Information Sciences Letters

Volume 11 Issue 5 *Sep. 2022*

Article 5

2022

The Mediating Role of Innovation On the Relationship Between Information Technologies and Reducing Tax Evasion

Nawaf Thuneibat Accounting Department, Faculty of Business, Mutah University, Jordan, basel.ali@asu.edu.bh

Basel Ali Accounting and Finance Department, Applied Science University, Kingdom of Bahrain, basel.ali@asu.edu.bh

Mithkal Alqaraleh Accounting and Finance Department, Middle East University, Jordan, basel.ali@asu.edu.bh

Hussam Thneibat Department of Business Administration, Faculty of Administrative and Financial Sciences, Aqaba University of Technology, Jordan, basel.ali@asu.edu.bh

Follow this and additional works at: https://digitalcommons.aaru.edu.jo/isl

Recommended Citation

Thuneibat, Nawaf; Ali, Basel; Alqaraleh, Mithkal; and Thneibat, Hussam (2022) "The Mediating Role of Innovation On the Relationship Between Information Technologies and Reducing Tax Evasion," *Information Sciences Letters*: Vol. 11 : Iss. 5 , PP -. Available at: https://digitalcommons.aaru.edu.jo/isl/vol11/iss5/5

This Article is brought to you for free and open access by Arab Journals Platform. It has been accepted for inclusion in Information Sciences Letters by an authorized editor. The journal is hosted on Digital Commons, an Elsevier platform. For more information, please contact rakan@aaru.edu.jo, marah@aaru.edu.jo, u.murad@aaru.edu.jo.



An International Journal

http://dx.doi.org/10.18576/isl/110505

The Mediating Role of Innovation On the Relationship Between Information Technologies and Reducing Tax Evasion

Nawaf Thuneibat¹, Basel Ali^{2,*}, Mithkal Alqaraleh³ and Hussam Thneibat⁴

¹Accounting Department, Faculty of Business, Mutah University, Jordan

²Accounting and Finance Department, Applied Science University, Kingdom of Bahrain

³Accounting and Finance Department, Middle East University, Jordan

⁴Department of Business Administration, Faculty of Administrative and Financial Sciences, Aqaba University of Technology, Jordan

Received:1 Jan. 2022, Revised: 10 Feb. 2022, Accepted:1 Mar. 2022. Published online: 1 Sep. 2022

Abstract: Numerous nations depend heavily on taxation as their principal source of income, and tax evasion is a big issue for their tax agencies and governments. Studies on information technology and tax evasion in underdeveloped nations and other parts of the globe are few and far between. The purpose of this research was to investigate the link between information technology and the reduction of tax evasion. A mediator variable in the relationship between information technology and tax evasion was also explored in this research, which was called "Innovation." The research employed a survey approach, sending questionnaires to 200 auditors at Jordanian listed companies. A total of 121 questionnaires were gathered from auditors working in Jordanian companies and evaluated using Partial Least Squares methods (PLS). The findings revealed that information technology (both in terms of system quality and user quality) may help to prevent tax evasion. The role of innovation as a mediator has been shown to have a favorable and substantial association between information technology and the reduction of tax evasion. These findings underlined the Jordanian company's increased reliance on information technology in order to carry out tax obligations, which would aid them in their efforts to prevent tax evasion. This research serves as a guideline for tax administrations as they implement improvements in sustainable IT to streamline tax administration while also improving taxpayer services & increasing law enforcement effectiveness.

Keywords: Information Technology, System Quality, User Quality, Innovation, Tax Evasion.

1 Introduction

Tax evasion has been known to significantly affect the progress of a country's economy because it causes considerable imbalance at the macroeconomic level [1]. It negatively affects the market economy as it causes unfair competition [2]. Furthermore, funding development has been found to be adversely impacted by tax evasion as it may eventually compel the affected country to borrow money and also shoulder a high cost [3]. Meanwhile, [4] was among those who stated that tax evasion causes a tax gap, which denotes the amount of tax to be paid but is not willingly paid in a timely manner. In this regard, it is clear that tax evasion has an economic impact on any state as it causes reduction in government investment and in the frequency of public spending as the volumes of earned public revenues by the state from taxpayers are being reduced. In addition, tax evasion among corporate firms has been found to significantly affect the country's overall collection of revenue, and this affects the economy negatively [5]. Accordingly, in the mitigation of tax fraud among large tax payers, the appropriate strategies are referred from the Kenya Revenue Authority as a unit of analysis to enable the study to form categorical and meaningful conclusions [6].[7] mentioned that tax evasion results in internal and external borrowing, for the purpose of offsetting the shortage in the public revenue, implying that the state are pressurized by interest payments. It is thus necessary to scrutinize tax evasion as it greatly impacts the economic, social and even cultural development of any country [2, 3]. In doing so, it is important to identify its causes and novel solutions in order to increase voluntary compliance.



In their study, [8] described e-taxation as a process in which documents of tax or tax returns are tendered via the internet. In this method, submission of paper return is usually unnecessary. E-taxation usually involves the application of technology, Web and Software to serve a wide array of tax administration and compliance. Meanwhile in Indonesia, [9] stated that modern technology impedes tax evaders because potential taxpayers are all captured by the system. Still, negligent ICT usage by tax payers and the tax administrators can be disastrous because scammers and hackers of the internet facilities are able to take advantage from such negligence or from the lax security of the system.

In practice, recognized the innovation in information technology (IT) is well established in industrialized countries, while newly industrializing and agricultural countries have been making administrative mediations to speed up IT development within their boundaries. Furthermore, the lack of suitable approach recommendations for developing government IT development strategies signals a loss in research understanding of the role of government foundations, and organizations more broadly, in IT innovation [10] Within the context of developing country, none of the studies had so far been carried out to investigate the mediating role of Innovation on the relationship between information technologies, in terms of User quality and System quality and the reducing tax evasion, which depicts existence of gap in literature. And can be said there are few studies in developing country and globally. For instance, in examining the Role of Electronic Accounting Information Systems in terms of inputs, processing and outputs [11] for the reduction of Tax Evasion in Facilities Subject to Income and Sales Tax in Jordan, [12] did consider user quality and system quality for the mentioned purpose (tax evasion). Hence, the effect of the use of IT in terms of User quality and System quality to reduce tax evasion in Jordan and the mediating role of Innovation is examined in this study. Therefore, this study examines the mediating role of Innovation on the relationship between information technologies, in terms of User quality and System quality and the reducing tax evasion in Jordan. Accordingly, this study offers a valuable basis to the income and sales tax authority in Jordan, and information concerning the issues associated with the use of IT particularly concerning User quality and System quality in income and sales tax authority. Furthermore, the insights offered by this study will be useful to taxable businesses, and also to the relevant literatures and scholars.

There are six sections in this paper with the following details: Section 1 introduces the examined topic; Section 2 discusses the problem statement; Section 3 reviews the IT literature particularly on User quality and System quality and tax evasion; Section 4 details the research methodology, covering the sampling, the validity and reliability of the data gathering instrument used, the research design, the study populace, the unit of analysis, and the data analysis design; Section 5 details the research hypotheses to be tested in this study, and Section 6 recapitulates the study findings and discusses the study limitations and conclusion.

PROBLEM STATEMENT

Tax evasion is a serious issue facing the income and sales tax authority in Jordan and in global. In view of that, tax evasion impedes the amassing of taxes and spending as stipulated by the Justice and Equality rule. Indeed, it is an unethical even though a common practice that impedes governments from implementing important projects, while also jeopardizing other complying taxpayers. In Jordan, the actual magnitude of tax evasion is still unknown. However, as reported in several studies including [12], some officials at the Jordanian Income & Tax Department noted high level of tax evasions. And can be said there are few studies in developing countries and globally related to IT and tax evasion. As further highlighted by [13], the Jordanian economy has reached 30 billion dollars, and yet only four billion dollars were collected as taxes by the state - as reported by the head of the Finance Committee in the Jordanian House of Representatives. The research best knowledge can be said there are few studies in developing countries and globally related to IT and tax evasion.

This study will therefore investigate the mediating role of Innovation on the relationship between IT, (in terms of User quality and System quality) and the reduction of tax evasion in Jordan. The following research questions are thus presented:

RQ1: What is the effect of User quality of IT on the reduction of tax evasion?

RQ2: What is the effect System quality of IT on the reduction of tax evasion?

RQ3: What is the effect IT on the innovation?

RQ4: What is the effect Innovation on the reducing tax evasion?

RQ5: What is the effect Innovation as mediation on the relationship between IT and reducing tax evasion?

By having the research questions addressed, primary research objectives will be achieved. These objectives are:

1. To explore the effect of User quality of IT on the reduction of tax evasion.

2. To explore the effect of System quality of IT on the reduction of tax evasion.

3. To explore effect IT on the innovation.

4. To explore effect Innovation on the reducing tax evasion.

5. To explore effect Innovation as a mediation on the relationship between IT and reducing tax evasion.

2. Literature Review

The literature associated with the study topic is discussed in this section. Accordingly, related empirical studies are highlighted. Among the main constructs discussed include tax evasion, IT, system quality and user quality and Innovation. Each is as detailed below:

Tax evasion

Various definitions of tax evasion have been presented in various studies. For instance, Amjad and Audi [2] stated that tax evasion comprises the evasion of taxes and duties to be paid to the state budget through taxable income concealment. Notably, in defining the concept, some distinguish revenue hide by "bypassing" the law (illicit tax evasion or tax fraud), and diminishing tax obligations through the use of tax law evasion (licit tax evasion), as can be observed in [14].

tax evasion is signified by all licit and illicit procedures that allow the taxpayer to escape paying the tax as provided by the fiscal laws, fully or partially[3, 7]. Furthermore, owing to the gaps in the present legislative framework, tax liabilities can be evaded without being considered an economic crime. In evading tax obligations without breaking the law, [15] reported that taxpayers take advantage of the existing or non-existing legislation in certain activity or region / country. Correspondingly, [16] reported high relevance of tax evasion in determining the level of economic, social and even cultural development of any state. In the context of Jordan, [3] reported that tax evasion is a weighty issue because it makes up a high revenue. The authors thus suggested the government to be more aggressive in dealing with tax evaders.

Relevant to this study context, theory of Tax Evasion by [17] explains the inclination of people towards taking risks. As the theory implies, individuals involved with profits and losses are somehow connected to some reason. This theory is thus able to explain the equity-premium challenges that commonly occur in accounting, and these challenges are generally linked to the issue of tax evasion and it is computable in terms of portfolio choice. Taxes compensation may be caused by the non-linear modification of potentials for the purpose of overweighing the potential of tax audit, which could result in the act of tax avoidance [18]. In order to deter tax avoidance, theory of Tax Evasion has been applied through the practice of tax payment. Further, when proceeds from tax levies are greater than the real tax liability, whereby the taxpayer reports revenue accurately, reimbursement is given to taxpaver. As such, the efficacy function of taxpayer is bowl-shaped to succeed. On the other hand, progressive payment less than the real liabilities of tax

will cause the efficacy function to fail and the taxpayer would be inclined to avoid taxes [19].

Information Technology

Information technologies encompass tools, devices, and resources that can allows information to be communicated, created, managed and shared [20]. Common instruments in IT include computer software programs and apps for mobile phones; networks; and hardware (computers & Internet) [21], and in an organization, these tools are usually used in the gathering, processing [22, 23], storing and transmitting pertinent information to support the operations of management [24]. [4] investigated tax evasion dynamics in the context of risk perception associated with the use of tax IT. Additionally, perceived risk was examined as a moderating factor in the relationship between IT (IT) and tax evasion. The findings indicated that IT has the potential to prevent tax avoidance. In their study, [24] described IT as a system which makes available the historical information on the existing status and the projected information that suitably caters to the need of relevant bodies. Furthermore, considering its ability in self-monitoring the disturbances within the system, concluded the value of IT in decision making and the determination of course of action in getting the system under control [11, 25, 26]. For the future IT, [27] indicated that its components include: people, data processing, data communication, information system and retrieval, and system planning [28, 29]. [30]investigated the impact of superior IT (IT) on company tax results. The research showed that organizations with high-quality IT are able to obtain both lower and less fluctuating cash effective tax rates than other enterprises. These findings show that enterprises with high-quality IT are able to save more taxes while incurring less tax risk than firms with lower-quality IT.

In their study, [31]utilized theory of organizational effectiveness in forming a theoretically-based construct space for IS effectiveness. Accordingly, six IS effectiveness categories were established by the authors with the use of unit-of-analysis and evaluation-type context dimensions. They are as follows: infusion measures, market measures, the economic measures such as the measure of organizational impacts, usage measures such as the measure of user satisfaction, and productivity measures such as the measure of user satisfaction, and productivity measures such as the measure of individual impact. In the framework proposed in this study, "system quality" and "information quality" were the measures used. The quality of the IT system and the quality of its users will thus be measured in this study.



System quality

The information system should display how people work and the involved social practices [11, 25, 26, 28]. The information system is thus seen as an interdependent social system, in which IT is a component alongside brainware and the organization's relationships [11, 25]. Indeed, IT is more than a mere technical system with behavioral implications[27, 32]. Similarly, [33] indicated people as among the important components of information systems, [25, 26, 33] while [34] mentioned human resources as the essence of organizing.

The concept of system effectiveness has been described in past information systems studies in terms of "user information satisfaction" or perceptions of system users concerning the level to which the information system that is accessible to them is catering to their information requirements. Three Major dimensions of IS Quality as follows: Information Quality, System Quality, and Service Quality [25, 26, 35]. According to the authors, each dimension should be measured or controlled as each dimension impacts "System Use" and "User Satisfaction."

User quality

In DeLone and McLean [35], the ability of user was described as the ability of a person in carrying out countless of tasks within a job. Additionally, it is an element in a maturity that is associated with knowledge or skills which can be acquired through education and training. Quality of user greatly impacts the success of accounting information systems implementation and the application of advanced IT within organization [25, 26]. Hence, this construct greatly affects the implementation and development of an information system and the selection of the appropriate individual or team in the establishment of an information system in a company [11]. [30] observed that businesses that invest in high-quality IT may achieve lower and more predictable cash effective tax rates than other businesses. These results demonstrate that businesses that invest in highquality IT may save more taxes while incurring less tax risk than businesses that invest in low-quality IT. In any organization, employees who are competent and reliable in information system use are regarded as a valuable resource. In this regard, [26, 34] indicated that user function is for effective management of resources, and well-built personnel function (e.g., recruitment, training, evaluation, counseling, continuing education, labor relations, and compensation administration).

Hypothesis Development

The present study presents five main research hypotheses and their formation is as discussed below:

System quality of Information technology impact the reducing tax evasion

In measuring the effectiveness of information systems, system (system use) and user satisfaction (user information satisfaction) is as two commonly used dimensions in studies of information systems as a substitute (surrogate) in the measurement of the effectiveness/performance of AIS [25, 26]. [4] explored the dynamics of tax evasion using tax IT. According to the results, IT has the ability to reduce tax evasion. [30] showed that firms with high-quality IT are able to save more taxes while incurring less tax risk than firms with lower-quality IT. In a related study, examined the direct association between IT and tax *evasion* and found statistically significant associations [4, 5, 30]. As such, the following hypothesis is established:

H1: System quality of information technology impacts the reduction of tax evasion.

User quality of Information technology impact the reducing tax evasion

The concept of user's ability was discussed in [36]. They described the concept as the ability, skill and power that user strives to him- or herself. Comparatively, the concept was described by [37] as a component with linkage to very effective or very successful work implementation. Furthermore, the correct usage of information systems in addition to the support provided personnel expertise can improve individual and company performance [25, 26]. And of the effectiveness/performance of AIS [11]. [4] found information technology has the ability to reduce tax evasion. It is important that the company has the appropriate equipment that supports information systems, i.e., hardware and software, as this can facilitate user in effectively using the information systems. As such, the following hypothesis is established:

H2: User quality of information technology impacts the reduction of tax evasion.

Information technology and innovation

The focus of a prior study was mostly on improving the inventive capacities of IT workers [11, 25, 38]. In general, technology consumers have been viewed as passive recipients of inventive objects. In fact, a technology transfer paradigm, in which the hub of creative activity is the IT organization, continues to be a prominent stance in the IS innovation literature. In the same vein, studies found a positive relationship between IT and innovation [25, 39-41].

H3: Information technology has a positive impact on innovation.

Innovation and reducing tax evasion

Tax incentives have been used by strategy manufacturers in both developing and non-industrial countries to promote

investment in innovation. In any case, we know very little about the impact of such regulations on firm innovation and the essential components of firm innovation [42]. the study [41] searched tax avoidance in the diesel fuel market and dodgers' reactions to administrative innovation? They find an example of cost and assessment flexibility that is consistent with the development of new avoidance tactics as a result of the administrative adjustment.[25, 26] found positive relationship between information system and innovation. In addition, [43] discovered that innovation has a greater influence on tax evasion.

H4: Innovation has a positive impact on tax evasion.

Innovation as mediation

The process of incorporating new ideas, information, and goods and services into current products and services is known as innovation [25]. According to the findings and discussions by [44], all of the factors stated can act as mediators, facilitating the creation of a link between an independent and dependent variable. Variables can also be utilized to connect the independent variable to the mediation, as well as the mediation to the dependent variables. As a result, the following hypothesis is presented:

H5: Innovation mediates the relationship between information technology and reducing tax evasion.

Theoretical Framework

This study presents a theoretical framework in order to test the mediating role of Innovation on the relationship between information technologies and reducing tax evasion in Jordan. Figure 1 illustrates the framework.

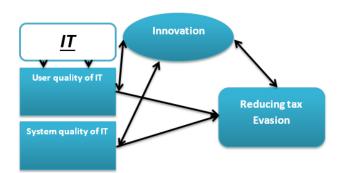


Figure 1: Theoretical Framework

3. Research Methodology

As explained by [45], a research design makes up the master plan that specifies the methods and procedures that are to be used in the gathering and analysis of the information needed. Statistical Package for the Social Sciences (PLS Smart) and several statistical analyses were used in data analyses, in order to yield valuable information[46]. In this study, a survey was the used data collection method, and it involved three parts as below:

Part 1: General information on the study sample.

Part 2: Statements that measure the impact of system quality of IT on the reduction of tax evasion.

Part 3: Statements that measure the impact of user quality of IT on the reduction of tax evasion.

The present study utilized a questionnaire in data gathering, and the items of the questionnaire were adapted from several past studies (e.g., [25, 26, 47-49]. In the questionnaire, the items were of close-ended questions with a five-point Likert scale. The values show the answer choices to a given factor, and PLS Smart was used to analyze the data obtained. This study used percentage analysis and it comprehensibly shows the obtained observations in simple form. The data ranking selects the highest number of responses in each class of fivepoint Likert scale. In determining the internal consistency, Cronbach's alpha was applied in this study. The internal consistency shows the inter-linking of the items. It was suggested that the obtained Cronbach's alpha value is between 0.70 and 0.90 to denote reliability. According to Hair, Risher [50], one statistical aspect of Cronbach's alpha is its usage of a statistical method in achieving reliability, as is a coefficient of reliability as well, but not a statistical test. In a measurement, reliability entails the measurement's degree of consistency with a concept. Cronbach's alpha can be used in measuring the strength of consistency. A total of 120 randomly chosen auditors in the Jordanian, responded to the questionnaire. These auditors became the study respondents owing to their full knowledge of their work.

Table 2 Measurement of User quality of IT

Items	
1.	Improving workers' accounting abilities
	decreases tax avoidance.
2.	Improving workers' management abilities
	minimizes tax avoidance.
3.	Improving workers' computer abilities decreases
	tax avoidance.
4.	All tax administration staff possess appropriate
	practical and professional qualifications, which
	contributes to the reduction of tax evasion.
5.	Employees have appropriate knowledge with
	computerized accounting information systems,
	which contributes to tax evasion reduction.



- 6. Tax departments have an internal control structure in place that results in increased staff performance, which results in less tax evasion.
- 7. Tax examinations are conducted by highly skilled, specialist professionals who contribute to the reduction of tax evasion.

Source: Adapted from [47, 49]

Table 2 Measurement of System quality of IT

Items

- 8. Our organization's information technology is easily accessible.
- 9. Our organization's information technology is adaptable.
- 10. Our organization's information technology can be interconnected with other systems.
- 11. Our organization's IT understands the expectations of its users.
- 12. Our organization's information technology can be relied on.
- 13. Our organizations are reachable.

Source: Adapted from [25, 26]

Table 2 Measurement of Innovation

Items

- 14. My company often adopts new technology (or apps).
- 15. My company creates a new product or service.
- 16. Our accounting system is up to date. 4. Our online platforms provide operational ease.
- 17. Our company's computer system includes greater security measures.
- 18. Our organization's compensation system promotes creativity.
- 19. Managers provide a lot of encouragement to employees who wish to attempt new things.

Source: Adapted from [25]

Table 3 Measurement of Reducing tax evasion

Items

- 1. Gaps in the conventional tax system lead to taxpayers' tax evasion rates.
- 2. The old taxation system's method of calculating taxable income encourages people to evade taxes.
- 3. Ignoring the country's basic economic conditions encourages people to evade taxes.
- 4. The old taxation system does not generate enough income for the state budget as a result of tax avoidance.
- 5. Inadequate management and a lack of faith in the administration's ability to achieve tax justice encourage people to dodge taxes.

6. Increase penalties for tax evasion, including the rate of interest on unpaid taxes.

Source: Adapted from [18, 48]

4. PLS Data Analysis and Results

The study evaluates the model using the Partial Least Squares analytic approach through Smart PLS 3. The measurement model (which represents the connection between variables and their indicators) was analyzed using the two-stage analytical approach described by Asparouhov and Muthén [51]. In this research, a similar strategy was used to examine the structural model (the relationships between the variables) [46].

Assessment of Measurement Model

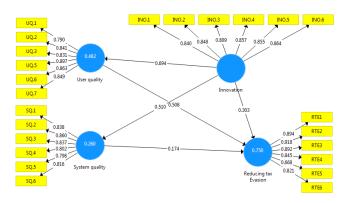


Figure 2 - Measurement Model

The validity of measurement models was determined using two (2) methods, convergent and discriminant validity. While convergent validity is determined by indicator loadings, average variance extracted (AVE), and composite reliability. The findings are summarized in Table 1 and Figure 2; "the loading for all items was determined to be more than the minimal criterion of 0.50. The results varied between 0.668 and 0.918, the AVE values varied between 0.682 and 0.716, and they all above the suggested barrier of 0.50, whilst the composite reliability values varied between 0.928 and 0.938, likewise beyond the recommended level of 0.70. [46]. However, item No 7 (decrease tax evasion) was eliminated owing to insufficient indication loadings. Finally, based on the findings, it is suggested that the current research has reliable convergent validity.

Table 1. Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Innovation	0.920	0.924	0.938	0.715

Reducing	0.917	0.927	0.936	0.712
tax Evasion				
System quality	0.906	0.908	0.928	0.682
User quality	0.920	0.924	0.938	0.716

Following the establishment of reliability and validity, another test was performed: discriminant validity based on the criteria proposed by [46]. The measurement compares the square root of AVE with latent variable correlations. Table 2 shows that the AVE square roots were always bigger than the diagonal values in all circumstances. Thus, the discriminant validity is established. Overall, the present study's measurement model's convergent and discriminant validity tests yielded good results.

Table 2. Analysis of the Discriminant Validity

r	r			1
	Innovatio	Reducin	System	User
	n	g tax	quality	quality
		Evasion		
Innovation	0.846			
Reducing	0.744	0.844		
tax				
Evasion				
System	0.510	0.626	0.826	
quality				
User	0.694	0.820	0.586	0.846
quality				

Structural Model Analysis

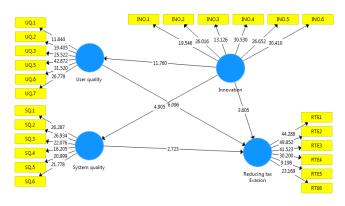


Figure 3 - Structural Model

According to Table 3, the predictive strength of the current research model, denoted by the R-square (R2) or coefficient of determination, reflects the combined contribution of exogenous and endogenous elements in the study [46]. The R2 value was calculated using the Smart PLS algorithm function to demonstrate the amount of variance that the exogenous factors account for. As a result, the R2 values for these three variables are 0.750, 0.260, and 0.482, indicating that the variance in income tax evasion is jointly explained

by System quality, User quality, and innovation. Following that, bootstrapping was performed using 5,000 re-samples from 121 instances to examine the significance of the path coefficients (β) using the one-tailed test. As a consequence, the findings of the path estimates and t-values were also examined in regard to the postulated correlations of this research

Table 3. R Square

	R Square	R Square Adjusted
Reducing tax Evasion	0.750	0.744
System quality	0.260	0.254
User quality	0.482	0.478

Using the structural model as a case study, we can see the results of our analysis in Table 4. In accordance with the parameters Innovation \rightarrow Reducing tax Evasion (t = 3.605; p = 0.000), Innovation -> System quality (t = 4.905; p = 0.000), Innovation -> User quality (t = 11.760; p = 0.000), System quality -> Reducing tax Evasion (t = 2.723; p =0.007), and User quality -> Reducing tax Evasion (t = 6.096; p = 0.000), the results Based on the findings in Table 4, the result revealed that innovation had a substantial mediating impact on the effect of influence. Reducing tax Evasion is associated with innovation, user quality, and system quality, and is associated with reducing tax Evasion (t = 5.385; p =0.000), and is associated with innovation, user quality, and system quality (t = 2.708; p = 0.007), and is associated with innovation, system quality, and tax evasion (t = 2.70; p =0.007). Thus, H5 is considered to be valid.

Table 4. Hypothesis Testing Results

Hypothesis	(0)	(M)		T.V	P.V
			STDEV		
Innovation	0.303	0.306	0.084	3.605	0.000
->					
Reducing					
tax Evasion					
Innovation	0.510	0.506	0.104	4.905	0.000
-> System					
quality					
Innovation	0.694	0.694	0.059	11.760	0.000
-> User					
quality					
System	0.174	0.177	0.064	2.723	0.007
quality ->					
Reducing					
tax Evasion					
User	0.508	0.504	0.083	6.096	0.000
quality ->					
Reducing					
tax Evasion					



Innovation	0.353	0.350	0.065	5.385	0.000
-> User					
quality ->					
Reducing					
tax Evasion					
Innovation	0.089	0.087	0.033	2.708	0.007
-> System					
quality ->					
Reducing					
tax Evasion					

Predictive Relevance

Apart from the R2 value, predicted relevance (Q2) is another useful statistic that makes use of the resampling approach [52]. To determine the endogenous variable's predictive importance, the blindfolding approach was used with multiple or single items in the reflective measuring model [46]. According to [46], "a cross-validated redundancy measure Q2 value larger than zero indicates that the model is predictively significant." As a consequence of this test, it was determined that the model developed in this research is predictive of endogenous components, as shown in Table 5.

 Table 5. Variable Cross-Validated Redundancy (Q²)

	SSO	SSE	Q ² (=1- SSE/S SO)
Innovation	726.000	726.000	
Reducing tax Evasion	726.000	343.236	0.527
System quality	726.000	601.724	0.171
User quality	726.000	482.966	0.335

5. Discussion

The study's stated purpose was to determine the effect of system and user quality on reducing tax evasion in Jordanian businesses. and to investigate the mediating function of innovation in the link between IT and tax evasion reduction.

The findings of statistical testing in Table 4 indicate that TI has a significant effect on reducing tax evasion, with a p-value of 0.007 for system quality and 0.000 for user quality. The original sample estimate values are 0.174 and 0.508, indicating that IT has a direct influence on decreasing tax evasion. This finding shows that the hypotheses H1, H2, H3, and H4 in this research are correct. The outcome of the mediator of innovation test indicates that innovation is capable of mediating the relationship between IT and tax evasion, as evidenced by p-values of 0.000 for user quality and 0.007 for system quality, and so H5 is also accepted in this research. The outcome is consistent with [4, 5, 30] The increased use of IT in the tax system results in less tax evasion. There are a variety of reasons for this, including the

simplicity with which IT can identify fraud and the availability of trustworthy data for a tax audit, as well as quicker access to information and greater tax reporting efficiency and effectiveness.

IT adoption in tax administration allows and promotes compliance testing through tax audits by facilitating faster access to taxpayer data. According to the Institute of Chartered Accountants in England and Wales (ICAEW), digitizing tax services would simplify administrative tasks such as registration, payment, and tax reporting for taxpayers, allowing taxpayers to benefit from IT while also making tax compliance more comfortable. IT will enhance the quality of internal and external third-party data, allowing tax authorities to undertake compliance audits. As a consequence, it was discovered that when high-quality IT is used effectively, tax evasion may be reduced significantly. And by using the mediation of innovation, which also serves to favorably mediate the relationship between IT and tax evasion, in accordance with [41, 43]. By identifying and measuring IT and minimizing tax evasion, our study contributes to both the IT and tax literatures. and our research contributes to the addition of innovation as a mediator between IT and the reduction of tax evasion. According to research, no study has considered innovation as a variable between IT and reducing tax evasion.

6. Conclusions, Limitations, and Directions for Further Research

Taxation is the most practical method for governments to raise cash to fund development initiatives in the nation. Nonetheless, the tax evasion problem has jeopardized the government's capacity to earn or maximize anticipated tax income for the purpose of supporting developmental initiatives. Jordan's government is highly reliant on taxes as a significant source of sustainable income. As a result, the present research focuses on the income taxation of firm taxpayers, who account for a significant portion of Jordan's taxable population. The study's use of IT has the potential to influence taxpayers' dishonest conduct. IT provides significant advantages to its users, in this example, taxpayers, not only in terms of efficacy, but also in terms of report completion time and information accessibility. Simultaneously, this survey demonstrated once again that taxpayers recognize the value of IT in assisting tax authorities in auditing and detecting tax fraud. Additionally, this research explored innovations that may act as a bridge between IT and tax avoidance. Not only does the invention improve the use of IT, but it also reduces fraudulent activity. Taxpayers value innovation because they see that IT is better capable of identifying fraud and using the resulting tax audit as a tool for self-assessment compliance. However, taxpayers have not shied away from IT.

The conclusions of this research made practical contributions to tax administration's implementation of IT.

Considerations such as system and user quality may impact taxpayers' behavior when it comes to using tax IT and minimizing tax evasion. Practically speaking, this research verified for authorities that increased use of IT may help prevent tax evasion. As a consequence, this research may provide information and feedback to associated parties, such as the government and policymakers, i.e., the Directorate General of Taxation, about the VAT system's technological implementation. We hope that our research will serve as a guide and that the government and stakeholders will take it into account when creating policies related to the use of IT in Jordan's or other countries' VAT systems. The current research adds to the body of knowledge about many significant drivers of tax evasion. However, the current research has certain drawbacks, the most significant of which is that the use of structured questionnaires may not accurately reflect importers' honest responses or real behavior. As a result, a combination of methods is required. Additionally, future research may examine widening the model by integrating additional untested sociopsychological variables such as tax knowledge, tax service quality, data quality, patriotism, religion, and external audit.

References:

- Mishchuk, H., et al., *Impact of the shadow* economy on social safety: The experience of Ukraine. Economics & Sociology, 2020. 13(2): p. 289-303.
- 2. Amjad and M. Audi, *Macroeconomic Environment and Taxes Revenues in Pakistan: An Application of ARDL Approach.* Bulletin of Business and Economics (BBE), 2018. 7(1): p. 30-39.
- AL-Shawawreh, T.B. and B.Y. AL-Smirat, *Economic effects of tax evasion on Jordanian economy*. International Journal of Economics and Finance, 2016. 8(7): p. 344-348.
- 4. Paoki, A.G.F., et al., *The Effect Of Information Technology And Perceived Risk In Anticipating Tax Evasion.* 2021, Petra Christian University.
- Adeniyi, S.I. and B.R. Adesunloro, *Electronic taxation and tax evasion in Nigeria: A study of Lagos State.* Journal of academic research in economics, 2017. 9(1).
- 6. Osipov, G.V., V.I. Glotov, and S.G. Karepova, *Population in the shadow market: petty corruption and unpaid taxes.*

Entrepreneurship and Sustainability Issues, 2018. **6**(2): p. 692.

- 7. Gorodnichenko, Y., J. Martinez-Vazquez, and K. Sabirianova Peter, *Myth and reality* of flat tax reform: Micro estimates of tax evasion response and welfare effects in Russia. Journal of Political economy, 2009. **117**(3): p. 504-554.
- 8. Nadirov, O., K. Aliyev, and B. Dehning, *To work more or less? The impact of taxes and life satisfaction on the motivation to work in continental and eastern Europe.* The Impact of Taxes and Life Satisfaction on the Motivation to Work in Continental and Eastern Europe, 2017: p. 266-280.
- 9. Setyowati, M.S., et al., *Blockchain technology application for value-added tax systems.* Journal of Open Innovation: Technology, Market, and Complexity, 2020. **6**(4): p. 156.
- Charani, E., et al., Optimising antimicrobial use in humans-review of current evidence and an interdisciplinary consensus on key priorities for research. The Lancet Regional Health-Europe, 2021.
 7: p. 100161.
- Ali, B.J. and M.S. Oudat, Accounting Information System And Financial Sustainability Of Commercial And Islamic Banks: A Review Of The Literature. Journal of Management Information & Decision Sciences, 2021. 24(5): p. 1-17.
- 12. Al-Khasawneh, R., Role of Electronic Accounting Information Systems in Reducing the Phenomenon of Tax Evasion in Facilities Subject to Income and Sales Tax in the Hashemite Kingdom of Jordan. International Journal of Accounting and Financial Reporting, 2020. **2**(10).
- Al-Rawashdeh, H.A. and A.A. Al-Bawab, *The Impact of The Corporate Governance Principles in Reducing of Tax evasion in Jordan.* AL-Anbar University journal of Economic and Administration Sciences, 2019. 11(25).
- 14. Hamid, N.A., et al., *Determinats of* reinvestment allowance (RA) tax incentive



utilization in embracing industry 4.0. Polish Journal of Management Studies, 2018. **18**.

- Poór, J., et al., Knowledge management in human resource management: Foreignowned subsidiaries' practices in four CEE 25. countries. Journal of International Studies, 2018. 11(3).
- Androniceanu, A., R. Gherghina, and M. Ciobănaşu, *The interdependence between fiscal public policies and tax evasion*. Administratie si Management Public, 2019(32): p. 32-41.
- Kahneman, T., D. Kahneman, A. Tversky. Prospect Theory: An Analysis of Decisions Under Risk, 1979: p. 263-291.
- Alm, J., B.R. Jackson, and M. McKee, *Estimating the determinants of taxpayer compliance with experimental data.* National tax journal, 1992. 45(1): p. 107-114.
- 19. Saez, E. and G. Zucman, *Progressive wealth taxation*. Brookings Papers on Economic Activity, 2019. **2019**(2): p. 437-533.
- Wael Fujo, S., S. Subramanian, and M. Ahmad Khder, *Customer Churn* 28. *Prediction in Telecommunication Industry Using Deep Learning*. Information Sciences Letters, 2022. 11(1): p. 24.
- 21. Abdullah Jalamneh, A. and M. Ahmad Khder, *Challenges of implementing cloud computing in the arab libraries* 29. *environment*. Information Sciences Letters, 2021. 10(1): p. 10.
- Khder, M.A., S.W. Fujo, and M.A. Sayfi, *A roadmap to data science: background, future, and trends.* International Journal of Intelligent Information and Database Systems, 2021. 14(3): p. 277-293.
- 23. Khder, M.A., Web Scraping or Web Crawling: State of Art, Techniques, Approaches and Application. International Journal of Advances in Soft Computing & Its Applications, 2021. **13**(3).
- 24. Alqaraleh, M.H., et al., *The Mediating Role of Organizational Culture On the*

Relationship Between Information Technology and Internal Audit Effectiveness. Corporate Governance and Organizational Behavior Review, 2022. 6(1).

- Ali, B.J., W.A.W. Omar, and R. Bakar, Accounting Information System (AIS) and organizational performance: Moderating effect of organizational culture. International Journal of Economics, Commerce and Management, 2016. 4(4): p. 138-158.
- Ali, B.J., R. Bakar, and W.A.W. Omar, The Critical Success Factors of Accounting Information System (AIS) And It's Impact on Organisational Performance of Jordanian Commercial Banks. International Journal of Economics, Commerce and Management, 2016. 4(4): p. 658-677.
- Ali, B.J. and I.A.A. AlSondos, *Operational Efficiency and the Adoption of Accounting Information System (Ais): A Comprehensive Review of the Banking Sectors.* International Journal of Management, 2020. 11(6).
 - Alawamleh, H.A., et al., *The Challenges, Barriers And Advantages Of Management Information System Development: Comprehensive Review.* Academy of Strategic Management Journal, 2021.
 20(5): p. 1-8.
 - . Salameh, A., et al., From Citizens Overview: Which Antecedents' Can Assist to Increase Their Satisfaction Towards the Ubiquity of Mobile Commerce Applications? International Journal of Interactive Mobile Technologies, 2020. 14(17): p. 45-55.
- 30. Hamilton, R. and J. Stekelberg, *The effect* of high-quality information technology on corporate tax avoidance and tax risk. Journal of Information Systems, 2017. 31(2): p. 83-106.
- 31. Grover, V., S.R. Jeong, and A.H. Segars, Information systems effectiveness: The construct space and patters of application.

Information & Management, 1996. **31**(4): p. 177-191.

- 32. Ali, B.J., A.A. Salameh, and M.S. Oudat, The Relationship Between Risk Measurement And The Accounting Information System: A Review In The Commercial And Islamic Banking Sectors. PalArch's Journal of Archaeology of Egypt/Egyptology, 2020. 17(6): p. 13276-13290.
- 33. Puspitawati, L., *The Influence of User Ability to Effectiveness of Accounting Information Systems: Research on the Tax Office (LTO) in West Java Regional Office.* information technology, 2015. **6**(12).
- 34. AL-Qudah, M.K.M., A. Osman, and B.J.A.R. Ali, Effect of human resource polarization, training and development, and human resource stimulation on the strategic planning of human resources: evidence from the Government Ministry in Jordan. Advances in Environmental Biology, 2014: p. 675-679.
- 35. DeLone, W.H. and E.R. McLean, *The DeLone and McLean model of information systems success: a ten-year update.* Journal of management information systems, 2003. **19**(4): p. 9-30.
- Matulin, M. and Š. Mrvelj, Modelling user quality of experience from objective and subjective data sets using fuzzy logic. Multimedia Systems, 2018. 24(6): p. 645-667.
- Hammer, F., S. Egger-Lampl, and S. Möller, *Quality-of-user-experience: a position paper*. Quality and User Experience, 2018. 3(1): p. 1-15.
- Bogatenkov, S., V. Belevitin, and M. Khasanova, *Risk management based on model of competences when introducing innovative information technology*. International Journal of Engineering & Technology, 2018. 7(4): p. 78.
- 39. Ravichandran, T., Exploring the relationships between IT competence, innovation capacity and organizational agility. The Journal of Strategic

Information Systems, 2018. **27**(1): p. 22-42.

- 40. Rajapathirana, R.J. and Y. Hui, *Relationship between innovation capability, innovation type, and firm performance.* Journal of Innovation & Knowledge, 2018. **3**(1): p. 44-55.
- 41. Li, Q., M.S. Ma, and T. Shevlin, *The effect* of tax avoidance crackdown on corporate innovation. Journal of Accounting and Economics, 2021. **71**(2-3): p. 101382.
- 42. Song, M., S. Wang, and H. Zhang, *Could* environmental regulation and R&D tax incentives affect green product innovation? Journal of Cleaner Production, 2020. **258**: p. 120849.
- 43. Cai, J., Y. Chen, and X. Wang, *The impact* of corporate taxes on firm innovation: Evidence from the corporate tax collection reform in China. 2018, National Bureau of Economic Research.
- 44. Namazi, M. and N.-R. Namazi, Conceptual analysis of moderator and mediator variables in business research. Procedia Economics and Finance, 2016.
 36: p. 540-554.
- 45. Rahi, S., Research design and methods: A systematic review of research paradigms, sampling issues and instruments development. International Journal of Economics & Management Sciences, 2017. 6(2): p. 1-5.
- 46. Hair Jr, J.F., et al., *A primer on partial least squares structural equation modeling (PLS-SEM)*. 2021: Sage publications.
- 47. Mwangi, I.J., D.N.u. Kiragu, and D.M. Githui, *Effect of technology adoption and staff training on tax fraud among large tax payers in Kenya revenue authority.* 2018.
- Al Baaj, Q.M.A., A.A.S. Al Marshedi, and D.A.A. Al-Laban, *The impact of electronic taxation on reducing tax evasion methods of Iraqi companies listed in the Iraqi stock exchange*. Academy of Accounting and Financial Studies Journal, 2018. 22(4): p. 1-13.
 - Kinyua, C.N., Effect of information

49.



technology on tax administration and performance by Kenya Revenue Authority (KRA): A study of sameer park branch. 2019.

- 50. Hair, J.F., et al., *When to use and how to report the results of PLS-SEM*. European business review, 2019.
- 51. Asparouhov, T. and B. Muthén, *Exploratory structural equation modeling.* Structural equation modeling: a multidisciplinary journal, 2009. **16**(3): p. 397-438.
- 52. Shmueli, G., et al., *Predictive model* assessment in *PLS-SEM: guidelines for* using *PLSpredict.* European journal of marketing, 2019.