Fraud Triangle Theory and Income Tax Evasion in Lebanon

Ahmad Mohamad Abdo-Salloum[1,2,*], Hasan Yousef Al-Mousawi[1]

[1]*Doctoral School of Law, Political, Administrative and Economic Sciences - Lebanese University, Beirut, Lebanon.*

[2]*Department of Accounting Information Systems, Lebanese International University, Tripoli, Lebanon.*

Abstract: Tax revenues are a critical source of income for the Lebanese government. However, tax evasion remains pervasive in the country, with income tax evasion being the most prominent type. This results in an annual loss of $2 billion, which equates to around 3.9% of the GDP. As a result, effective measures must be implemented to reduce income tax evasion in Lebanon. To achieve this, the root causes of income tax evasion in Lebanon must be clearly identified so that the policymakers can respond and take necessary action. Thus, this study aims to explore the relationship between the components of the Fraud Triangle Theory and the behavior of taxpayers in committing income tax evasion in Lebanon. The study also seeks to assess the correlation between the factors of the Fraud Triangle Theory and taxpayer behavior, and subsequently, determine the intensity of each factor and the most significant factor. The research methodology used is quantitative, with a survey strategy employed for data collection through a questionnaire. The study population comprises income taxpayers in Lebanon, with a random sample selected for the study. The data collected are analyzed using SPSS, including reliability testing, ANOVA testing, regression analysis, and Pearson correlation. The findings indicate that opportunities, rationalization, and capabilities are significant factors in committing income tax evasion in Lebanon. However, the study also revealed that pressures, mistrust in politicians, lack of motivation for tax compliance, and financial instability are not significant factors. Nonetheless, these factors indirectly affect income tax evasion in Lebanon as they trigger the rationalization of evading taxes. In conclusion, reducing income tax evasion in Lebanon is essential for the country's economic stability. This study contributes to the understanding of the factors influencing income tax evasion and provides a basis for future research in this area. The findings suggest that policymakers should focus on reducing opportunities for income tax evasion and addressing the rationalization and capabilities of evading taxes.

Keywords: Income tax evasion, Fraud Triangle Theory, Opportunities, Rationalization, Capabilities, Pressures.

1. INTRODUCTION

Tax evasion is defined as a tax resistance that obstructs the tax collection and then, reduces the government's cash receipts (Gatot Soeherman et *al*., 2017). In addition, it is described as a complex social and economic incident, a threat that affects the economies, for which this area has attracted the attention of many scientific researchers (Comandaru et *al*., 2018). Accordingly, numerous studies were conducted in order to identify the roots of tax evasion.

Speaking about income tax evasion in Lebanon, many taxpayers do not report their due income taxes, and others are used to submit unrealistic declarations which is a kind of income tax evasion. According to Bank Audi (2018), income tax evasion constitutes the largest kind of tax evasion in the country. It results in a loss of $2 billion per year which equals to around 3.9% of the GDP. In addition, income tax evasion activities include misreporting of taxes, manipulating revenues and expenses, and minimizing the profits; such activities are intended to reduce the tax due to the govern

ment. Furthermore, Lebanon suffers pervasive corruption, poor inspection of taxpayers' transactions and accounts, and the Lebanese people trend of evading taxes (BLOMINVEST BANK, 2017). As a result of the significant level of tax evasion, Lebanon was ranked 137th among 180 countries in the Corruption Perceptions Index of the Transparency International Organization in 2019. Thus, Lebanon is recognized among the top 50 corrupted countries in the world (Transparency International, 2020). Therefore, serious and effective procedures should be implemented in order to minimize the income tax evasion in the country. Accordingly, the roots of income tax evasion in Lebanon need to be clearly identified, and once identified, the Lebanese policymakers will be able to respond to such problem and reduce the income tax evasion.

Various theories, including the Social Exchange the Theory, Theory of Planned Behavior (TPB), and the Fraud Triangle theory, address the issue of income tax evasion. According to social exchange theory, individuals consider the fairness of sacrifices and benefits they receive, including fair treatment from the government. Taxpayers who perceive unfair treatment are more likely to engage in fraud or non-compliance. The Theory of Planned Behavior explains that behavior is determined by the intention to behave, which is influenced

*Address correspondence to this author at the Department of Accounting Information Systems, Lebanese International University, Tripoli, Lebanon; E-mail: ahmad.salloum@liu.edu.lb

by three factors: behavioral beliefs, normative beliefs, and control beliefs. The Fraud Triangle, proposed by Donald Cressey (1953), identifies three factors that cause fraud: perceived pressure, perceived opportunity, and rationalization. Tax evasion is a form of fraud and can be facilitated by the self-assessment system in taxation (Gatot Soeherman et al., 2017).

Several studies linked the roots of tax evasion to the components of the Fraud Triangle Theory of Cressey (1953). Nonetheless, there is no existing study that identified the roots of income tax evasion in Lebanon, by linking them to the Fraud Triangle Theory. Cressey's Theory indicates that three factors are associated with any type of fraud. These are situational pressure, opportunity and rationalization. First, the situational pressure factor includes job-related or personal stress that may motivate an individual to act deceitfully. Second, the opportunity factor involves direct access to information and/or access to assets. Finally, the rationalization factor pertains to individuals' characters and level of moral opposition to acts of deceit (Hall, 2011). Consequently, this research links the roots of income tax evasion in Lebanon to the components of the Fraud Triangle Theory. It aims to explore the relationship between the components of the Fraud Triangle Theory and the behavior of taxpayers in committing income tax evasion in Lebanon. It also seeks to assess the correlation between the factors of the Fraud Triangle Theory and taxpayer behavior, and subsequently, determine the intensity of each factor and the most significant factor. Therefore, achieving the aim of this research is crucial for the Lebanese policymakers and tax authorities in order to tackle the income tax evasion problem form its roots.

Moreover, this research investigates the relationship between the Fraud Triangle Theory and income tax evasion among Lebanese taxpayers using a mono quantitative research methodology. The survey strategy is employed to collect data from a sample of 114 taxpayers, and the data are analyzed using SPSS. The study acknowledges the limitations of the sample size, the lack of previous research on the topic, and the timing of the study during a financial crisis in Lebanon. The study provides recommendations for reducing income tax evasion in Lebanon and guiding future researchers.

Furthermore, this research contributes to the existing literature on income tax evasion by applying the Fraud Triangle Model to the Lebanese context. The findings reveal that the Fraud Diamond Model, which expands on the Fraud Triangle Model, is a more suitable framework for understanding the factors that influence income tax evasion in Lebanon. Specifically, the study found that opportunities are the most significant factor in income tax evasion, while pressures were found to be indirectly influential through their impact on rationalization. Additionally, the study highlights the impact of the Lebanese financial crisis, pervasive corruption, ineffective control procedures, and other factors on income tax evasion. These insights can inform policymakers and tax authorities in Lebanon and other countries facing similar challenges in combating tax evasion. Overall, this research expands the understanding of tax evasion by applying a well-established theoretical model to a specific context and identifying unique factors that contribute to tax evasion in Lebanon.

Finally, this paper has been designed in the following manner: the first section provides the introduction, the second section presents the literature review, the third section outlines the model specification and data used, the fourth section discusses the analysis of the data and the results obtained, and lastly, the fifth section presents the conclusion.

2. LITERATURE REVIEW

The literature review is divided into two sections. The first section provides an overview of the Lebanese income tax system and identifies the factors that contribute to income tax evasion in the country. The second section examines various studies conducted in different countries on the topic of tax evasion, with a particular focus on the fraud triangle model. This review of the literature aims to establish a comprehensive understanding of the factors that drive tax evasion.

Income Taxes in Lebanon

The Lebanese tax law clearly identifies the process to which taxpayers should abide when paying their income taxes. Accordingly, the payment of income taxes is always anticipated by submitting tax returns. These tax returns include all revenues, expenses, and profits, as well as the amount of tax owed to the government. Nonetheless, there is a large number of Lebanese taxpayers who are used to not submit their tax declarations; or to submit unrealistic declarations for income tax evasion incentives.

Tax evasion is described as active and passive tax resistance that obstructs the collection of taxes, and then minimizes the government's cash receipts (Lumbantoruan, 1996: 489, cited in Gatot Soeherman et al., 2017). Several researchers dealt with the income tax evasion. Hammar et al. (2005) denoted that multiple factors influence the manipulation of income in order to evade taxes. These factors include the probability of getting caught, the trust in the public officials, the marginal tax rate and the level of taxable income. Additionally, Alm et al. (2015) reported that corruption enables individuals to achieve income tax evasion by understating income. Then, Gatot Soeherman et al. (2017) indicated that small companies evade taxes, while large companies usually seek to take the best opportunity from the vagueness or the gaps of the tax laws. In addition, employees by themselves are unable to evade income taxes because their employer is obliged to report the wages paid to the tax authorities and accordingly, pays the taxes due on salaries and wages. Moreover, Ozili (2020) identified several factors that contribute to tax evasion. These factors are: high tax rates, tax evasion technologies, weak tax enforcement strategies, inaccurate tax data and records, booming tax avoidance industry, corruption, inadequate collection mechanism and non-transparency, self-employed income, and other factors. Furthermore, Kassa & Mohammed (2021) found that tax fairness has the greatest influence on taxpayers' decision to evade taxes, followed by tax knowledge and moral obligation. Lastly, Khalil & Sidani (2022) concluded that the root of tax evasion may belong to the taxpayers' perception of the equity of the tax system rather than demographic characteristics or personality traits.

In Lebanon, two studies have been conducted on income tax evasion. The first study was conducted by BLOMINVEST

BANK in 2017 and it shed light on several parameters that affect the tax evasion in Lebanon. It considered the tax evasion as a form of moral hazard, and that the weak implementation of corporate governance increases tax evasion. In addition, the study implied that Lebanon suffers pervasive corruption, poor inspection of taxpayers' transactions and accounts, and the Lebanese people trend of evading taxes. Moreover, it indicated that SMEs tend to manipulate their financial statements for income tax evasion incentives, and that SMEs working in the informal market may not register in the Ministry of Finance. Therefore, income tax evasion from these is difficult to estimate. Then, the study stressed that Syrian refugee-workers are kept undeclared to the tax authorities by their employers. Finally, the study denoted that Lebanese companies declare lower salaries in order to evade social security fees. Furthermore, the second study was conducted by Bank Audi during 2018. It emphasized that tax rates in Lebanon are relatively low. Nevertheless, Lebanon suffers from large tax evasion gap. Also, the study displayed different sources of fiscal evasion such as income taxes, value added taxes, custom duties, unpaid electricity bills, and property taxes. Nevertheless, income tax evasion is the primary source of tax evasion in the country (Bank Audi, 2018).

The Fraud Triangle Theory and Income Tax Evasion

Income tax evasion is a serious social and economic problem, a threat that attacks the economies. It is an arrangement by which individuals or organizations reduce their tax liabilities through legal or illegal means (Parreira, 2014). As a result, several researchers have sought to explain the underlying causes of tax evasion. Cressey (1953) developed the Fraud Triangle Theory, which indicates that any fraudulent act is based on three roots: the pressure, the opportunity, and the rationalization. Subsequently, the factors identified by Cressey (1953) have been discussed widely among numerous researchers; who approached the tax evasion to the Fraud Triangle Theory, since tax evasion is considered as a fraudulent act (Lederman, 2021).

Starting with the pressure factor which is the first component of the Fraud Triangle Theory, Yalama and Gumus (2013) implied that taxpayers are exposed to several pressures that induce them to evade taxes. These are high tax rates, high penalty rates, and increased tax audit activities by tax officials. Subsequently, Aghghaleh et *al.* (2014) denoted that the pressure involves different financial problems. They concluded that the majority of fraudulent acts is based on vice-related or financial pressures. Furthermore, Murphy and Free (2016) argued that pressures are always external, also, they are always accompanied with related internal incentives. In addition, Gatot Soeherman et *al.* (2017) examined as well the pressures related to tax evasion. They found that the pressures to commit tax evasion may be based on financial condition, business relations, other parties such as family or tax advisors to evade taxes. Nugraha and Susanto (2018) also stressed that the fraud perpetrator might have pressure conditions such as high living costs, personal financial problem, strong ambition, legal problem, unsatisfactory jobs, and family problems. Moreover, ACFE (2020) implied that if individuals have challenging financial problems that are hard to be solved, they will commit illegal acts in order to solve

these problems. Also, it indicated that financial problems might be job-related or personal. Furthermore, Hijattulah et *al.* (2020) stressed that tax fairness represents a pressure for tax evaders. Accordingly, taxpayers who perceive their tax obligations as higher than that of other taxpayers, are more motivated to evade taxes. Finally, Lederman (2021) indicated that several contexts of financial pressures influence tax evasion, including small businesses and corporate contexts. According to her, struggling small businesses commit income tax evasion, specifically, in salaries and wages taxes. Additionally, she indicated that the direct beneficiaries from tax evasion are the corporation's shareholders. Hence, Shareholders require managers to evade taxes, and the latter engage in evasion as long as their benefits are clearly identified.

The opportunity element of the Fraud Triangle Theory was discussed as well by the researchers. Yalama and Gumus (2013) stressed the importance of the probability of being caught as a factor in tax evasion; that is when the probability of being caught is insignificant, tax evasion would increase. In addition, Aghghaleh et *al.* (2014) argued that related party transactions and the difference between cash flow responsibility and control procedures are opportunities to commit a fraud. Also, Gatot Soeherman et *al.* (2017) suggested that perceived opportunities that influence the tax evasion are: the lack of controls, the access to information, and the absence of an audit trail. Moreover, Nugraha and Susanto (2018) suggested that the fraudsters seek to maximize their profitability in perpetrating a fraud in the presence of the internal control procedures, and relying on collusion as a central factor when it comes to opportunity. Furthermore, ACFE (2020) denoted that the perpetrators abuse their position of trust to solve their financial problems without being caught. ACFE (2020) added that perpetrators must distinguish that they have the opportunity to commit a fraud without getting caught. Also, Hijattulah et *al.* (2020) investigated the corruption as an essential opportunity in fraudulent activities, particularly in tax evasion; that is corruption occurs when a public tax officer receives a sum of money in exchange for an illegal act. Furthermore, Lederman (2021) denoted that cash income creates a perceived opportunity to evade income taxes. In addition, the perpetrator should rely on his technical skills in order to identify the opportunities that open the doorway to tax evasion. Otekunrin et al. (2021) suggested that the implementation of E-tax system minimizes the opportunity to taxpayers to evade taxes. Finally, Kong et al. (2023) provided compelling evidence that the anti-corruption campaign has a detrimental impact on corporate tax evasion. One possible explanation is that the central inspection team's anti-corruption campaign weakened the collusion between taxpayers and tax officials.

Rationalization is the last element of the Fraud Triangle Theory, and it has attracted the most attention from researchers. Hence, Yalama and Gumus (2013) indicated that tax morale, tax mentality, and abiding the law by taxpayers greatly influence tax evasion. Also, Murphy and Free (2016) identified seven rationalization categories: (1) advantageous comparison, by comparing acts to something worse, (2) justification of moral, by reconstruing acts as they are morally worthy, (3) reduce, ignore, or misinterpret the results of the acts, (4) euphemistic labeling, or using complex language to

make acts look better than they are, (5) blaming or denial the victim, (6) displacing duty by blaming somebody else, and (7) spreading responsibility, by blaming everyone else. Moreover, Gatot Soeherman et al. (2017) suggested that the perpetrators of tax evasion believe that their actions are not fraudulent. Otherwise, they believe that tax evasion is their right and sometimes they feel it is worthy for having done much for their companies. In addition, Nugraha and Susanto (2018) denoted that the perpetrators should rationalize their fraudulent act despite the presence of the pressures and opportunities. Thus, perpetrators use their rationalization to remove the negative impact of the unethical act. Furthermore, ACFE (2020) stressed that perpetrators must justify their fraudulent act to themselves in order make it acceptable. Such behavior is known as rationalization. At this stage, ACFE (2020) was in accordance with the results of Murphy and Free (2016) who suggested moral justification as a rationalization category. Furthermore, ACFE (2020) mentioned that rationalization takes place before committing the fraud, and it provides several excuses that perpetrators give to explain their fraudulent act. These include: we always do it, everyone does it, we had no idea it was fraudulent, and it's part of our country's culture. Subsequently, Hijattulah et al. (2020) argued that tax evasion is an unethical act that influences the wealth distribution in society. This is because tax revenues constitute the essential finance of public services. Lederman (2021) linked the rationalization of evading taxes to the six categories expanded by Anand et al. (2004) namely: (1) Rejection of responsibilities (The perpetrators engaged in corrupt acts perceive that they don't have other choice than to commit such activities); (2) Rejection of injury (The perpetrators believe that they harmed no one by their actions; hence, these actions are not considered as corruption); (3) Rejection of victim (The perpetrators handle any blame for their actions by noting that the violated party deserved whatever happened); (4) Social weighting (The perpetrators engage in two practices that justify the salience of corrupt behaviors: 1. Condemn the condemner, 2. Selective social comparison); (5) Appeal to loyalties (The perpetrators believe that their violation of norms is due to their effort to realize a higher-order value); and (6) Metaphor of the ledger (The perpetrators rationalize that they are entitled to commit irregular behaviors because of their time and effort in their jobs). Lastly, Abu Hassan et al. (2022) suggested that the threat of punishment and the tax learning and education have a significant positive relationship with tax compliance rationalization.

Subsequently, the fraud triangle model has been expanded by Wolfe and Hermanson (2004) to the recent four-based model, which is called the fraud diamond model. Accordingly, they stressed the need for a new factor, the capability, in order to occur a fraud. They suggested that the capability factor enables fraud perpetrators to recognize that they have the required characters and abilities to be the right person who can commit the fraud. Thus, it allows them to identify the particular opportunity and do their best to turn it into reality. In addition, based on their experience in fraud investigation, Wolfe and Hermanson (2004) concluded six important traits for committing a fraud and which perceived as capability. First, the position within an organization may provide the ability to exploit or generate an opportunity for fraudulent acts that are not available to all. Also, when individuals perform the same tasks repeatedly, their capability to commit fraudulent acts increases over time as their knowledge of the controls and processes expands. Second, the fraud perpetrators are smart enough to utilize and understand internal control deficiencies and to exploit functions, authorized access, or positions to the maximum advantage. Hence, the most significant frauds are typically committed by individuals who are creative, experienced, and intelligent, and who possess a strong understanding of the company's controls and vulnerabilities. Third, the right perpetrators are greatly egoistic and self-confident that they will not be detected, and they believe that if caught, they could easily take themselves out of trouble. Consequently, the more confident the person is, the lower the expected cost of fraud. Basically, Wolfe and Hermanson (2004) supported R. Allan (2003) who denoted that "egotist" is the most common personality types among fraud perpetrators. Fourth, the successful fraud perpetrators can force others to commit a fraud. As a result, a very persuasive perpetrator may be able to influence others to commit a fraud. In addition, Allan (2003) mentioned that "bully" is a common personality among perpetrators. It allows them to demand significant and unusual demands from their workers, spreading fear instead of respect. Fifth, successful perpetrators lie consistently and excellently in order to avoid detection. They must look people right in their eyes and lie persuasively. Finally, successful fraud perpetrators are able to face and to deal with the stress. This is because perpetrating a fraud and managing it can be extremely stressful over a long period of time. Consequently, there is a risk of detection, with personal implications for the perpetrator, as well as a need to continually cover up the fraud on a daily basis.

Although most of the tax evasion drivers have been identified by the Fraud Triangle Theory, some researchers investigated additional factors related to the tax evasion. Hence, Hammar et al. (2005) examined the importance of trust in committing tax evasion. They noticed that such fraudulent acts are pervasive among taxpayers who distrust politicians and who believe that politicians do not perform a good job concerning the use of tax revenues. Furthermore, Yalama and Gumus (2013) investigated the impact of different factors on tax evasion. These are demographic, economic, politics, administrative, and additional factors. Subsequently, McGee and Ross (2014) explored the impact of education, gender and age on tax evasion in six countries, however, they were unable to state that the relationship between tax evasion and education, gender and age is uniform across countries and cultures. Moreover, Kong and Wang (2014) implied that in order to reduce tax evasion, it is important to motivate taxpayers to abide with the tax laws. Ismail et al. (2014) argued that two factors influence tax evasion; the confidence in the fiscal fairness (fair tax system), and the confidence in the effective controls of tax evasion. Additionally, Ozili (2020) concluded that there is a correlation between financial stability and tax evasion. Hijattulah et al. (2020) found that the decision to commit tax evasion can be influenced by groups or individuals such as friends, peers, family, and colleagues. Kassa & Mohammed (2021) suggested that tax knowledge, tax fairness, and moral obligations are significant factors that affect taxpayers' participa-
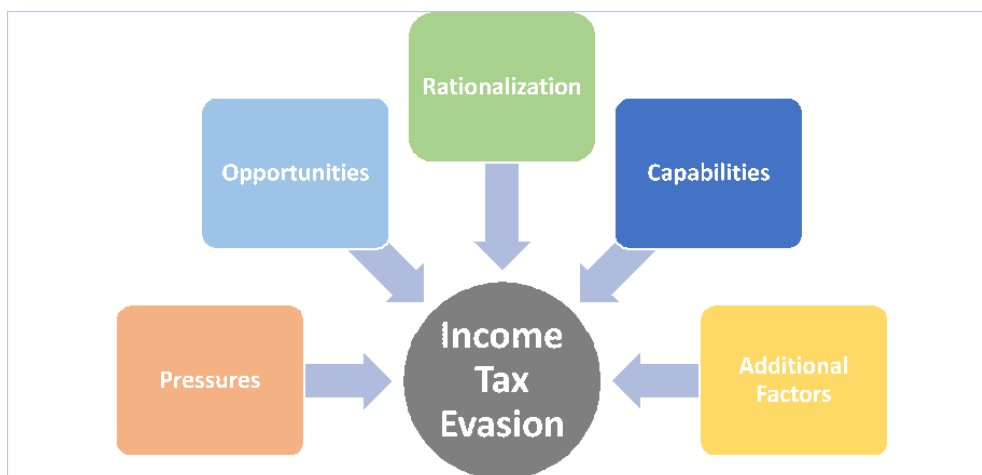
Fig. (1). Regression Model of Income Tax Evasion.

tion in tax evasion activities. Finally, Benkraiem et al. (2021) denoted that both the robustness of auditing standards and the ethical conduct of firms are effective institutional mechanisms in reducing tax evasion.

3. MODEL SPECIFICATION AND DATA

This section explains the methodology adopted throughout this paper. In addition, it specifies the model to be tested as well as the dependent and the independent variables.

Methodology and Model Specification

In order to achieve the research aim, the mono quantitative research methodology is adopted. Moreover, the positivism and the critical realism philosophies are implemented. In addition, the survey strategy is employed for the data collection using a questionnaire. The questionnaire used collects data regarding the dependent and the independent variables. The questions used in the questionnaire are structured and closed ended questions, and they are based on 5-point Likert scale. In addition, the questionnaire is prepared and distributed to participants using Google Forms. Furthermore, the population of this study consists of the income taxpayers in Lebanon, which amounts to 663,651. Hence, a random sample of 114 taxpayers is selected based on Kish (1965) sampling. Subsequently, the data collected are analyzed using SPSS based on the reliability test, the ANOVA test, the regression analysis, and Pearson correlation.

Moreover, the regression analysis allows to develop a model concerning income tax evasion in Lebanon. The model encompasses all of the independent variables that have an impact on income tax evasion in Lebanon, with income tax evasion being the dependent variable. The model of income tax evasion is presented below:

Income tax evasion = b_0 + b1*pressures + b2*opportunities + b3*rationalization + b4*capabilities + b5*additional factors + ε, where:

b0 is a constant indicating a certain level of income tax evasion if all other variables in the model are insignificant.

b1 to b5 are vectors of unknown regression parameters.

ε is the error of prediction.

Fig. (**1**) is the graphical representation of the regression model that is going to be tested.

Variables Specification

While the dependent variable in this research is the income tax evasion in Lebanon, the independent variables comprise pressures, opportunities, rationalization, capabilities and additional factors. These variables are represented in the questionnaire using the following drivers:

Table 1. Variables of the Research.

The dependent Variable: Income tax evasion in Lebanon	1- There is a high trend of income tax evasion in Lebanon.
	2- When income tax evasion is committed, taxpayers will not report all of their income to tax authorities.
	3- When income tax evasion is committed, taxpayers will not pay their income tax correctly.
	4- Lebanese taxpayers are greatly tempted to evade income taxes.
Independent Variable 1: Pressures	1- Financial problems: high debts, personal losses, unexpected need for money, and high living costs and others.
	2- Personal norms: The tax preparer, the friends, the family, the spouse, and the peers, influence the decision of taxpayers to evade taxes.
	3- High tax rates: The Lebanese income tax rates are high.
	4- High penalty rates: The Lebanese penalty rates are high. (Penalties are imposed when breaking the tax law).
	5- Saving incentives: Income tax evasion allows taxpayers to save more money.
	6- Increased tax audit activities: The increased audit activities performed by the government's tax controllers.
Independent Variable 2: Opportunities	The ineffectiveness or the absence of internal control procedures.
	The absence of audit trail.

	Related party transactions. For example, the collusion between the taxpayers and their customers to reduce the amount of actual sales.
	The low probability of getting caught.
	The corruption.
	The lack of accountability for tax evaders.
	Frequent cash transactions.
Independent Variable 3: Rationalization	No blame: Taxpayers deserve to evade taxes.
	No blame: Taxpayers benefit from nothing.
	No blame: The government will never miss the money.
	No blame: There is a lot of corruption.
	The tax system is unfair, it allows taxpayers to pay income taxes on behalf of rich people.
	Income tax evasion is not a bad act, it is ethical and hurts no one. All taxpayers evade income taxes.
	Income tax evasion is the only way to save the businesses of taxpayers. Hence, they deserve to evade income taxes.
	Income tax evaders have low ethical values and morals.
Independent Variable 4: Capabilities	Lebanese taxpayers are able to evade income taxes without getting caught.
	Repeated income tax evasion allows taxpayers to evade taxes easily.
	Lebanese taxpayers are smart enough to evade taxes without getting caught.
	Lebanese taxpayers are egoist and confident that will not be detected when evading income taxes.
	Lebanese taxpayers have the skill of consistently lie and are able to deal with stress resulted from lying activities.
Independent Variable 5: Additional factors	Lack of trust in tax officials and policymakers.
	Lack of motivation to comply with tax law.
	Lack of financial stability in the country.

4. DATA ANALYSIS AND RESULTS

This section presents the tests conducted with SPSS software along with the empirical results and discussions.

Tests

A. Reliability Test

The Reliability Test of SPSS showed a Cronbach's Alpha $\geq$ 0.7 for all the questions of the questionnaire. Hence, the questions combined in each category of questions measure the same thing, and thus, the responses are considered as reliable.

B. ANOVA Test

The ANOVA test is performed based on a margin error of 5% in order to identify the impact of age, gender, marital status, governorate, education, income level, business size, and legal form of taxpayers on the income tax evasion in Lebanon. Consequently, the ANOVA test shows no significance regarding any of the previous variables when evading income taxes (all P-Values were above 5%). Therefore, no relationship is detected between income tax evasion and the age, gender, marital status, governorate, education, income level, business size, and legal form of taxpayers.

C. Regression Analysis

Regression Analysis – Income tax evasion

The regression analysis allows to develop a model concerning income tax evasion in Lebanon. The model of income tax evasion is presented below:

Income tax evasion = b_0 + b1*pressures + b2*opportunities + b3*rationalization + b4*capabilities + b5*additional factors + ε.

Moreover, the regression analysis is used to test the following hypotheses:

H1: The pressures of taxpayers positively affect the income tax evasion.

H2: The opportunities of taxpayers positively affect the income tax evasion.

H3: The rationalizations of taxpayers positively affect the income tax evasion.

H4: The capabilities of taxpayers positively affect the income tax evasion.

H5: Income tax evasion is influenced by additional factors.

The goodness of it test is performed before starting the regression analysis. Accordingly, The F-Test shows significance (P-Value = 0 < 0.05), and the R-Square provided is 0.34.

Although R square is not really strong, the model is still considered as reliable and fitting the data due the significance of the F-Test, and due to the sensitivity of the research topic. Furthermore, several researchers conducted their regression analysis on tax evasion with a low R-Square. Accordingly, Yalama and Gumus (2013) performed their regression analysis for tax evasion while having an R-Square of 0.168. Also, Gatot Soeherman et al. (2013) performed their regression analysis for tax evasion while having an R-Square of 0.25.

Subsequently, the multiple regression test is performed in order to explore the income tax evasion model in Lebanon. Accordingly, the opportunities, the capabilities, and the rationalization are proved as significant when evading income taxes (P-Value < 0.05), while the pressures and additional factors are recognized as non-significant (P-Value > 0.05).

Hence, the final model of income tax evasion in Lebanon is:

Table 2. F-Test.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	22.068	5	4.414	11.117	.000
Residual	42.877	108	.397		
Total	64.945	113			

Table 3. Model Summary.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.583	.340	.309	.63009

Table 4. Regression Table.

Coefficients					
Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	1.262	.429		2.942	.004
Pressures	.036	.095	.034	.386	.700
Opportunities	.330	.085	.338	3.881	.000
Rationalization	.190	.087	.200	2.191	.031
Capabilities	.168	.076	.187	2.212	.029
Additional factors	.072	.074	.085	.967	.336
Dependent Variable: Income Tax Evasion					

Table 5. Regression Table – Enhanced.

Coefficients					
Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
1 (Constant)	1.462	.380		3.843	.000
Opportunities	.343	.083	.352	4.146	.000
Rationalization	.230	.077	.242	2.974	.004
Capabilities	.180	.075	.200	2.412	.018
Dependent Variable: Income tax evasion					

Income Tax Evasion = 1.262 + 0.036 Pressures + 0.33 Opportunities + 0.19 Rationalization + 0.168 Capabilities + 0.072 Additional factors.

Moreover, the opportunity is considered as the most significant factor of income tax evasion as it has the highest coefficient.

Nonetheless, the regression model could be enhanced by removing all the nonsignificant variables and rerun the regression analysis. Thus, pressures and additional factors are removed from the model. By doing so, the regression table becomes as follows.

Accordingly, the regression model of income tax evasion in Lebanon becomes:

Income Tax Evasion = 1.462 + 0.343 Opportunities + 0.23 Rationalization + 0.18 Capabilities, this means that the opportunities constitute the major variable that leads the income taxpayers to evade taxes with a coefficient of 0.343. The, rationalization is to be considered the second variable with a coefficient of 0.23. Finally, the last variable that influences the income tax evasion is the capabilities with a coefficient of 0.18. Nevertheless, income tax evasion may take place in the absence of these three variables, this is due to the constant of 1.462 in the model.

Finally, the result of hypotheses testing is summarized in the below table:

Table 6. Results of hypotheses testing – Income Tax Evasion.

Hypothesis number	p-value	Decision
H1	0.700	Rejected
H2	0.000	Accepted
H3	0.031	Accepted
H4	0.029	Accepted
H5	0.336	Rejected

Regression Analysis – Rationalization

The regression analysis is also performed to explore the variables that trigger the rationalization of income taxpayers to evade taxes. Hence, the rationalization is now considered as the dependent variable, while the pressures, opportunities, capabilities and additional factors are considered as the independent variables. Therefore, the following hypotheses are tested:

H6: The pressure factors positively affect the rationalization of income tax evasion.

H7: The opportunity factors positively affect the rationalization of income tax

H8: The capability factors positively affect the rationalization of income tax evasion.

H9: The additional factors positively affect the rationalization of income tax evasion.

Consequently, the regression table of the rationalization is as follows.

The regression table shows that the pressures (P-value $0.001 < 0.05$) and the additional factors (P-value $0.003 < 0.05$) are only significant for tax evasion rationalization. However, the opportunities (P-value $0.229 > 0.05$) and capabilities (P-value $0.775 > 0.05$) are nonsignificant. Accordingly, the conclusion to be drawn is, despite that the pressures and the additional factors do not influence directly the income tax evasion, they trigger the rationalization, which then lead to income tax evasion. Thus, the decisions on the hypotheses

related to rationalization are as follows:

Table 8. Results of hypotheses testing – Income Tax Evasion.

Hypothesis Number	p-value	Decision
H6	0.001	Accepted
H7	0.229	Rejected
H8	0.755	Rejected
H9	0.003	Accepted

Regression Analysis – Opportunities

Finally, the regression analysis is also accomplished in order to explore the relationship between the opportunities and capabilities when evading income taxes. Therefore, the opportunities are now considered as the dependent variable, while the capabilities are considered as the independent variables. Thus, the following hypothesis is tested:

H10: The capabilities allow income taxpayers to identify the opportunities to evade income taxes.

Consequently, the regression table of the rationalization is presented below.

The regression table shows that the capabilities (P-value $0 < 0.05$) are significant for tax evasion opportunities. Accordingly, the conclusion to be made is that capabilities enable income taxpayers to identify their opportunities to evade income taxes. Therefore, **H10 is accepted**. Furthermore, this result does not constitute a multicollinearity which means the redundance between variables that makes the regression model unstable. This is understood from the variance inflation factor (VIF) which is 1, then, below 5.

d. Pearson Correlation

In order to support the results provided by the regression analysis, the Pearson correlation test is conducted. Such test measures the linear correlation between sets of data.

Pearson Correlation – Income tax evasion

The regression analysis provides the following model concerning income tax evasion in Lebanon: Income Tax Evasion $= 1.462 + 0.343$ Opportunities $+ 0.23$ Rationalization $+ 0.18$

Table 7 - Regression table – Rationalization.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.849	.466		1.820	.072
	Pressures	.336	.099	.301	3.382	.001
	Opportunities	.113	.093	.110	1.209	.229
	Capabilities	.026	.084	.028	.312	.755
	Additional factors	.239	.078	.270	3.055	.003
Dependent Variable: Rationalization						

Table 9. Regression Table – Opportunities.

							Collinearity Statistics	
		Unstandardized Coefficients		**Standardized Coefficients**				
Model		**B**	**Std. Error**	**Beta**	**t**	**Sig.**	**Tolerance**	**VIF**
1	(Constant)	2.806	.290		9.687	.000		
	Capabilities	.308	.082	.334	3.748	.000	1.000	1.000
Dependent Variable: Opportunities								

Coefficients

Table 10 - Pearson Correlation - Income tax evasion.

Correlations

		Income tax evasion	Opportunities	Capabilities	Rationalization
Income tax evasion	Pearson Correlation	1	.484**	.359**	.372**
	Sig. (2-tailed)		.000	.000	.000
	N	114	114	114	114

Table 11. Pearson Correlation – Rationalization.

Correlations

		Rationalization	**Pressures**	**Additional factors**
Rationalization	Pearson Correlation	1	.419**	.393**
	Sig. (2-tailed)		.000	.000
	N	114	114	114

Table 12. Pearson Correlation – Opportunities.

Correlations

		Opportunities	**Capabilities**
Opportunities	Pearson Correlation	1	.334**
	Sig. (2-tailed)		.000
	N	114	114

Capabilities. Hence, it is desirable to test the correlation between income tax evasion and opportunities, rationalization and capabilities. Accordingly, the below table shows the Pearson correlation test between these variables.

The above table shows that income tax evasion is strongly correlated with opportunities, rationalization and capabilities, this is deduced since P-value for all variables is 0 which is below 0.05. Hence, this result supports the regression model of income tax evasion in Lebanon.

Pearson Correlation – Rationalization

The regression analysis proves that the pressures (financial problems, high tax and penalty rates, increased audit activities, and saving incentives) and additional factors (absence of financial stability, mistrust in politicians, and lack of motivation to tax compliance) allow taxpayers to rationalize income tax evasion. Nonetheless, this result is also tested using Pearson correlation while the following table is provided.

The above table shows that rationalization to income tax evasion is strongly correlated with the pressures and the additional factors, this is deduced since P-value for these variables is 0 which is below 0.05. Hence, this result supports the results concluded from the regression analysis of rationalization.

Pearson Correlation – Opportunities

The regression analysis provides that capabilities enable income taxpayers to identify their opportunities to evade income taxes. However, this result is also tested using Pearson correlation while the following table is provided.

The above table shows that the opportunities of income tax evasion is strongly correlated with the capabilities, this is deduced since P-value for these variables is 0 which is below 0.05. Hence, this result supports the results concluded from the regression analysis of opportunities.

Empirical Results

Income tax evasion is pervasive in numerous countries; however, several factors have been recognized as causes of tax evasion. Nonetheless, this research tests five factors within the Lebanese context, namely pressures, opportunities, rationalization, capabilities, and additional factors. In fact, these factors are selected based on the Fraud Triangle Theory as well as from existing studies. Accordingly, the data was collected from income taxpayers and analyzed and tested using SPSS in order to draw a conclusion. Consequently, the results achieved from the data analysis and hypotheses testing led to the following discussion.

a. Income tax evasion in Lebanon and age groups, gender, marital status, educational level, income level, business size and legal form of taxpayers.

Taxpayers' age groups, gender, marital status, educational level, income level, business size and legal form are investigated in this research. Consequently, the results revealed these factors as nonsignificant to income tax evasion. The reason behind this result might be related to the trend of the Lebanese taxpayers to evade income taxes. In fact, this was really seen from the data provided by the questionnaire, as 85% of respondents agreed that there is a high trend of tax evasion in Lebanon. Therefore, it appears that most taxpayers evade income taxes irrespective of the factors examined. Accordingly, this result is in accordance with those of Yalama and Gumus (2013), who found no correlation between tax evasion and age, gender, or marital status. However, it contradicts the results of McGee and Ross (2014) who found that in Brazil, Russia, China, United States and Germany, older taxpayers are more averse to evade taxes, that is the older taxpayers get, the more averse they were to evade taxes. Furthermore, it is contrasted with those of Alm et *al.* (1992) and Hammar et *al.* (2005). While Alm et *al.* (1992) found a negative correlation between the level of income and tax evasion, that is higher income minimizes tax evasion; Hammar et *al.* (2005) concluded that tax evasion is more pervasive among groups with highest income than among groups with lower income.

b. income tax evasion in Lebanon and the pressures faced by taxpayers.

The pressures faced by income taxpayers are examined in this research. Accordingly, the pressures comprise financial problems, high tax and penalty rates, increased audit activities, and saving incentives. However, the results disclosed that pressures are nonsignificant to income tax evasion. Nonetheless, pressures may indirectly influence tax evasion as they trigger the rationalization to evade income taxes. Furthermore, the Lebanese taxpayers are struggling nowadays to survive, this is due to the implications of the deep financial crisis in the country. The crisis led the taxpayers to face irregular financial problems. Accordingly, the taxpayers experience shortage of liquidity problems resulted from the central bank circulations on cash withdrawals from banks accounts. This shortage negatively affects the business of taxpayers. Nevertheless, and although the exacerbation of the financial crisis, tax audit activities have been increased.

Therefore, these pressures may enable the Lebanese taxpayers to rationalize the income tax evasion activities. This finding is inconsistent with the findings of Yalama and Gumus (2013), Aghghaleh et *al.* (2014), Gatot Soeherman et *al.* (2017), Nugraha and Susanto (2018), and Hijattulah et *al.* (2020). All these researchers stressed that tax evasion is directly influenced by the pressures faced by taxpayers.

c. Income tax evasion in Lebanon and the opportunities of taxpayers to evade income taxes.

The opportunities of taxpayers include the ineffectiveness or the absence of internal control procedures, the absence of audit trail, the related party transactions, the low probability of getting caught, the corruption, the lack of accountability for tax evaders, and frequent cash transactions. However, the research investigates the relationship between these opportunities and the income tax evasion in Lebanon. Consequently, the results revealed that opportunities are considered as the most significant factor when evading income taxes. In fact, the reason behind this finding is quite obvious. First of all, the corruption is highly pervasive in the country (Transparency International, 2020); such corruption enables tax evasion activities. Second, policymakers control procedures intended to reduce evasion activities are deficient and ineffective. Third, taxpayers are very rarely being caught. Finally, the taxpayers currently engage in a large number of cash transactions due to the central bank restrictions, thus, they are able to hide and unrecord part of their cash revenues in their accounting books. Therefore, all these opportunities constitute a great motive for taxpayers to evade income taxes. This result is in the same line of those of Yalama and Gumus (2013), Aghghaleh et *al.* (2014), Gatot Soeherman et *al.* (2017), Nugraha and Susanto (2018), Hijattulah et *al.* (2020), and Lederman (2021). All these researchers implied that taxpayers evade taxes when they have the opportunity to do so.

d. Income tax evasion in Lebanon and the rationalization of taxpayers.

The rationalization of taxpayers to evade income taxes is also examined in this research. However, rationalization includes blame removal, unfairness of the tax system, justification of tax evasion, and the ethical values of taxpayers. Accordingly, the results suggested that rationalization is significant when evading income taxes. This means that taxpayers should rationalize and then, justify such fraudulent act in order to commit it. Furthermore, the previous analysis showed that pressures can trigger taxpayers to rationalize evading income taxes. Hence, Lebanese taxpayers would rationalize the following in order to evade income taxes: no blame; tax evasion is fair, the government will never miss money, tax evasion is not a bad act, it is ethical and hurts no one, and that all taxpayers evade income taxes. Also, some may believe that income tax evasion is the only way to keep their businesses afloat, especially during the current financial crisis. This result is in accordance with those of Yalama and Gumus (2013), Aghghaleh et *al.* (2014), Gatot Soeherman et *al.* (2017), Nugraha and Susanto (2018), Hijattulah et *al.* (2020), and Lederman (2021). All these researchers suggested that taxpayers rationalize their tax evasion.
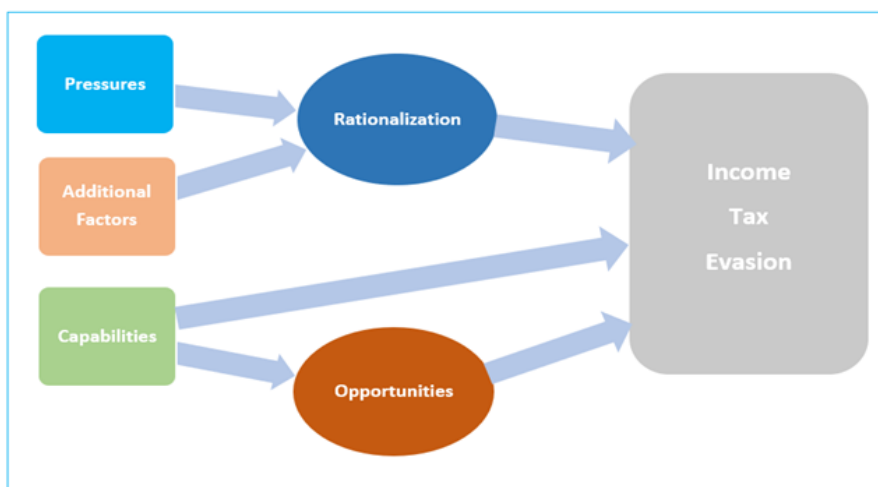
Fig. (2). Final model of income tax evasion.

e. Income tax evasion in Lebanon and the capabilities of taxpayers.

The expanded model of the Fraud Triangle Theory (The Fraud Diamond Theory) implies the existence of the capability when committing any fraudulent act. Hence, the capabilities are also investigated in this research. However, the capabilities include the ability to evade income taxes without getting caught, the repeated income tax evasion activities, the taxpayers' smartness and confidence, and the taxpayers' skills to lie. As a result, the capabilities are deemed to be significant when evading income taxes. In addition, the study disclosed that there is a positive relationship between capabilities and opportunities, that is the presence of the capability enables taxpayers to identify their opportunities to evade income taxes. Moreover, the majority of the Lebanese taxpayers are well educated and smart. In fact, this is concluded from the data collected through the questionnaire, and which shows that 93% of the sample have achieved a university degree. Hence, the Lebanese taxpayer are able to identify their opportunity to evade income taxes. Also, the Lebanese trend to evade taxes constitute a capability to evade taxes, as repeated evasion activities enable the taxpayers to easily identify their opportunities to evade taxes. Finally, due to the ineffective control procedures against tax evader, the taxpayers are strongly confident that their tax evasion won't be detected. Hence, this result supports the finding of Wolfe and Hermanson (2004), that is, capabilities allow any fraud perpetrator to commit a fraudulent act.

f. Additional factors of income tax evasion in Lebanon.

The additional studied factors of income tax evasion in Lebanon include the absence of financial stability in the country, the mistrust in politicians, and the lack of motivation to comply with tax law. However, the results revealed these factors as nonsignificant to income tax evasion. Nevertheless, while these additional factors were found to be nonsignificant to income tax evasion, they may indirectly contribute to tax evasion by triggering taxpayer rationalization. Accordingly, the Lebanese policymakers have never motivated the taxpayers to increase their tax compliance. Therefore, these reasons along with the current financial instability

in the country, may lead taxpayers to rationalize the income tax evasion.

g. The final model of income tax evasion in Lebanon

As previously discussed, this research proves that the opportunity, capability, and rationalization of income taxpayers are significant when evading income taxes. However, the pressures and the additional factors are considered nonsignificant. Moreover, the research provides the following income tax evasion model: ITE = 1.462 + 0.343 Opportunities + 0.23 Rationalization + 0.18 Capabilities. This means that opportunities are concluded to be the major variable that leads the income taxpayers to evade income taxes, with the highest coefficient of 0.343. Accordingly, the most significant factor that plays the major role in income taxpayers evading income taxes in Lebanon is the opportunity. Thus, corruption, ineffective control procedures in the country, lack of accountability, and frequent cash transactions constitute the greatest motive for income taxpayers to evade income taxes. Moreover, according to the income tax evasion model emerged by this research, the presence of at least one of these significant factors leads income taxpayers to evade income taxes. Nevertheless, the presence of more than one factor indeed increases the chance of committing income tax evasion. Consequently, based on the findings discussed previously, the overall income tax evasion model is summarized in the Fig. (**2**).

The final model presented above clearly identifies the direct and indirect roots of income tax evasion in Lebanon. Accordingly, the pressures and additional factors affect income tax evasion indirectly, as they trigger the rationalization of income taxpayers to evade income taxes. Thus, rationalization directly influences income tax evasion. Hence, income taxpayers have to rationalize their fraudulent behavior before committing it. In addition, opportunities are proven to be the most crucial factor that directly and greatly influence income taxpayers evading income taxes in Lebanon. Thus, income taxpayers need to acquire sufficient opportunity to evade income taxes. Moreover, capabilities are recognized as a significant factor that directly affects income tax evasion in Lebanon. Also, capabilities allow income taxpayers to identify their opportunities to evade income taxes.
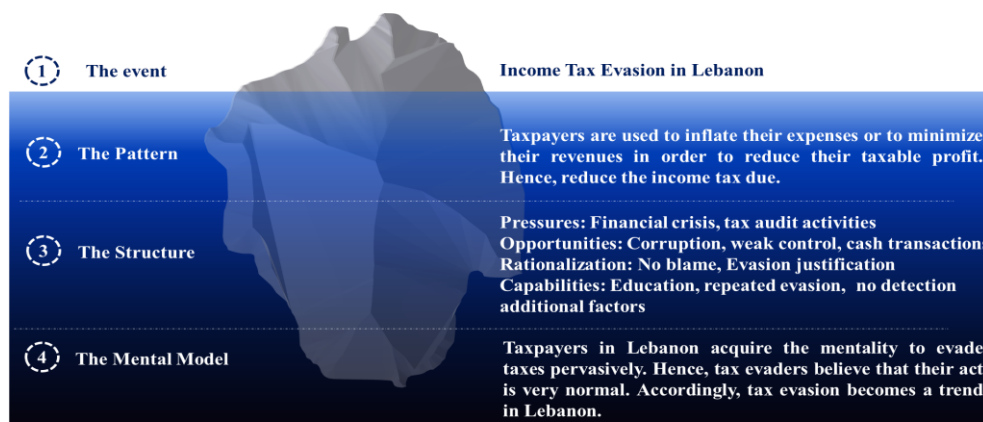
Iceberg System Thinking Model

Fig. (3). Iceberg Model of Income Tax Evasion.

Table 13. Hypotheses Decisions.

Hypothesis Number	Decision
H1	Rejected
H2	Accepted
H3	Accepted
H4	Accepted
H5	Rejected
H6	Accepted
H7	Rejected
H8	Rejected
H9	Accepted
H10	Accepted

Finally, the findings of this research served to build an Iceberg System Thinking Model for income tax evasion in Lebanon, as displayed in the Fig. (3).

The event shows what's happening, it is the level at which the world is perceived. In this research, the event is the income tax evasion in Lebanon. Below the event level are the patterns, which are similar events that have been taking place over time. Accordingly, income taxpayers are used to evade income taxes by reducing their taxable profit. In fact, this is achieved by inflating their expenses or minimizing their revenues submitted to the tax authorities. Furthermore, below the pattern level lies the structure level, it comprises the reasons behind the observed patterns. Hence, this research proves the components of the Fraud Diamond Model as the structure of the income tax evasion in Lebanon. These are the pressures, the opportunities, the rationalization, the capabilities, and other factors. Finally, the mental model includes the attitudes, beliefs, morals, and values that allow the structure to continue functioning as it is. These are the beliefs learned subconsciously from society, family, and are likely unaware of. However, it seems from our results that the tax evaders possess low professional ethical values which allow them to commit such fraudulent act. In addition, a kind of social influence is widespread among taxpayers in Lebanon to evade taxes. Accordingly, income tax evasion becomes a trend in Lebanon, and taxpayers acquire the mentality to easily evade taxes. According to them, such event is very normal.

5. CONCLUSION

This paper aimed to explain the relationship between the Fraud Triangle Theory components and the behavior of taxpayers in perpetrating income tax evasion. It also sought to assess the significance of correlation between the components of the Fraud Triangle Theory and the behaviors of the taxpayers, in order to explore the intensity of each factor and determine the most significant factor. In order to achieve the aim of this research, the following hypotheses were tested:

H1: The pressures of taxpayers positively affect the income tax evasion.

H2: The opportunities of taxpayers positively affect the income tax evasion.

H3: The rationalizations of taxpayers positively affect the income tax evasion.

H4: The capabilities of taxpayers positively affect the income tax evasion.

H5: Income tax evasion is influenced by additional factors.

H6: The pressure factors positively affect the rationalization of income tax evasion.

H7: The opportunity factors positively affect the rationalization of income tax

H8: The capability factors positively affect the rationalization of income tax evasion.

H9: The additional factors positively affect the rationalization of income tax evasion.

H10: The capabilities allow income taxpayers to identify the opportunities to evade income taxes.

Based on the SPSS test results, the decision for each hypothesis can be stated as follows:

The paper illustrates how the Fraud Diamond Theory confirmed the results obtained by this research. The pressures, opportunities, rationalization, and capabilities were identified as factors that influence income tax evasion in Lebanon, although each has a different intensity of influence. Opportunities were found to be the most significant factor in income tax evasion, while pressures were considered non-significant but indirectly affect income tax evasion by triggering rationalization to evade taxes. Rationalization and capabilities were also identified as significant factors in income tax evasion. These findings can be attributed to various factors. Firstly, Lebanese taxpayers are currently struggling to make ends meet due to the country's deep financial crisis. Secondly, corruption is widespread in the country, according to Transparency International's report (2020). Thirdly, control procedures to reduce tax evasion are deficient and ineffective. Fourthly, Lebanese taxpayers rationalize their tax evasion, and fifthly, most Lebanese taxpayers are well-educated and intelligent, allowing them to identify opportunities to evade taxes. Furthermore, the trend of tax evasion among Lebanese taxpayers has created a capability to evade taxes, as repeated evasion activities enable them to quickly identify such opportunities. Finally, due to the lack of effective control procedures against tax evaders, taxpayers are confident that their tax evasion activities will not be detected.

Limitations

The limitations of this research are important to consider, as with any study. Initially, the sample size may be considered a limitation, as only 114 questionnaires were returned out of the 200 distributed randomly to taxpayers. While the response rate of 57% is acceptable for such a sensitive topic, it was not possible to increase the sample size due to some taxpayers not being willing to provide information. Moreover, the lack of previous studies on the relationship between tax evasion and the Fraud Triangle Theory could be seen as a limitation, as most studies focus on the Fraud Triangle Theory and its relationship with general fraudulent activities rather than tax evasion in particular. Finally, the timing of the research may also be considered a limitation, as it was conducted during a period when Lebanese taxpayers are struggling to survive due to the deep financial and economic crisis in the country. As a result, the answers of respondents may have been affected by the situation and may not reflect the reality of tax evasion under normal circumstances.

Furthermore, two sets of recommendations have been provided, one aimed at guiding future researchers interested in replicating this study, and the other aimed at reducing income tax evasion in Lebanon.

Recommendations for Future Researchers

Future researchers could replicate this study with several considerations. First, a larger sample size should be selected to increase the reliability of the study. Second, additional variables related to income tax evasion should be included in the regression analysis to increase the R Square and improve the income tax evasion model proposed in this study. Third, mixed methods, including in-depth interviews with taxpayers and tax preparers in addition to the questionnaire, are highly recommended. These interviews will allow researchers to ask open questions ended and explore the underlying reasons for income tax evasion in Lebanon. Fourth, future studies could expand on this research by examining other taxes, such as value-added taxes. Fifth, it is recommended to investigate the literature linking tax evasion to behavioral science and develop an experimental design using nudges to reduce tax evasion. Finally, researchers may analyze the financial statements of taxpayers to identify indicators of tax evasion.

Recommendations to Reduce Income Tax Evasion

In order to reduce the income tax evasion and increase the tax compliance in Lebanon, the following recommendations are proposed.

- The results of this research indicate that opportunities for taxpayers to evade income taxes are highly significant. Therefore, policymakers and tax authorities should establish serious procedures to minimize these opportunities. This may include enhancing the quality of tax audit, establishing accountability procedures for income tax evaders, publicly sharing the results of these procedures, adopting effective control procedures (such as COSO Control), and implementing other procedures.

- The research also revealed that a majority of taxpayers rationalize income tax evasion and consider it ethical. Additionally, the research showed that taxpayers are capable of evading income taxes. Therefore, it is recommended to increase the perception and awareness of taxpayers about income tax evasion to prevent them from rationalizing such activities or employing their capability in tax evasion activities. This could be achieved through workshops, training, conferences, or other events

targeting income taxpayers and sponsored by the Lebanese authorities.

- Although the pressures of income tax evasion were found to be non-significant, the research identified them as significant for rationalizing tax evasion, which indirectly affects income tax evasion in Lebanon. Therefore, policymakers and tax authorities should minimize these pressures. This can be done by revising income tax and penalty rates, revising family exemptions and tax brackets, especially after the depreciation of the Lebanese Pound. The Ministry of Finance should also focus on the quality of tax audit rather than the quantity of taxpayers being audited.

- Concerning the additional factors which include the mistrust in politician, the lack motivation to tax compliance, and the financial instability, the research found that they are significant for the rationalization of evading income taxes; thus, they indirectly affect the income tax evasion in Lebanon. However, the policymakers should establish a long-term strategy in order to respond to these problems.

In addition to the above, the Lebanese policymakers and tax authorities may use the tools of behavioral science as a unique and modern strategy to reduce the income tax evasion. This may include:

- Hassle factor: Policymakers should make the process of declaring and paying income taxes easier. Currently, small taxpayers who declare their taxable profit based on lump-sum basis are not allowed to declare and pay their taxes online, despite constituting a large portion of taxpayers. To increase compliance, all taxpayers should be allowed to declare their taxable profit and to pay their taxes online, and the procedures for obtaining online credentials should be simplified.

- Incentives: A reward system could be implemented to increase income tax compliance. For example, taxpayers who submit all tax returns on time and who are not found to be evading taxes could receive a partial refund of the income tax paid.

- Feedback: Tax authorities should transparently publish where taxes are being used. By doing so, taxpayers can recognize that the collected taxes are being fairly used for the benefit of Lebanese citizens.

- Reminder: The tax authorities should remind taxpayers to declare and pay their income taxes on time regularly.

- Commitment: According to behavioral science, committing to a specific behavior can empower people to achieve behavioral changes. Taxpayers could sign a written commitment to the Ministry of Finance, stating that they will not evade income taxes. This commitment could accompany their tax returns each period.

REFERENCES

Abu Hassan, N. S., Palil, M. R., Ramli, R., & Maelah, R. (2022). Enhancing Tax Compliance in Malaysia: Does Tax Learning and Education Matter? *International Business Education Journal*, 15(1), 18-29.

ACFE, (2020). *Fighting fraud in the government.* [Online] Available at: https://www.acfe.com/uploadedFiles/Shared_Content/Products/Self_-_Study_CPE/Fighting%20Fraud%20in%20the%20Government_Excerpt_2018.pdf [Accessed 21 8 2021].

Aghghaleh, S. F., Iskandar, T. M. & mohamed, Z. M. (2014). Fraud Risk Factors of Fraud Triangle and the Likelihood of Fraud Occurrence: Evidence from. *Information Management and Business Review*, 6(1), pp. 1-7.

Alm, J., Martinez-Vazquez, J. & Mccellan, C. (2015). Corruption and Firm Tax Evasion. *Journal of Economic Behavior & Organization*, October, 124(C), pp. 146-163.

Bank Audi, (2018). *A Lackluster Real Sector Activity Yet Coupled With Persistently Sound Financial and Monetary Conditions*, Beirut: Bank Audi.

Benkraiem, R., Uyar, A., Kilic, M., & Schneider, F. (2021). Ethical behavior, auditing strength, and tax evasion: A worldwide perspective. Journal of Business Research, 133, 809-818.

Blominvest Bank, (2017). *Tax Evasion in Lebanon: How Much of a Burden?*, Beirut: Blominvest Bank.

Comandaru, A.-M., Stanescu, S.-G. & Paduraru, A. (2018). THE Phenomenon OF TAX Evasion and the need to Combat Tax Evasion. *The Journal Contemporary Economy*, 3(3), pp. 124-133.

Gatot Soherman, A. D., Mahjudin & Rahmansyah, M. R. (2017). Perceived Pressure, Opportunity and Rationalization of Taxpayers (Theoretical and Empirical Review).

Hall, J. A. (2011). *Accounting Information Systems*. 7th ed. Mason: South-Western Cengage Learning.

Hammar, H., Nordblom, K. & Jagers, S. C. (2005). Tax Evasion and the Importance of Trust. *Journal of Socio-Economics*, pp. 238-245.

Hijattulah, A.-J., Abuamria, . F. M. J., Alkhatib, A. A. & Marimuthu, M. (2020). Tax Evasion and the Social Influence Perspective: A Conceptual Model for Palestine. *International Journal of Psychosocial Rehabilitation*, 24(2), pp. 4855-4866.

Ismail, R., Rihan, W. & Nsouli, F. (2014). Value Added Tax evasion and illegal recovery cases in Lebanon. *Procedia - Social and Behavioral Sciences*, Volume 109, pp. 527-530.

Kassa, A. G., & Mohammed, S. A. (2021). Factors influencing taxpayers to engage in tax evasion: Evidence from Woldia City administration micro, small, and large enterprise taxpayers. Journal of Innovation and Entrepreneurship, 10(1), 8.

Khalil, S., & Sidani, Y. (2022). Personality traits, religiosity, income, and tax evasion attitudes: An exploratory study in Lebanon. Journal of International Accounting, Auditing and Taxation, 47, 100469. https://doi.org/10.1016/j.intaccaudtax.2022.100469

Kong, D., Zhang, Y., & Qin, N. (2023). Anti-corruption campaign and corporate tax evasion: Evidence from China. International Tax and Public Finance, 1-24. https://doi.org/10.1007/s10797-023-09777-x

Kong, F. & Wang, C. (2014). The Determinants OD Tax Evsion: A Literatire Review. *Gdansk studies of East Asia*, Issue 5, pp. 70-78.

Lederman, L. (2021). The Fraud Triangle and Tax Evasion. *Social Science Research Network (SSRN)*, Volume 106, pp. 1154-1207.

McGee, R. W. & Ross, A. M. (2014). Education Level and Ethical Attitude Toward Tax Evasion: A Six-Country Study. *Social Science Research Network (SSRN)*.

Murphy, P. R. & Free, C. (2016). Broadening the Fraud Triangle: Instrumental Climate and Fraud. *Behavioral Research in Accounting*, 28(1), pp. 41-56.

Nugraha, S. & Susanto, E. (2018). *The Fraud Behavior from the Perspectives of the Fraud Triangle: an Indonesian Case.* Indonesia, Atlantis Press, pp. 113-120.

Otekunrin, A. O., Nwanji, T. I., Eluyela, D. F., Inegbedion, H., & Eleda, T. (2021). E-tax system effectiveness in reducing tax evasion in Nigeria. Problems and Perspectives in Management, 19(4), 175-185. https://doi.org/10.21511/ppm.19(4).2021.15

Ozili, P. K. (2020). Tax evasion and financial instability. *Journal of Financial Crime,* 27(2), pp. 531-539.

Parreira , R. d. M. (2014). *The Ethics of Tax Avoidance.* Washington, THE George Washington University.

Transparency International (2020). *Transparency International Index.* [Online] Available at: https://www.transparency.org/en/cpi/2020/index/lbn#

Wolfe, T. D. & Hermanson, R. D. (2004). The Fraud Diamond: Considering the Four Elements of Fraud. *CPA Journal,* 74(12), pp. 38-42.

Yalama, G. O. & Gumus, E. (2013). Determinants of Tax Evasion Behavior: Empirical Evidence from Survey Data. *CSCanada International Business and Management,* 6(2), pp. 15-23.