchers examined the factors influencing tax morale, such as tax morale among self-employed workers and employees, as well as different tax systems in various countries. Overall tax morale in different countries, dependent on culture and the attitude of people towards tax compliance, should also be taken into consideration. Some of the studies also considered church attendance [4, 50]and proved a highly significant positive effect on tax morale. Kirchler [29] in the publication "The Economic Psychology of Tax Behaviour" and later Kirchler and Wahl [32] by providing the tax compliance inventory made an enormous effort to distill the sociological and social psychological influences on tax compliance. The research gap focused on personal characteristics in the tax morale literature remains. The organizational approach based on comprehending the act of economic crime as a collective act dominates the research on economic crime; only a few studies have examined what personality trait characterizes the economic criminal. The results suggest that there is a clear tendency towards economic criminality in at least these personality traits – the positive extrovert, the disagreeable, and the neurotic– while there are two personalities related to law-abiding behavior – the conceited and agreeable [2]. Self-control, which is a trait associated with the Big Five Inventory to Conscientiousness, is one of the variables in predicting criminal behavior and it explains between 10% and 16% of the variance in committing crimes [62]. Another predictive variable is neuroticism [1]. The use of personality in economics is still in its early stages, however, and more research is needed to examine relationships between personality traits and compliance [33]. To move to the individual level, the topic of tax morale leads to the question of how personality influences attitudes toward paying taxes. This paper provides new insight into the factors that have an impact on tax morale. The purpose of this study is to find the extent to which a person's personality affects the paying or avoiding of taxes, as well as which personality traits from the Five-Factor Model personality [11]. As tax compliance attitudes may differ across countries, this study contributes to the knowledge of the situation, by describing the cultural specifics of the Iranian taxpayers. So far, as mentioned, no comprehensive research has been conducted in Iran regarding the identification of the effects of managers' personality traits in decisions related to non-payment of taxes and tax fraud. The present study is one of the interdisciplinary types of research that intends to explain the effects of personality traits, which are classified based on the studies of psychological researchers, to one of the most fundamental questions in the field of tax accounting. Until now, it has been assumed that classical economic models can be useful in identifying and preventing tax fraud and do not need to take other factors into account. However, studies exhibit that conventional decision-making model, which are designed without the foundations of social psychology and based only on economic components, cannot explain the developments and the exact way decision-makers function [6]. This issue has led to the discussion of behavioral economics in the field of tax fraud, which is based on the idea that in the field of tax fraud, psychological issues should be included and included in the models; this is the approach that the present study will follow.

2 Theoretical Foundations

2.1 Tax Fraud

Tax avoidance is defined as any strategy that reduces a firm's tax debt[23]. Pasternak and Rico[43] defined tax avoidance as the legal use of the tax system for personal gain to reduce the amount of tax payable using the law itself. In other words, tax evasion reduces an individual's tax liabilities by circumventing the law or making full use of legal fines. For reasons such as the existence of special privileges in tax behavior with specific activities against the general principles of taxation and shortcomings in tax laws and regulations, taxpayers may have the opportunity to use legal solutions to reduce or not fulfill their tax liability. In this case, the taxpayer can avoid taxes through legal ways. Any illegal attempt to evade taxes, such as failing to provide tax officials with the necessary information about taxable income and benefits, is considered tax evasion or fraud. In other words, tax evasion or fraud refers to the illegal non-payment of all or part of the tax. This can be done in the form of setting up financial accounts, providing incorrect financial information, or not providing information. Generally, tax fraud refers to the illegal non-payment of all or part of a tax[36]. In addition, tax fraud relates to the informal economy, such as domestic transactions and illegal activities such as criminal and delinquent activities, from which no tax is levied due to lack of necessary information [36].

2.2 Personality Traits

Personality traits are types or tendencies that lead to individual differences in behavior, stability over time, and continuity of behavior in various situations[51]. Today, many personality experts and psychologists believe in the existence of five basic traits in human personality. This research began in 1949 with the studies of D. W. Fiskend and later expanded with the studies of researchers such as [47, 53, 30]. According to Frey, B. S[22], the most important personality traits that are presented in the model as Big Five traits are: Neuroticism (N), Extraversion (E), Openness to experience (flexibility) (O), Agreeableness (A) And Conscientiousness (C)[20].

Neuroticism: It is the dimension that is based on unpleasant experiences and emotions. This dimension also includes characteristics such as anxiety, depression, shyness, aggression, hostility, emotional instability, and irritability [48].

Extraversion: Extroverts tend to engage in physical and verbal activities, and introverts are interested in solitude and independence. Extroverts are social people. This factor includes characteristics such as experiencing positive emotions, activity, assertiveness, courage, excitement, warmth or talkativeness, and being social [48].

Openness to experience: This factor includes the degree of flexibility in the face of experiences, creativity, curiosity, initiative, wisdom, and acceptance of new values and ideas [48].

Agreeableness: Like extroversion, the index of agreement emphasizes the tendency of interpersonal communication. This factor includes characteristics such as religiosity, feeling of happiness, contentment, saving, and patience [48].

Conscientiousness: A conscientious person has strong and predetermined goals and desires. This factor includes attributes such as a sense of responsibility, self-control, order, conscientiousness, adequacy, willingness to progress, and caution in work[32,45].

2.3 Personality Types and Taxes

Tax compliance is regarded as the willingness of the individual to act following tax law [7]. An earlier study on tax compliance conducted by Roth et al in 1989 has defined tax compliance as an activity where all tax returns are filled at the proper time under the tax law applicable while tax liability is reported accurately. When a taxpayer fails, intentionally or unintentionally to meet their tax obligation, that brings them under the category of tax non-compliance. The issue of tax noncompliance has always been in heat not only for now but for ages. Tax non-compliance can be viewed from many perspectives. It is a problem for the public finances because the government has lost its revenue. It is also a law enforcement issue and an ethical problem for individuals from a particular country. It is very important to overcome the issue of tax non-compliance since it deals with the trust that people have in government to ensure the distribution of fair and just tax. Tax non-compliant behavior can be categorized into three major groups: failing to file the return, failing to report tax liability accurately on the return, and failing to remit taxed ownership. Taxpayer can choose to comply with tax because the cost of non-compliance is too high or because they feel obligated to do so since it is their responsibility. Several research have been conducted on the effect of the tax rate, income, probability of audits, severity of fines, and knowledge of tax compliance. One of the earliest types of research on tax compliance by Allingham and Sandmo in 1972 has found that taxpayers will voluntarily report accurate tax income when the probability of getting detected increases, and the penalty imposed also increases. However, this early research does not emphasize the reason for a taxpayer for completely not filing a tax return or a non-economical factor affecting tax non-compliance. Compliance with tax obligations is not simple since there a many factors influencing an individual in complying with his tax obligations given compliance is related to an individual's behaviour. James et al [23]. has suggested that is better to explore tax compliance beyond the economic approach to understand the behaviour of individuals toward compliance. Various studies have been conducted to identify the relationship between human behaviour and tax noncompliance. Blanthorne and Kaplan in [9]. stresses that an individual's ethical belief, which is their norm affects the taxpayer's compliance decision. Personal norms are an individual's self-based expectations and criteria. Previous researchers also have explored the study on factors of tax non-compliance into the social norms, tax morale, tax ethics, and tax behaviour. Yet, minimal emphasis has been given to an individual personality and their decision to non-comply. Personality traits are important as they influence the way individuals interact with environments. Social and psychological factors become the highlight of tax compliance studies in the late [36]. Gunter emphasizes that tax compliance is a behavioral problem and is much affected by an individual's tax morale. In his book The Psychology of Money and Public Finance, Schmolders defines tax morale as citizens' tax mentality and their inner acceptance of tax duties and acknowledgment of the sovereignty of the state. He strongly made a point in his book that tax morale is determined by the loyalty of the citizens and how much trust they have in their nation's authority. Schmolders survey in Germany indicates half of the responders compared tax evaders with cunning business while only one to third considers them as thieves or deceivers. Schmolders study explains that most people do not look at tax noncompliance as an offense but as a smart technique. Similarly, in a study by Frey [22]. and Alm and Torgler [4], tax morale also defines an individual's intrinsic motivation to pay one's taxes. The study of tax behavior has looked in-depth into factors such as social norms [64], perceptions of tax authorities ki [28], stance towards authorities and government, and even the mental accounting involved in dealing with one's tax affairs [7]. Researchers also have ventured into the area of tax ethics which can also be defined as moral reasoning towards taxation. Higher or better-developed tax ethics lead to higher voluntary compliance. Individuals with strong intentions towards self-interest, referred to be focusing on self only; not the nation, reported low tax ethics and high non-compliance [27]. Looking into all the previous research from a surface view, there are links between tax attitudes, behavioral intentions, and actual compliance decisions but how tax attitudes are formed is still under uncertainty. Personality has been proven as an effective tool in determining an individual's decision-making process and ability. As tax compliance is a decision-making process of an individual, personality is a very important measure to determine how individuals with different personalities make their decision to comply with tax laws and regulations. Research results show that there is a significant difference in problem-solving, risk assessments and independence of opinion between men and women. Studies in the past have shown that gender differences are effective in tax compliance. These studies show that women are more risk-averse compared to men and thus they follow the moral conclusion. but in some studies, it has been shown that there is no difference between the behavior of women and men in care and financial ability. Studies in psychology show that men have a greater sense of competitiveness, and thus more self-confidence compared to women. Also, women are more honest than men and are more active than men in public contributions including paying tax. Women are more obedient to the rules compared to men. Hence women are expected to have less tax fraud compared to men[12].

2.4 Experimental Background

There has been no research In Iran that studies the personality traits of managers and their effects on their attitudes toward tax fraud; therefore, in this section, studies that are somehow related to the subject of this research are mentioned. Namazi and Zeraatgari [38] identified interesting accounting information for Tehran Stock Exchange investors based on their personality traits. The results suggested that the personality trait of investors is an effective factor in their information interests, and investors with more risk-averse personality traits are more interested in reliable information while investors with more risky personality traits are interested in relevant information. Regardless of the different types of personality, almost all investors are very interested in obtaining information about the trading volume with related parties and auditor reports. However, investors have shown the least interest concerning sales growth information over the past ten years. To examine the significance of audit team norms and peers' personality components, the Entropy technique is employed. Subsequently, using the TOPSIS method, these factors that affect the objectivity of financial auditors are ranked. The statistical population of this study encompasses all professional auditors, both within auditing organizations and private auditing institutions, who are members of the Iranian Society of Certified Public Accountants in 2020, totaling 242 members. The findings indicate that extroverted and responsible personality types wield a positive and substantial influence on auditors' objectivity. Additionally, the study reveals that audit team norms have a constructive and significant effect on the objectivity of auditors[11].The findings of this study reveal seven factors identified as influential factors on investor behavior, based on theoretical literature and research background, using the TOPSIS technique. Subsequently, using the confirmatory factor analysis approach, the research findings indicate that investor financial literacy and investor personality traits play the most significant role in investor behavior. Additionally, higher expected returns, rules and regulations, security, profitability, and position and location of investment are identified as the next influential priorities on investor behavior[55].The purpose of this study is to determine the effect of auditors' skeptical personality traits with considering the characteristics of organizational behaviour on job durability. For this purpose, the relationship between interpersonal trust, locus of control and presumptive doubt and neutral of professional skepticism and three characteristics of organizational behaviour, organizational commitment, perceived organizational support and organizational citizenship behavior on job durability are assessed. The statistical society consists of all auditors of audit institutions that are the member of the Association of Certified Public Accountants who are working and not the organization's partners. The structural equation modeling has been used for analysis. The findings of the study show that auditors' skeptical personality traits did not directly affect their job durability[27].

Sepehri et al. [50] examined the relationship between personality traits of auditors and their adherence to the auditing professional conduct code. The results of their research exhibited that the personality trait of Agreeableness is most related to the degree of adherence of auditors to the code of professional conduct; other features are in the next category with an equal number of repetitions. Also, in general, in terms of auditors' adherence to the code of professional conduct, professional performance and independence are most related to the personality types of auditors; Confidentiality, honesty and integrity, and professional conduct are next in line. Ebrahimi Romenjan and Sharifi [22] examined the relationship between the personality trait of independent auditors and audit report delay. The results indicated that there is a significant relationship between the personality dimensions of the independent auditors and the delay in the independent auditor's report except for the neurotic dimension. Jamshidi and Ghalibaf Asl [22] examined the effect of investors’ personalities on their business behavior and investment performance in the Tehran Stock Exchange. The results of their research exhibited that Investors with an external locus of control, type-A behavior, and high maximizing tendency are busy working on trading more frequently. Investors with an external locus of control, high sensation seeking, and high self-monitoring have a less diverse portfolio. Finally, the frequency of transactions is related to better performance, while portfolio diversification does not affect the performance of the individuals. Saeedi Graghami and Naseri [50] examined the effect of personality traits on the auditor's professional judgment in allocating time budget to accounts containing estimates. The results showed that among the personality dimensions of NEO, only neurosis has a positive and significant relationship with professional judgment. Other personality dimensions such as extraversion, openness to experience, agreeability, and conscientiousness have no significant relationship with professional judgment. Naderi et al. [37] also examined the effect of personality traits of auditors A, B, C, and D on the content of the audit report. The results suggested that there is a significant difference between acceptable, conditional, and rejected comments of different personality traits, but there is no significant difference between the type of non-commenting comments and personality traits. Moradi et al. [35] identified risk factors affecting fraud probability in financial reporting from auditors' viewpoint and its impact on firms' performance. The results showed that there is a significant relationship between management qualities, management following internal controls and enforceable standards, risk factors related to the market and industry conditions, operational features, company liquidity and fiscal stability, and fraud probability. Also, the results indicate that there is a significant relationship between firm performance and fraud risk. Baradaran Hassanzade et al. [8] examined the effect of auditors' personality traits on the content of the auditing report. The results exhibited that neuroticism has a significant and negative and significant impact on the type of auditor's opinion and number and has a significant and positive effect on the number of clauses after the comment, bets but it doesn't have a significant and positive impact on the type of bet. Extroversion has a significant and negative effect on the type of auditor's opinion, the type of bet, the number of bets, and the number of paragraphs following the statement. Flexibility has a significant and positive impact on the type of bet, but it doesn't have a significant effect on the type of auditor's opinion, the number of bets, and the number of the paragraph following the statement. Being Agreeable has a significant and positive impact on the type of auditor's opinion, the type of bet, the number of bets, and the number of paragraphs following the statement. Being conscientious has a significant and positive impact on the number of the paragraph following the statement but it doesn't have a significant effect on the type of auditor's opinion, the type of bet, and the number of bets. Paidarmanesh et al. [45] investigated the reasons for tax evasion in companies, which uses two independent variables (financial constraints and tax planning opportunities) and two dependent variables (firm value and tax evasion by tax difference method) in the form of 13 models. The 11 indicators have been considered for the variable of financial constraints of companies, and the model is implemented for all these indicators. The research was conducted in the 5 years from 2015 to 2019 in the Tehran Stock Exchange, and Eviews software was used to analyze the data and fit them for 3 research hypotheses. The results suggested that the opportunity for tax planning has a negative effect on the value of the company, and the increase in the opportunity for tax planning and subsequently tax evasion causes a decrease in the value of the company. Also, the results indicated that there is a significant relationship between tax planning opportunity and tax evasion (by tax differences method) in firms, while there is no positive relationship between financial constraints and tax evasion (by tax difference method) in companies that have tax planning opportunities. Hamid et al. [26] in the realm of corporate tax behavior, corporate governance mechanisms exert influence over the behavior of managers, playing a crucial role in shaping and overseeing their actions. The board, responsible for resource allocation, performance improvement, and enhancement of shareholder wealth, holds a central position in determining tax management strategies. Consequently, companies with distinct governance structures may adopt different approaches to tax management, indicating that corporate governance mechanisms can impact corporate tax activities. To evaluate the relative importance of identified criteria, the network analysis process method was employed. This method aims to structure the decision-making process within a scenario influenced by multiple independent factors. Unlike the hierarchical analysis process, the network analysis process allows for relationships between all levels, rather than solely from higher to lower levels.

By utilizing the conformity rate, the network analysis process calculates the inconsistency of all judgments, with the calculated inconsistency rate required to be below 10%. The compatibility coefficient of the final matrix serves as an indicator of questionnaire validity. Significant evidence suggests that increased tax requirements can enhance tax compliance. However, certain forms of tax offenses are sometimes utilized to control the issue of tax default. Overall, this study sheds light on the impact of corporate governance mechanisms on corporate tax activities and utilizes the network analysis process to evaluate the importance of relevant criteria. The findings contribute to our understanding of the intricate relationship between governance, tax management, and compliance. The results can be valuable for practitioners, policymakers, and researchers interested in corporate tax behavior and governance dynamics.Karami et al. [34] in most countries, taxation plays a very important role as one of the main means of government in the economy. Most of the state's revenue sources are taxed, through which redistribution for the three purposes of allocating economic benefits. Income and economic stability are used. Due to differences in tax laws and regulations and accepted accounting principles and principles, what may be considered from the perspective of income and expense accounting theories may not necessarily be from the perspective of income and expense tax laws. It should be noted, however, that the purpose of determining profits in the preparation of financial statements from an accounting perspective is to determine the source of tax calculation is different in tax laws. It accounts for a large share of Iran's GDP, so addressing it can play an important role in achieving the ultimate goals of macro policies [23]. With the formation of agency relations, the conflict of interest between Managers, and shareholders on the one hand, and other stakeholders (such as the government) on the other. Yat is not the same as determinate tax (tax gap). Two goals are conceivable. While this gap is expected to affect the quality of reported earnings for investors, the greater the difference, the lower the firm's profitability. And affect future profits of companies [45].Farrar et al. [23] investigated the influence of financial incentives and revenge, on taxpayers' tax fraud reporting intentions. The results exhibited that having a motive for revenge and financial reward significantly increases the objectives of tax fraud reporting. Ethical commitment also mediates the link between revenge motives and reporting objectives in tax fraud. Al-Samarraie et al. [5] examined the effects of personality traits on human information seeking. The results of their research showed that users with adaptive and extroverted personality traits have a high conscientious personality and are generally in quick search for information about their tasks. Schafer et al. Shafer et al. [52] in a study entitled "Social responsibility, professional commitment, and tax fraud" examined the relationship between accountants' socioeconomic beliefs and attitudes and their professional commitment and ethical decisions. The study population consisted of 271 tax auditors working in Hong Kong auditing firms. The results suggested that ethics and social responsibility have a strong and positive relationship with the professional commitment of tax officials and a negative relationship with their participation in tax fraud. Tax officials have a higher professional commitment, consider tax fraud more immoral, and lead to less involvement in tax fraud it becomes. Manurung et al [37] in a study examined the moderating role of the effectiveness of internal controls and organizational justice on the relationship between organizational commitment and employee fraud. The results showed that organizational commitment has positive effects on employee fraud. He also indicates the role of moderating the effectiveness of internal controls and organizational justice on the relationship between organizational commitment and employee fraud. Other findings suggest that cost stickiness has a positive impact on the relationship between institutional investors and passive institutional investors with conservatism [67]. Several researchers have examined the relationship between ownership structure and stock liquidity of companies listed on the Tehran Stock Exchange. The effects of ownership structure were analyzed in two dimensions: ownership type and ownership concentration. The findings of their study indicated an inverse relationship between the level of institutional ownership, managerial ownership, and ownership concentration with liquidity. Moreover, a direct relationship was identified between the level of corporate ownership and liquidity [68].From the review of internal and external studies in the field of personality traits, it can be concluded that most of the accounting studies have used personality traits and are not complete, because, in each of these studies, one or at most two parts of the personality are studied and has been reviewed. To provide general theories before making reliable predictions about the relationship between personality and accounting consequences, it is necessary to repeat these experiences further. In general, the difference between the present study and other research in this field can be expressed as follows:

- This study examines the differences between the personality traits of corporate financial managers completely and comprehensively regarding their attitudes toward tax fraud. Firms also determine the type of attitude they have toward tax fraud.
- The Myers-Briggs Type Indicator (MBTI) has been used more in accounting studies than other methods [22] and apparently in existing accounting studies, no study of tools for determining personality types, through the Five-Factor Model (FFM) [52] .

The formulated hypotheses are based on a comprehensive review of the literature and are presented as follows:

Hypothesis 1: The personality traits of financial managers have a significant effect on tax fraud.

Hypothesis 2: The effect of personality traits of financial managers on tax fraud is different in male and female managers.

Hypothesis 3: The effect of personality traits of financial managers on tax fraud is different in listed firm managers and non-listed firm managers.

3 Methodology

To collect the data for this research, financial managers of firms (both listed and non-listed firms) are used; Therefore, it can be said that the statistical population of the present study regarding the financial managers of listed firms is the Tehran Stock Exchange and regarding the financial managers of non-listed firms, it is not limited to a specific sector and includes the whole country. Since the method of data collection in this study is through a questionnaire and this study is among the survey research, the period of this research is limited to 2020.To collect research data, due to the possibility of non-return of some questionnaires or incomplete answers to the questionnaires, 500 questionnaires were distributed in both parts of the research statistical population. Following repeated follow-ups, 321 firm's finance managers responded to the questionnaires, of which 306 were deemed appropriate. It should be noted that out of this number of questionnaires, 32 questionnaires are related to the section of financial managers of listed firms from the statistical community, and 247 questionnaires are related to the section of managers of non-listed firms from the statistical community. An electronic questionnaire was designed and used to facilitate the distribution of questionnaires. However, the questionnaires were also distributed by the researcher in person to firms (both listed and non-listed firms) or sent via email and cyberspace. In total, the questionnaire of the present study consists of three parts. The first part consists of general questions that consist of six questions. These questions provide information about the gender, level of education, level of experience, and type of firm in which the respondents work. This information is used in the analysis of information and conclusions of the questionnaire. The second part of the NEO Multifunctional Personality Questionnaire (NEO-FFI) in the form of a five-choice scale Likert with the options "Strongly disagree", "disagree", "Neutral", "Agree" and "Strongly Agree", which includes 60 multiple-choice specialist questions. Relationships are with personality traits that respondents are asked to respond to base on their professional knowledge and existing facts. This questionnaire has been used many times in previous research in the field of psychology and due to its standard, it has a good validity coefficient. This NEO-FFI personality questionnaire was administered by McCrae and Costa to 208 American students over three months with scores ranging from 0.83 to 0.75. The third section deals with identifying the attitudes of corporate financial managers towards tax fraud. In this section, two tax cases were raised and the respondent was asked to assign a score between 1 and 10 to the options presented below this text based on these two cases and the measures taken. To be more precise, the choice of the respondent indicates the extent of his ethical judgment in the field of taxation, which reflects the attitude of the company manager towards tax fraud. These two cases are designed in such a way that the firm's tax advisor does something immoral. After asking each of these two theorems, 10 questions are asked. Now, if the respondent chooses options that reflect the ethical action of the firm's tax advisor, the respondent is more prone to immoral judgments and vice versa. Therefore, if the respondent scores lead to options related to the ethics of the firm's tax advisor (smaller numbers and close to one), the respondent's action is considered more immoral. In total, this variable can have a score between 20 and 200. The larger the value of this variable, the more ethical judgments the respondent makes. It should be noted that, first, according to the previous literature in the field of tax fraud of firm's financial managers, the above tax cases were prepared. Then, to check the validity of the questionnaire, the mentioned cases were sent to some accounting professors and experts, and they were asked to comment on the tax cases raised to assess the attitude of the firm's financial managers regarding tax fraud and make the necessary corrections. Cronbach's alpha was used to determine the reliability of the questionnaire. The reliability of the questionnaire related to tax attitudes was 0.9.

4 Findings

Firstly, descriptive statistics are reviewed. Table (1) summarizes the information extracted from the first part of the questionnaire (demographic information based on gender, level of education, and experience) as well as information about personality traits. As can be seen in Table (1), the demographic characteristics exhibit that 84% (257 individuals) of the sample were male and 16% (49 individuals) of the respondents were female. The last degree of financial managers participating in the research was divided into four groups: associate, bachelor, master, and doctorate. 11% (35 individuals) have a bachelor's degree, 65% (199 individuals) have a master's degree and 24% (72 individuals) have a doctorate. Also, 10% of the selected sample (32 individuals) are financial managers of listed firms and 90% (274 individuals) are financial managers of non-listed firms. In the final part of Table (1), information about the personality traits of financial managers is presented in the study sample.

Table 1: Investigation of Demographic Characteristics of the Studied Sample

Variable		Frequency	Frequency (in percentage)
Gender	Male	257	84
	Female	49	16
Education	Associate	-	-
	Bachelor	35	11
	Master	199	65
	Doctoral	72	24
Firm type	listed Firm	32	10
	Non-listed Firm	274	90
personality traits	Personality trait of N	36	12
	Personality trait of E	62	20
	Personality trait of O	26	9
	Personality trait of A	52	17
	Personality trait of C	130	42

As mentioned before, in the present study, the personality trait variable includes five groups: personality trait of N, personality trait of E, personality trait of O, personality trait of A and personality trait of C. 12% (36 individuals) of the study participants have personality type N, 20% (62 individuals) have personality type E, 9% (26 individuals) have personality trait of O, 17% (52 individuals) have personality trait of A and 42% (130 individuals) have personality trait of C personality.

Test result of the first hypothesis is presented in Table (2).

Table 2: Test Results of the First Hypothesis

$TF = \beta_0 + \beta_1 N + \beta_2 E + \beta_3 O + \beta_4 A + \beta_5 C + \varepsilon$						
Variable	symbol	B	Std. Error	T	Sig.	VIF
Constant	Constant	8.047	5.214	1.543	.124	-
personality trait of neuroticism	N	.894	.059	15.057	.000	1.352
personality trait of extraversion	E	.878	.053	16.483	.000	1.573
personality trait of Openness to experience	O	.792	.072	11.019	.000	1.279
personality trait of agreeableness	A	.792	.048	16.484	.000	1.506
personality trait of conscientious	C	.872	.034	25.754	.000	1.970
R Square	Adjusted R Square		Durbin-Watson	F		Sig.
.695	.690		1.626	136.683		.000

The results of the table show that the significant value of the t-statistic for different types of personality traits is less than 0.05, so the relationship between personality traits and tax fraud is observed at a 95% confidence level and therefore the first hypothesis is confirmed. The positive sign of regression coefficients for the personality traits of neuroticism, extraversion, openness to experience (flexibility), and agreeableness indicates the positive effect of these personality traits on tax fraud. In contrast, the negative sign of regression coefficients for the personality trait of conscientious indicates the negative effect of the personality trait of conscientiousness. Also, according to the table, the value of the personality trait of N's coefficient is larger than the coefficient of other personality traits, which indicates the greater impact of this personality trait on managers' tax fraud. The value of the Adjusted R Square equal to 0.69 shows that the tax fraud variable is 69% affected by independent variables. Durbin-Watson statistics indicate that regression line error values lack any autocorrelation. Also, since the variance inflation rate of the variables is less than 5, it can be said that there is no alignment between the independent variables. The test results of the second hypothesis are presented in Table (3). The values of coefficients, t-statistic and significance level of t-statistic can be seen in each group of men and women, respectively.

In this section, the results of the table show that in both groups of male and female managers, the significant value of t-statistic for different types of personality traits is less than 0.05, so at the 95% confidence level, the effect of personality traits on tax fraud is observed. The positive sign of regression coefficients for personality traits of neuroticism, extraversion, openness to experience (flexibility), and agreement in both groups of male and female managers indicates the positive effect of these personality traits on tax fraud. The negative sign of the regression coefficient for the personality trait of conscientiousness in both male and female managers indicate the negative effect of the personality trait of conscientiousness on tax fraud. As a result, the second hypothesis, which indicates a difference in the impact of managers' personality traits and tax fraud between the two groups of male and female managers, is not confirmed and rejected. In the group of male managers, the value of the Adjusted R Square is equal to 0.685 indicating that the tax fraud variable is 68% affected by independent variables. In the group of female managers, the value of the Adjusted R Square is equal to 0.714 indicating that tax fraud is 71% affected by the personality traits of managers. Durbin-Watson statistics in the two groups of male and female managers equal to 1.54 and 2.33, respectively, indicate that the regression line error values do not have any autocorrelation. Also, since the variance inflation rate of the variables in both groups of male and female managers is less than 5, it can be said that there is no alignment between the independent variables.

Table 3: Test results of the second hypothesis

$TF = \beta_0 + \beta_1 N + \beta_2 E + \beta_3 O + \beta_4 A + \beta_5 C + \varepsilon$					
Variable	Symbol	Gender		VIF	
		Male	Female	Male	Female
Constant	Constant	7.018 (1.211) (.227)	13.489 (1.126) (.266)	-	-
personality trait of neuroticism	N	.892 (13.676) (.000)	.906 (6.279) (.000)	1.350	1.376
personality trait of extraversion	E	.913 (14.849) (.000)	.772 (7.002) (.000)	1.471	1.950
personality trait of Openness to experience	O	.796 (10.540) (.000)	.865 (2.359) (.023)	1.313	1.097
personality trait of Agreeableness	A	.805 (14.971) (.000)	.728 (6.876) (.000)	1.509	1.508
personality trait of conscientious	C	-.868 (-23.315) (.000)	-.925 (-10.967) (.000)	1.971	1.904
	R Square	Adjusted R Square	Durbin-Watson	F	Sig.
Male	.692	.685	1.548	112.584	.000
Female	.744	.714	2.334	24.946	.000

The test results of the third hypothesis are presented in Table (4). The values of coefficients, t-statistic and significance level of t-statistic can be seen in each group of listed firms and non-listed firms, respectively .In this section, the results of the table exhibit that the personality traits of active managers in listed firms have a weaker impact on tax fraud than managers working in non-listed firms. The positive sign of regression coefficients for the personality traits of neuroticism, extraversion, and agreement in both groups of managers of listed firms and non-listed firms indicates the positive effect of these personality traits on tax fraud. The sign regression coefficient for the personality trait of openness to experience (flexibility) in the group of directors of listed firms and the personality trait of conscientious in both groups of directors of listed firms and managers of non-listed firms is negative, indicating the negative impact of these personality traits on tax fraud. On the other hand, the effect of personality traits on tax fraud in the managers of listed firms in the personality traits of N and O is not statistically significant. Given that the significant effect of personality traits on tax fraud was not observed in all personality traits related to listed firms, therefore, it is not possible to comment with certainty on the rejection or approval of the third hypothesis. In the group of managers of listed firms, the value of the Adjusted R Square is equal to 0.79 indicating that the tax fraud variable is 79% affected by independent variables. In the group of managers of non-listed firms, the value of the Adjusted R Square is equal to 0.68 indicating that tax fraud is 68% affected by the personality traits of managers. Durbin-Watson statistics in the two groups of directors of listed firms and non-listed firms equal to 2.20 and 1.63, respectively, indicate that the regression line error values do not have any autocorrelation. Also, since the rate of variance inflation of variables in both groups of managers of listed firms and non-listed firms is less than 5, it can be said that there is no alignment between independent variables.

Table 4: Test Results of the Third Hypothesis

$TF = \beta_0 + \beta_1 N + \beta_2 E + \beta_3 O + \beta_4 A + \beta_5 C + \varepsilon$					
Variable	Symbol	Firm type		VIF	
		listed firms	non-listed firms	listed firms	non-listed firms
Constant	Constant	10.236 (.709) (.485)	9.271 (1.675) (.095)	-	-
personality trait of neuroticism	N	.092 (.304) (.764)	.905 (14.868) (.000)	1.201	1.374
personality trait of extraversion	E	.720 (3.420) (.002)	.877 (7.002) (.000)	1.607	1.583
personality trait of Openness to experience	O	-.003 (-.007) (.995)	.783 (10.700) (.000)	1.154	1.310
personality trait of Agreeableness	A	.493 (3.130) (.004)	.804 (16.047) (.000)	1.442	1.521
personality trait of conscientious	C	.877 (9.707) (.000)	.862 (23.866) (.000)	2.003	1.974
	R Square	Adjusted R Square	Durbin-Watson	F	Sig.
listed firms	.832	.799	2.204	25.690	.000
non-listed firms	.691	.685	1.630	119.735	.000

5 Discussion and Conclusions

Every year, as the income tax filing date approaches, taxpayers become emotionally involved: fear, panic, satisfaction, and hope. Although taxation is a topic that every legal or natural person should deal with, it seems that each person deals with their tax with a set of different strategies. The way different people approach the tax season is randomly determined by individual desires. In most cases, a person's response to the annual income tax filing process is rooted in his or her personality. In most cases, a person's response to the annual income tax filing process is rooted in his or her personality. For this reason, when there is a good understanding of the different types of personalities, it is easy to predict how taxpayers will deal with taxes.Tax in the economy is an allocative-distributive financial lever that can be a regulatory aspect. The phenomenon of tax evasion as an anti-value can be a serious threat to the continuation of social life and the realization of social welfare, and for this reason, it is inevitable to know the factors that cause tax evasion and to prepare and provide scientific and practical solutions and suggestions. One of the most important reasons for the gap between realized tax revenues and the country's tax capacities is the phenomenon of tax evasion. In fact, the existence of a vast underground economy, smuggling, lack of economic transparency and such things have led to the occurrence of considerable tax evasion in the country. Among these, some of the main reasons for the phenomenon of tax evasion can be attributed to social norms and actions in paying taxes, corruption of some tax officials, lack of transparency of information, lack of a monitoring and follow-up system in tax collection as institutional reasons for tax evasion, and not welcoming the submission of tax returns. Tax, delay in tax collection, problems related to the detection of tax arrears, non-identification of taxpayers and the existence of wide and varied exemptions as implementation problems in the current situation.Tax evasion is a socio-economic phenomenon with negative consequences on these two levels. And it reduces the public welfare, the continuation of the underdevelopment of the economy and the reduction of the share of taxes from gross production. It also includes the interior The tax evaders benefit from the tax-free ride! By providing the share of this group of economic actors by the complicators, the unfair distribution of the tax burden and imbalance There is an accident in the reallocation of resources. In fact, there is a feeling of doubt in the horizontal and vertical fiscal justice. In addition to increasing the possibility of social tensions, it drives the semantic system in a negative direction towards the tendency of non-economic action against voluntary and willing compliance. Distance from fiscal ideals and economic realism, fiscal organization and the country's economic complex, He sees his institutional authority and socio-economic structure in a fragile state at best.Tax research has been extensive, and the issue of tax evasion has been analyzed in many ways by previous researchers, as tax evasion is a very serious issue. Tax evasion is a growing global problem, and it is important to identify the underlying factors that influence tax decisions. In this study, the effect of financial managers' personality traits on tax fraud was investigated. This effect was then examined in two groups male financial managers and female financial managers. Also, the effect of personality traits of financial managers on tax fraud was tested separately in two groups of financial managers of listed firms and financial managers of non-listed firms. The findings suggested that the personality traits of financial managers affect tax fraud. This effect was also observed in the groups of male and female financial managers and also in the groups of financial managers of listed firms and non-listed firms. Neuroticism (N) contrasts emotional stability and events with negative emotions, such as feelings of anxiety, nervousness, sadness, and stress. Neuroticism is characterized by a negative emotional symptom, such as feelings of anxiety, sadness, and tension. Neuroticism is the opposite of emotional stability. They are nervous and emotionally insecure and are therefore driven to a disturbing nature. Research findings exhibit that a person who has negative feelings does not comply with tax laws and regulations. Also, people who are known as neurotic do not comply with tax rules and regulations because they are insecure and do not worry about paying taxes. Extraversion implies an energetic approach toward the social and material world and includes traits such as sociability, activity, assertiveness, and positive emotionality. An extravert is generally manipulative and seeks to dominate and decide how things should be done [7]. The findings indicate that extraversion individuals perceive tax compliance as important, and they have a positive attitude towards compliance. This can be due to their sociability and confidence features which indicate that they believe in their responsibility as regulators of taxable income. As a result, these individuals tend to manipulate taxes so that they can have a minimum tax payment. Openness to Experience describes the breadth, depth, originality, and complexity of an individual's mental and experiential life. Individuals with more openness to experience enjoy change and complexity in life, and they demonstrate a higher level of tolerance for ambiguity. The desire to learn among open individuals tends to be higher and their intellect makes them prone to explore and gain knowledge through sincere work. As per the findings, it is evident that individuals under this domain of personality feel noncompliance is right and therefore tend to tax fraud. Agreeableness includes traits such as altruism, tendermindedness, trust, and modesty. Agreeableness is manifested in social qualities such as kindness. Agreeable individuals are tender-minded, cooperative, trustful, and modest. Individuals are agreeable when they are derived to be gentle, honest, and warm. This suggests that these individuals will be emphatic to others, which means these taxpayers understand that if the tax amount is reduced, the amount deducted will be used to improve the company so that all employees can benefit. So, these taxpayers are also manipulating tax reporting. Conscientiousness describes socially prescribed impulse control that facilitates task- and goal-directed behavior, such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing, and prioritizing tasks. Conscientious individuals accept social values such as dutifulness and orderliness. Conscientious individuals are task- and goal-oriented, thorough, responsible, reliable, follow norms and rules, plan, organize, and prioritize. They are governed by conscience or diligence. Conscientiousness reflects the tendency of an individual to follow policies and protocols, so this indicates those who are conscientious will follow the tax laws by being transparent about their income and expenses to the tax authority despite any opportunity, pressure or rationalization that exists. In addition to that, high conscientiousness in an individual reflects the attitude of taking responsibility and these individuals may give more focus on complying with tax as per the legislation since it is their responsibility. It should be noted that a study has not yet examined the effect of financial managers' personality traits on tax fraud, so no study was found to compare.

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