



## **The effect of e-accounting and mediated by internal control system on the performance of SME in Iraq**

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### **Abstract**

E- accounting within the company add value to the company, such as high quality, fast decision making, cost reduction and easy to use so as to perform key activities in value chain effectively and efficiently, improve quality and improve efficiency (Suzan et al., 2020). Recently, the request to explore online financial transaction have been stipulated due to the soaring impact on the bureaucratic accomplishment (Al-Delawi and Ramo,2020). The existing literature indicates that various studies have been undertaken to examine how e-accounting influence the in-house control system and the concert, in the various theoretical frameworks. Nevertheless, researches which investigate the different magnitudes of e-accounting is relatively low. Only a few studies have examined the e-accounting characteristics on internal control system as well as its performance. Additionally, there seems to be a lack of research exploring how the above relationships are affected by the constructs. The current study, therefore, explores the link between the quality of information, cost savings, quick decision-making and easy to use by using e-accounting to tract the control system the inside the company and its performance. The relationship between the control system in the

company and its output is explored by the current research. The research model comprises of a list presumption which is used to investigate the outcomes, and 345 accountants working at the commercial SME in Iraq are involved as the respondents. The analysis is conducted through Smart PLS to confirm that the e-accounting features impact the concert and the efficiency of internal control system positively. The results obtained is noteworthy in the theory and practice through a finer-grained in the understanding of the impact of SME in relation to the characteristics of e- accounting, the control system in the company and its presentation.

**Keywords:** E- accounting features, Internal Control, The performance in SME.

**JEL Classification:** M41, M4

## **1.Introduction**

At the present time, computerized documentation has become important and is being implemented in most of the organizations. Therefore, it is unfeasible to accomplish contentious supremacy in the business field unless infotech is embraced by the company. In this respect, e-accounting has been used widely, especially in monetary presentation (Ahmad and Al-Shbiel,2019). Investigations have been carried out on definite framework using computerized documentation on financial matters and the effect of administration realization. Therefore, both variants are required to be collaborated in one framework of to show the achievement of the company in verifying the unconventional correlation in both of them. Hence, this current research is conducted to fulfil the purpose. The practicality of e- accounting could be seen as it backs up the organization day to day events, policy making procedure, and assist the accomplishment of the administrative duty in the organization. Whether the organization employs insufficient book-keeping evidence structure, the business deals procedure would not be accurate and as the consequence that could appear is the bookkeeping evidence has to be negotiated. The organization could not provide the evidence accurately, and the pronouncement would be inaccurate (Lawita,2020).

The constituents of the responsibility in the inner authority to supervise the money- making events in the company is relevant in e- accounting. The inner authority could assist the organization and play the regulator role efficiently. The presence of efficient

inner authority, would alert the management to make sure the events in the organization are well carried out. Additionally, the administrators could persuade each other to accept the evidences which are included in the acknowledged information are correct and reliable (Putri and Endiana,2020). Currently, several researchers are conducted to measure on e-accounting effects on the overall performance. SME growth has drawn the scholars' and expert's attention. Analyzing the relationships of e-accounting and the performance goals in the company could be very stimulating. Nonetheless, mediating role of the control system on e-accounting in relation to the overall performance in SME are not investigated by the conducted studies. Therefore, the present study intends to quantify the mediating effects of internal control system in relation to e-accounting and SME performance. This research would explore the qualities of e-accounts and measure the impact of SME overall performance (Alfartoosi and Jusoh,2020).

## **2. Literature Review**

This segment discussed theoretical contribution as well as an overview of previous studies which are undertaken to demonstrate the correlation of e-accounting, the control system inside the SME and its performance. It focuses on examining the research on e-accounting characteristics and how it has affected the performance based on the mediator impact on the internal control system.

### **2.1 Application of Technology Acceptance Model (TAM) Theory**

With the massive development of innovation, individuals have a higher chance of utilizing novel technology in their everyday life and work. Indeed, researchers investigated and published a hypothetical model to clarify user's information technology acceptance and use. TAM was applied to clarify the customer acceptance of innovation utilized in a diverse environment setting. Review in the field of innovation adoption regularly provides a challenge concerning the shortage of comparable studies and consumers' innovation in experience (Zaineldeen et al.,2020). One of the prominent and widely applied theory in describing the accepted evidence systems by an individual is the theory of Technology Acceptance Model (TAM) (Davis,1986). The acceptance of TAM information systems, has derived from the Reasoned Action Theory (Ajzen and Fishbein, 1977). This is originally suggested by Davis, (1989) who suggests SMEs are supposed to use e-accounting-based innovation to enhance performance.

Such technology would be useful to monitor the companies internally and ensure efficiency (Ibrahim et al.,2017). One of the aspects that influences its accomplishment in implementing e-accounting-based IT is the user's confidence. The successful implementation of e-accounting technology could support the effort to monitor internal control so as to expand the organizational enactment. This is in accordance with the Bandura's 1986 SET, which proposes that the acceptance of a technology could be affected by individual confidence. Consequently, this encourages the acceptance of technology by users.

## **2.2 Application of The Contingency Theory**

The meaning of "contingency" is the truth of somewhat which is quantified by the circumstances. (Chenhall, 2003). This eventuality occurs when a variant disturbs an additional variant and thus be included as the next variable (Donaldson, 2006). Woodward (1958) who believe in behaviorism. developed the Theory of Contingency. According to this theory, no best way is available for management.

Haldma and Laats, (2002), also noted that no best way is available for provision of a good management accounting system, rather than to rely on some contingencies to decide the most appropriate management accounting system in a given situation. Accordingly, this study explains the contingency theory is reflected by efficiency of the inner authority. Similarly, the contingency theory effectiveness in the structure of the inner authority is employed by Jokipii (2010), who investigated the success of the inner authority structure in organizational performance by considering the following contingent variables; perceived environmental uncertainty, organizational structure, firm's size, and strategy. In the study, the internal control structure, which is made up of the various mechanism in the structure of the inner authority which is used as a mediating variable. The mediating consequence of the inner authority structure is on the association of the efficiency of the inner authority and the organizational accomplishment.

## **2.3 The Stewardship Theory Application**

The last theoretical perspective utilized in the framework is stewardship theory by Donaldson and Davis, (1991). It proposes when administrators are given autonomy, they would act as responsible stewards of the assets under their custody (Cribb,2006). The stewardship theory is propounded by Donaldson and Davis (1991). It is used in this study to complement the contingency theory. The stewardship theory is a relevant theory that could be used to explain internal control. The main reason for using this theory is to identify the situations that contribute to the agreement between the attentiveness of the chief and the officials. In fact, Ebimobowei and Binaebi, (2013) state the existence of inspecting is the consequence from the concept of governance accounting. When stewardship approaches are adopted in government sector, changes might occur in the sector due to the fact that the stewardship theory serves as accountability mechanisms that could be used in ensuring good auditing, monitoring and reporting with the aim of improving performance (Cribb,2006).

#### **2.4 E- Accounting**

Computerized information and data are used to enhance the roles of book-keeping in an organization, without considering their sizes. (Abdullah et al.,2019). Appropriate application of computerized information guarantees timely monetary information as well as accurate book-keeping information given to the administration. Such actions are associated to the paraphernalia of policy making as well as the consequences of the procedure on the achievement of the organizations (Lawita,2020). E- accounting could be demarcated by the gradation on the computer-based systems which are employed to develop the evidence as well as deliver the pronouncement in the setting of regulator and synchronization the events in the organization. Prima and Akbar (2020), discover companies that employ e-accounting successfully show noteworthy effects of e- accounting on organizations' achievement. The successful utilization of e- accounting is important for the organizations since it assists the organization to attain economical, expand salary/profits in progress, generate ruthlessness as well as shoot up production. Therefore, effective e- accounting could affect the general procedure of the organization and dominate the workers fulfillment in using a specific structure confidently.

Although e-accounting is very important and is widely used, there has been relatively little research in this area. Past studies have revealed e-accounting system implementation expands in performance as a result of improvement accounting information quality, the process of decision-making and internal control. The controls facilitate transactions of a company in Iraq (Flayyih et al., 2019). Accounting systems are essentially used for analyzing, recording, evaluating, and monitoring the financial condition of

companies. The stability, viability, and profitability of a business are evaluated based on its financial condition. It is carried out by preparing reports using ratios such as ROI, ROE, and ROA and to illustrate the financial performance of a firm more comprehensively, financial information is used. E-accounting could affect managerial performance and simultaneously provides positive results (Ernawatiningsih and Kepramareni, 2019).

Huy and Phuc, (2020), argue that e-accountancy expertise as well as aptitudes are vital to the achievement of accountant's career because one of the key roles of accountants in SME is to be able to use the application of e-accounting. Therefore, since the research model intends to assess the technostress level of accountants when using e-accountancy, its features (quality of knowledge, decrease in expenses, simple analyzing and simple application) are seen as 'what e-accountancy could offer', and not 'what e-accountancy can do for you'. E-accountancy features would be clarified in the following section.

#### **2.4.1 Information Quality**

Information quality can be defined as the ability to meet the information required for satisfying the consumer's explicit and implicit needs (Alshikhi and Abdullah, 2018). There has been recent increase in the requirements for bringing data into line with the existing standards, so the information misuse will not be forgotten. Based on the rules and systems, quality of information has become very important for e-accounting success. Since information processing is considered as a commentative proceeding within any SME (Adebayo et al., 2016). In fact, relatively little research based on business has been done on the reliability of e-accounting in non-western countries. The researchers of e-accounting can and should apply their knowledge of both business and technology to fill this gap. The meaning of reliability of information is literally how much the researcher could depend on the origin of the statistic details, and the figures. Well-founded details are truthful, conscientious, certain, real, actual, unflinching, and reputable. The major measure of reliability is consistency (Alshikhi and Abdullah, 2018). Information quality largely depends on how reliable it is and how it is reported. The opinion of decision makers on how useful the information the system generates is able to satisfy the informational needs for the process of operation, reports from managers, budgeting and control within the organization as it influences how effective E-accounting is (Nwinee et al., 2016). In (2018), Ekiabor and Oluwole, suggested that it is very important for every organization to keep reliable records of accounting. Other than helping it thrive legally and financially. Through the use of the basic principles of accounting, the many shortcomings of accounting are reduced, thus, yielding quality and reliable work. Professional accountants ought to employ the use of accounting software to allow them make reports that are reliable by collecting quality financial reports.

With respect to information accuracy is the objects percentage without errors of information such as out-of-range values, misspellings, etc. (Mulyani ,2020). distinguishing four dimensions of quality for values of data: freshness (in the sense of timeliness), accuracy (in the sense of correctness), consistency, and completeness, but remarking accuracy as the most fundamental one, where the specific issues are related to completeness, freshness, and consistency (Susanto and Meiryani, 2019).

#### **2.4.2 Cost Reduction**

It means reduction of cost as a concept which is aimed at reducing cost through formerly accepted customary or normal procedure which deprive the decreasing of the achievements or efficiency of the service or venture (Choudhari, 2018). The current business environment is highly competitive, with an impact on the SME. All costs are reduced to the lowest level as an impulsive reaction under the present situation. Unnecessary discretionary and non-value-added costs are removed by carefully investigating all aspects of an organizational cost structure, yet keeping its modest spot. Most enterprises have the objectives of obtaining the highest profit. Due to relation of management with maximizing profit as one of the tools to assess the business's performance particularly in a manufacturing company, there should be increasing sales, therefore, increasing production resulting in higher cost. Therefore, to achieve maximum profit in a competitive market where the goods and services price impacts demand, there should be cost control and cost reduction (Bardhan and Thouin, 2013). To operate a business, you must be innovative, that is not just thinking of profitability but also responsibility and sustainability as well. A strong business growth plan focuses on how to increase profits and how operating costs can be reduced by embracing technology. Due to non-existence of software malfunction and the low cost, the accountant and employer will both be satisfied when using e-accounting. Records do not occur manually because the financial records are kept online in the data host processor, thereby saving lots of money being spent on several accounting software and manual books (Choudhari, 2018). However, e-accounting entails applying the web automation for the purpose of corporate book-keeping. Just as an e-mail is the automated form of the old-style postal communication, electronic book-keeping is "electronic enablement" of book-keeping processes that is lawful, could be traced and are formerly known as conventionally guided using paper (Trabulsi, 2018). Therefore, it is imperative that clients are informed about the benefits of e-accounting. By using the accounting software, accounting team's every member is able to achieve much more within a stipulated time, thereby suggesting that a smaller team is necessary (Beg, 2018).

### **2.4.3 Fast Decision Making**

In decision making, several possibilities are chosen to reach the anticipated outcome (Eisenfuhr, 2011). In line with this study, (Thabit and Abbas, (2017), noted that one can create electronic data interchange and web-based storefronts with the business accounting software. Live connections with the accounting system help improve the functions of manufacturing, forecasting, procuring, and scheduling. Through immediate transactions, they should be documented at the precise time to decide. Then, if the period amid occurrence of the transaction and its recording passes, deliberate measures should be taken to ensure complete and accurate recording of the entry.

The application of the latest technical knowledge in policymaking and procedures in the profession and modern management, is very important. Commercial policymaking should be supported by applying e- accounting to select simpler solutions in decision-making processes, reducing the costs of SMEs and increasing efficiency of decision selection. Some basic features are used to determine the role of business information systems in the organization (Holjevac, 2012). Using e-accounting makes the managers confident with information technology to support decision making (Meagher and Wait, 2013). For the success of any SME, quality and timely decision is vital. In fact, one of the most essential aspects of its internal design is how SME chooses to design its decision-making rules and assigns decision rights with the reward system and how to assess performance, as one of the vital aspects of SME design (or architecture). With the increase in global competition, and higher uncertainty from exposure to more markets and more competitors, the ability of SMEs to make good decisions is very important (Neziraj and Berisha Shaqiri, 2018).

### **2.4.2 Easy to Use**

A technology that is user-friendly is capable of reducing the difference between systems and users in a manner that allows more interaction between the user and the task rather than with the system (Adenike, 2018). The quality of accounting software used and understood easily would be helpful for its user. Thus, the system used becomes successful depending on the level of easy-to-use accounting software. Generally, an increase in easy-to-use has positive influence on many aspects of a firm's output quality including lower support and training cost, increased revenues, productivity, sales, and customer satisfaction, development costs and time and maintenance costs (Alfartoosi and Jusoh,2020).

The introduction of computers in many areas, especially enterprises, has made the processing and storing of information within an electronic environment indispensable. The use of computers by accounting professionals has become important due to the developments in computer technologies as well as their reflections in different occupations. Consequently, it is paramount for accounting students to acquire knowledge on the usage of computer in accounting, and instructors can use the most appropriate methods to teach the students how to use computer in accounting (Al-Dalabih, 2018). As a result of the usage of computers and internet in enterprises, computer usage in accounting has grown. It is observed that many accountants now employ the use of computers for their personal and work use because of the increase in computer use. Nevertheless, the use of technologies for a long time cannot be necessarily translated to using it efficiently (El-dalabeeh et al., 2019). The increase in data processing in different areas of human life such as education, work and leisure are increasingly drawing the attention of individuals to user-friendly software design. An interface's ergonomic design is reflective of the quality of such design, and it is one of the factors that determine the acceptance of an interactive human-computer system (Kanakriyah, 2017).

## **2.5 Internal control system**

Inner authority in the accounting profession, is defined as compliance aspects of control and financial reporting. Internal control is the way introduced by a company so as to accomplish the company's objectives and targets. They are a set of methods and strategies and taken up by an organization to make sure that all the company's deals are effectively dealt with so as to notice any kind of wastage, scam, and exploitation of company's resources (Teru et al., 2017). Internal control systems comprise all procedures and policies (inner authority) used by the management and directors establishment to help achieve the aims of the organization and confirming the efficient and orderly running of a business, such as obedience to inner rules, the deterrence and recognition of deception and fault, which is grounded in time to provide dependable monetary evidence, completeness as well as the precision of the book-keeping documents, and safeguarding assets. Internal control as a complete structure of inner authority is recognized to provide rational declaration of successful as well as well-organized procedure and inner monetary regulator, which complies to the regulations and laws (Al-Dmour, R., 2018).

Internal control systems conceal all the measures and rules (inner authority) which is manipulated by the administration and managers of a unit to assist the organizations to accomplish their objectives of certifying, as far as possible, the well organized and orderly execution of a corporation, together with protection of assets, obedience to internal policies, the recognition and deterrence of the mistakes and deception, comprehensiveness and precision of book-keeping chronicles and the groundwork in

time to provide reliable book-keeping documentation ( Sanusi Fasilat and Hassan, 2015). E-accounting requires internal control to get the required accounting information as expected (internal control other than securing assets ensures adherence to the set rules in the organization). There would be growing fraudulent activities in an organization for the non- integrated internal control in the E-accounting (Azmi and Azhar, 2020).

## **2.6 The Performance**

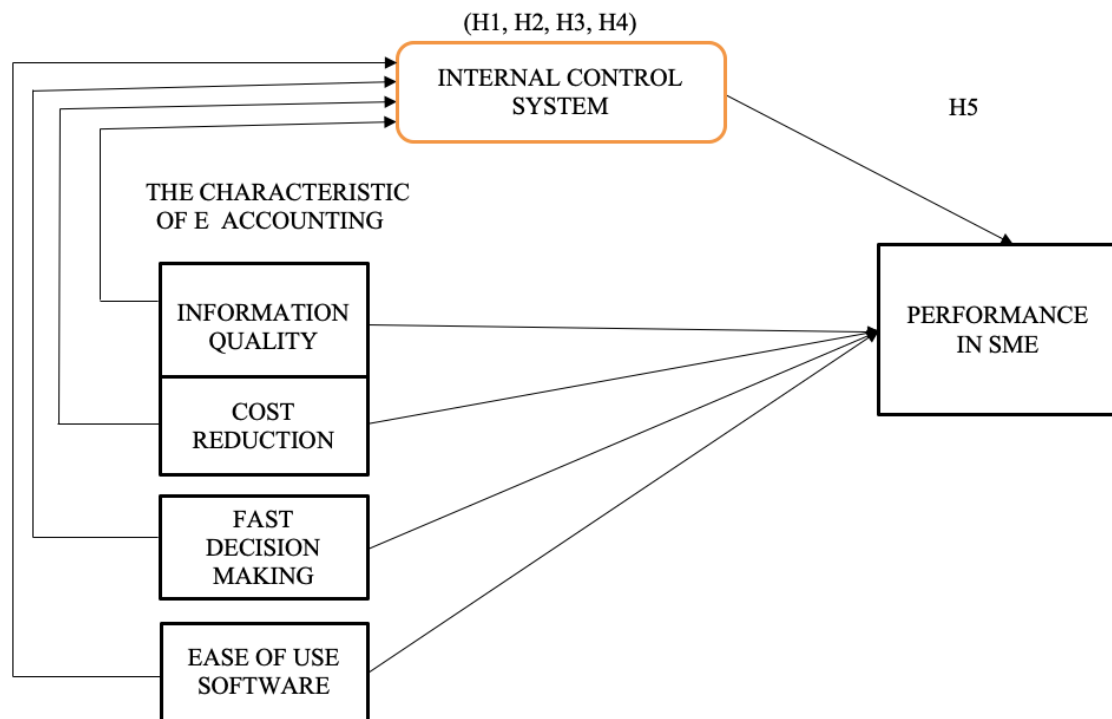
The definition of SME performance relates to the measure to enumerate the actions of commercial firms to see if its aims can be achieved. If firms succeed in satisfying the needs of stakeholders more than their rivals; then, firms can achieve its objectives. Economic variables or non-economic variables could be applied to calculate the achievement of the organization (Leitao and Franco, 2008). Initially, the small-scale industries possess the key impact on the gross domestic product (GDP) and joblessness. It has been mentioned earlier, universally, small scale industries are accountable for a significant portion in GDP and the decrease in joblessness; virtually, only in the circumstance of centralized fiscal structures which is not factual (but these systems are on the verge of extinction). Next, in the present situation of the fast fluctuations in the universal budgetary system, the inter- relations between federal financial prudence (a direct effect of globalization) and a problematic retrieval after the universal financial disaster have destined that the function of medium scale industries has meaningfully augmented, constructed on the capability to familiarize to the tasks of a uninterruptedly varying situation (Cicea et al.,2019). Finally, the small-scale industries characterize the background of unrestricted commercial resourcefulness and private enterprise, vibrant fundamentals essential a modest budget (Gomezelj Omerzel and Smolcic Jurdana, 2016).

Even though these researches could be beneficial to businesspersons in their exertions to discover the most suitable conducts to upsurge organizational achievement in the situation of inadequate capitals, they do not support meaningfully to comprehend the precise mechanisms and the causal factors of a small scale industries, subdivision routine in a particular country or another (Holzhacker and Skakova,2018). Small scale industries' achievements could be comprehended from a quantifiable viewpoint: efficacy, monetary consequences, stages of construction, number of clients, marketplace portion, cost-effectiveness, efficiency, subtleties of returns, expenses, and fluidity (Zimon, 2018) are based on the evaluative viewpoint: objectives accomplishment, management panache, the worker behavior client fulfilment, merchandise and procedure modernization, organizational and marketing innovation, etc. E-accounting is a method that assist organizations in strengthening its control and

enhancing the efficiency of SME operations. E-accounting provides reliable, appropriate details for decision makers, cost savings and the software is user friendly. E-accounting is could be used to record the financial transaction of the organization. It associates the systems wheels and accountancy procedures to trace the monetary dealings as well as providing inhouse and exterior performance report, and assisting to prepare fiscal reports in the capacity to increase administrative presentation (Alawi et al., 2018).

**3. Hypotheses development**

The proposed framework for this research focuses of the effect of the characteristics of e-accounting and mediated by the internal control on the performance (Figure 1.0).



### **Figure 1 Conceptual Framework**

This model suggests that the internal control system acts as arbitrator to show distinctive correlation amid e-accounting and the performance. The conceptual framework is created on the postulation of the e-accounting features which include evidence superiority, decrease in expenses, quick policymaking and simple application, would influence with mediated effect by internal control system on the performance. The conceptual model assumes that e-accounting features mentioned above would associate the control system and the performance of SMEs. The theories are developed to explore the associations of the variables which would be explained in the subsequent segments.

#### **3.1 The relationship between information quality and the mediated by internal control system internal on the performance.**

The first key hypothesis is to examine the connection between amid information quality and mediated effect by internal control system on the performance which are used to realize the research goal. Hypothesis 1 has been formulated to predict a noteworthy correlation amid SME information quality and internal control system. According to (Omer, 2016), In recent years, companies have been seriously engaged in a severe competition, especially on information that is known as a key source of any development. On the other side, internal control system helps companies to show more efficient performance using the information made available through e-accounting. To get quality of information using e-accounting is dependent upon numerous factors like internal control, staff qualifications, size of the firm, support given by top managers, and information quality (IQ). All these factors considerably affect the efficiency of the firm's performance. In addition, inner authority structure affects the success of electronic book-keeping since this framework could assure the quality of the information provided for the improvement of the company's performance. This system has a relevance with both operational and divisional processes. Data generally describes the things, events, and transactions that need to be recorded, categorized, and stored. Additionally, if there is a perfect internal control within a company, information could be utilized by managers more reliably in a way to manage the commercial activities properly; on the other hand, in cases where internal control is not in an ideal state, managers will not be able to accomplish the firm's objectives. The other qualitative features of accounting information can be achieved when a proper internal control system is implemented in a firm (Alawaqleh, 2021). E-accounting enables both organizations and individuals to recognize their objectives and develop strategies and take them into action. It also provides proper information timely. This way, e-accounting contributes considerably to the improvement of a firm's performance (Al-Waeli et al., 2020).

Study by HA (2020) showed that information quality is vital for e-accounting to succeed because it assures the quality of the data used for the improvement of the company's performance. This has connection with the operational and decisional processes. The management policies of IQ help firms to reply in a proactive way and deliver the products/services required by consumers. This is a great help for any firm to improve its performance. Mardi (2020) revealed that the use of a weak inner authority negatively affects the accruals quality. Thus, it can be said that e-accounting has relationship with inner authority over monetary commentary to make sure the reliability of the financial information. Therefore, the information quality and mediated effect by internal control system to have an important effect on the performance which is used internally by SMEs.

#### **H1. Information quality and mediated by the internal control system improves the performance in SME.**

The second key hypothesis is to examine the connection between amid cost reduction and mediated effect by internal control system on the performance which are used to realize the research goal. Hypothesis 2 has been formulated to predict a noteworthy correlation amid SME information quality and internal control system. Expressed by Lutfi et al. (2020), the literature is consisted of numerous studies focusing on the benefits of e-accounting. Simplifying the accounting-related papers and also the relocation of book-keeping procedures toward cloud-based electronic platforms considerably affected accounting information systems. The tested the cost savings produced by the application of a cloud computing-based program and reported that this can be considered as a highly significant and relevant criterion in cases where an internet-based accounting solution is to be selected. They also maintained that the digital technologies (including e-accounting) have the potential to enhance the quality of the accounting business-related cost savings and give support to decision-making process.

In recent years, Bataineh (2018) showed that the use of IT can reduce the labor time, thereby decreasing the overall costs. Bataineh (2018) also made an analysis on the effects of IT-related investments upon the productivity level of the companies working in Spain and have reported that although the companies in the sample had experienced some enhancements in the levels of their productivity during a defined period of time; these enhancements were not meaningfully induced by IT investments. Trabulsi (2018) suggested the companies managements to assess the cost reductions and company profits as the result of applying the programs developed by specific users. According to their results, the enhancements observed in the firm's income could also be generated by the information systems that worked on the basis of e-accounting. Soundararajan (2019) stated that IT covers all the areas on which a company act. He was concentrated upon e-accounting aiming to demonstrate that the computer-based accounting instruments have a direct relationship with the financial outcome and the productivity levels of SMEs.

Despite these arguments made by different researchers on the significant effectiveness of cost reduction and mediated by internal control system on the performance of SME, there are few other studies contradicting these arguments claiming the outcome in reducing costs is not noteworthy neither mediated by internal authority system nor company's performance. Abiodun, (2020), declare the presence of controlling procedure and the detachment of duties, in using modern technology such as e-accounting could expand cost of deception. The value of a worker who accomplish cheats, thus exceeds the price of a worker who accomplish deception in the domain of separated responsibility. Ejoh and Ejom (2014) also examine , a study which indicates the vital association amid inner authority and monetary accomplishment. Therefore, the research suggests the administration of the company should establish a consistent device to supervise the coaching process for the employees. An internal control surveilling the process should be carried out as a variant but not to influence the productions of the financial output in the organizations. Additionally, his study confirms, despite the assumption indicating the effectiveness of reducing costs by using e-accounting, and mediated by the inner authority production in small scale industries; the analysis of the questionnaire that has been conducted on these companies shows the insignificant consequences in reducing the cost of the companies' achievement in Iraq. Therefore, the hypothesis posited for the relationship between cost reduction and mediated by internal control system on the performance in SME was found with no significant effect.

## **H2. Cost reduction and mediated by the internal control system not improves the performance in SME.**

The third key hypothesis is to examine the connection between amid fast decision making and mediated effect by internal control system on the performance which are used to realize the research goal. Hypothesis 1 has been formulated to predict a noteworthy correlation amid SME information quality as well as the inner authority structure. The key objective of the third hypothesis in the research examine the connection effect of fast decision making, mediated by internal control system on the performance among Iraqi SMEs. Currently, the organizations are fast developing due to the rapid growth of industrial science world-wide, and e-accounting, is part of it. The transformation relies on the details and evidences, either to expand book-keeping evidence structure universally, or turn it to be more prosperous establishments. The evidences which are gathered should be exclusive and could be used to develop, authorize and making the right choice timely. However, book-keeping evidence could be defective illustration of the fundamental pronouncement delinquent, because the complex features could not be measured impeccably in fiscal digits (Hutahayan, 2020).

Daniel and Inim Victor argued, (2019) that the e-accounting could assist the administrators to comprehend the jobs better and decrease vagueness before providing their verdicts. Indecision could recount to the deficiency of evidence in contrast to what

a policy maker requires in deciding, while the other co-administrator could forecast the consequences based on their schedules, thus creating more doubts. Alawaqleh, (2021) defines the pronouncement to consolidate or subcontract fragment or all of the book-keeping roles and encompasses tactical pronouncements as well as applied contemplations. This increases problems at supervision location on internal control to the level of accountability for the authority to commence. Unless the book-keeping procedures are removed from the component, before internal control is abolished, and therefore, working administrators could be given extra accountability to regulate the problems. Thus, the problems on apparent services of administrators, and the amount to which the internal control is regarded as a mentor to the corporate, and the processor of book-keeping evidence to the procedure of policymaking in achieving the organization goals.

Azmi and Azhar (2020) debate on numerous intricate issues in internal authority and the structure of computer-based book-keeping evidence. They also designate the classification of administration pronouncements, detailed out the categories of verdicts made by the administrators, label numerous information provided by the organization development and internal authority. Undeniably, book-keeping evidences are widespread to be used by the public for policymaking on time. Therefore, the hypothesis posited for the effect of fast decision making and mediated by internal control system has been discovered to be accepted and noteworthy on the achievement among Iraq SMEs. Therefore, the findings corroborate the rationale discussed in the preceding paragraphs.

### **H3. Fast decision making and mediated by the internal control system improves the performance in SME.**

The fourth hypothesis aims to study the effect of the easy to use and mediated by internal control system on the performance among Iraq SMEs. E-accounting facilitates the ways for delivering the information and significantly affects the business transactions; it makes the transactions run more smoothly, and achieves more benefits through processing collected raw data into usable information. It is useful for decision makers and makes SMEs capable of competing in the age of free market. In addition, the application of e-accounting strengthens SMEs in a way to gain competitive advantages more easily (Andarwati et al., 2020). In the context of e-accounting, According Lanlan (2019) discusses on the appearance of the industrial sciences evidence and how it fluctuates the technique of book-keeping connections are documented. Specialized book keeper should possess the knowledge and willing to acquire the skills to use a processor main stream and recognize the use of bookkeeping operation through e-accounting. He should be able to prepare the documents which is. The inventors should foresee the handler prospect and make it user friendly, to encourage and attract the users to use e-accounting. the cognitive usefulness of e-accounting as well as the scope of the information structure which could support in educating performance for the consumers.

Alleged practicality is associated to the gradation which the users trust and the expertise would upsurge their competency on the profession. Consequently, if somebody is overwhelmed in using an explicit scheme, and achieved satisfaction in doing the job, it indicates the scheme has a greater impact of practicality, and the perception would convert to an improved course. Also, with the creation of a complete inner authority structure, the companies encourage competent and real occupational procedure could yield eminence merchandise /facilities and appropriate with the objectives of the companies. Nonetheless, the inner authority structure is changed and it sustains steadfast fiscal and administration figures in time designed for a straightforward broadcasting arrangement (Ibrahim et al.,2017).

In this order of ideas, Lanlan and Ahmi, (2018) believes the practice of book-keeping evidence over industrial science tools provides optimistic consequences in the presentation of the association. The scrutiny of book-keeping evidence in particular, permit the calculation of the gradation of the organization's monetary evidence structure and apprehend its authenticity which allows it to evaluate the superiority of its evidence, menace and progress. Practically, the entire book-keeping deals are experiencing analog to digital conversion. Nowadays, financial statements are not prepared physically by the accountant, instead there are a wide range of software which are computerized. The expansion of e- accounting particularly in the time of the trade insurgency has become so vital to be associated with the progress of the present industrial sciences such as cloud computing, internet of things, big data and analytics. Therefore, it is also quite important to comprehend the application of e- accounting among the book keeper. The purpose of this study is to supplement and generate the identification of the assumed the affluence of practice, practicality, and the application of e- accounting. According to the objective of the present study, the researcher intends to increase the facts and association among the variants and e- accounting and how this effects the organization performance. The core regulator is crucial and it is the root for e- accounting. It is characterize by its ability to perform accurately and the evidence perform successfully and play an auxiliary part, externally, to attain the actual deed that is govern from the internal, to ensure e- accounting could easily accomplish the standard and constant procedure (Gonzalez and Hoffman,2018).

Chirchir et al., (2019) examines in what way petite corporations derive to agree to in taking up e- accounting. He reveals that there is a constructive association between professed simple application, professed practicality, and the intent to accept e- accounting in Central Ohio, United States. Fowzia and Nasrin explored the appreciation of e- accounting in economic establishments in Bangladesh. Nirwanto and Andarwati (2019) find the utilization of e- accounting creates a vital link between

achievement expectation, determination anticipation, community influence and circumstances. The jurisdiction of inner authority internal book-keeping structure under the surrounding classification, would be a bridge or adopted into the electronic book-keeping evidence structure, precise regulator procedures would be neglected. Inner book-keeping structure is under the sovereignty of e-accounting. These characteristics could detect book-keeping fallacy that happen briefly, so that the superiority of book-keeping statistics administering expand, to evade book-keeping fallacy and could no longer be resolved within a limited period and how it impacts on performance measures (Ali et al.,2018). Therefore, the hypothesis posited for the effect of easy to use and mediated by internal control system was found to be positive and significant on the performance among Iraq SMEs. Therefore, the findings corroborate the rationale discussed in the preceding paragraphs.

#### **H4. Easy to use and mediated by the internal control system improves the performance in SME.**

## **4. Research Method**

The investigation requires practical inquiry and hypotheses analysis, a positivist paradigm (Levitt et al., 2018) and quantitative approach have been adopted by gathering prime information through the self-administered survey (Aguinis & Vandenburg, 2014).

### **4.1 Survey instrument development**

The investigation tool has been established to quantify the variables in the research model following guidelines suggested by (Yas et al.,2020b). The first few sets of questions in the survey questionnaire are designed to collect demographic information, followed by a section that comprised of items that captured the information on each of the variables in the model. The measurement used to calculate each of the concepts are Likert Scales, with satisfactory internal consistency reliability is reported using Cronbach Alpha values (Hair et al., 2010). The items are adapted from similar studies published by the top tier journals.

#### **4.2 Study sample and data collection**

450 questionnaires are circulated amongst Iraqi SMEs by email. 345 companies responded to the questionnaires by email. The procedures of analyzing the responses have been explained in the previous chapter. Hence, the 345 questionnaires are considered usable. Table 4.1 displays pertinent information related to the collected data. The response rate is 100% since prior to distribution of questionnaire, all the respondents have agreed to response.

#### **5. Data analysis**

Data collection has been analyzed in two steps. First, the SPSS version 23 is used to conduct preliminary analysis such as extracting demographic features of the respondents, descriptive statistics, testing for common method variance, testing for normality, outliers, etc. In the second phase, Partial Least Squares for Structural Equation Modelling (SEM) using Smart-PLS version 3.9 is deployed to scrutinize the measurement model and to examine the assumptions (Hair et al., 2019; Memon et al., 2017).

##### **5.1 Respondents' features and demographic profiles**

Table 1 presents the respondent's distribution for all demographic variables. According to results of respondents of gender showed that the males made up 62.3% and females 37.7%. According to the results of respondent's aged, 12.8% are 20 to 30 years old, 52.2% are 30 to 40 years old; and 27.5% are 40 to 50 years old, 5.8% are 50 to 60 years old and 1.7% are more than 60 years. Based on the education results, 34.2% possess master degree; 16.2% have diploma; 32.2% have degree; 7.5% are PhD holders; 8.1% finishes secondary school; and only 1.7% are primary school leavers. For income, the highest percentage 52.7% received between 1000-1500 USD\$; 9.6% receive more than 2000 USD\$; 23.2% receive the income between 1500-2000 USD\$; and 24.1% have an income between (500-1000 USD\$). For the category on satisfaction on e- accounting, the highest percentage, 64.9% are satisfied; and the lowest percentage 1.4% are dissatisfied; only 1.4% are very dissatisfied, and 15.9% of the respondents are very satisfied. Only 16.2% perceive e-accounting as normal. The result on the reason for choosing e-accounting, indicates 19.4% choose e- accounting because it gives quality information; 18.6% choose e-accounting because it

provides fast decision making; 10.1% choose e-accounting because the software is easy to use. 6.4% choose e-accounting because of cost reduction. The highest percentage 45.5% choose e-accounting because of all the given reasons.

Table 1 Frequency and percentage distribution of demographic characteristics

Variable	Level	Frequency	%
1.Gender	FEMALE	130	37.7
	MALE	215	62.3
2.Age	20-30	44	12.8
	30-40	180	52.2
	40-50	95	27.5
	50-60	20	5.8
	>60	6	1.7
3.Education	Primary	6	1.7
	Secondary	28	8.1
	Diploma	56	16.2
	Degree	111	32.2
	Master	118	34.2
	PHD	26	7.5
4.Income	500- 1000 USD\$	83	24.1
	1000-1500 USD\$	149	43.2
	1500-2000 USD\$	80	23.2
	more than 2000 USD\$	33	9.6

5.Satisfied	very dissatisfied	5	1.4
	dissatisfied	5	1.4
	Normal	56	16.2
	Satisfied	224	64.9
	Very satisfied	55	15.9
6.Reason	Information quality	67	19.4
	Cost reduction	22	6.4
	Fast decision making	64	18.6
	Ease to use	35	10.1
	All of them	157	45.5

## 5.2 Measurement Model: Convergent validity

The evaluation on how latent variables are measured on the basis of measurement model (items or indicators) defines and observed the measurement properties of the variables, the relations amongst the observed items or gages. The embryonic variables are influenced by measurement models, which identify the hypotheses and the relationships between the customary of perceived variants, for example rankings or survey units. These variants or concepts are measured and the critical dimension of the framework proposes an assessment of consistency of the detected variants and later used to calculate the dormant variable. Convergent validity could be defined as a construct validity, to certify the dimension model and convergent validity. In order to quantify the percentage of variance by gages which qualified to measurement errors, convergent legitimacy approves the measure of Average Variance Extracted (AVE). The confluent credibility of each item is calculated by inspecting the average variance extracted (AVE), which attempts to measure the modification and its indicators by a concealed variable constituent related to the measurement. The interpretation of the PLS analysis is based on least accepted intensity accuracy is 0.7 (Hair et al., 1998; Hair et al., 2011), and least essential close to average variance extracted (AVE) is 0.5 (Fornell and Larcker, 1981; Gefen et al., 2000; Hair et al., 2017). The highest outer loadings on a paradigm specifies that each paradigm is a correlated item and it has a durable affiliation with the item. This attribute is called the accuracy of the pointer. It could be used to measure the outer loadings. An overall rule of thumb is outer loadings requirement is 0.708 or greater (Hair et al., 2017). Low outer loadings (below

0.40) are not included in the measurement (Hair et al., 2011). Pointers with outer loadings between 0.40 and 0.70 are set aside for elimination from the measurement only when removing the pointer. This directs to a significant upsurge in AVE and the complex consistency (Reinartz et al., 2009).

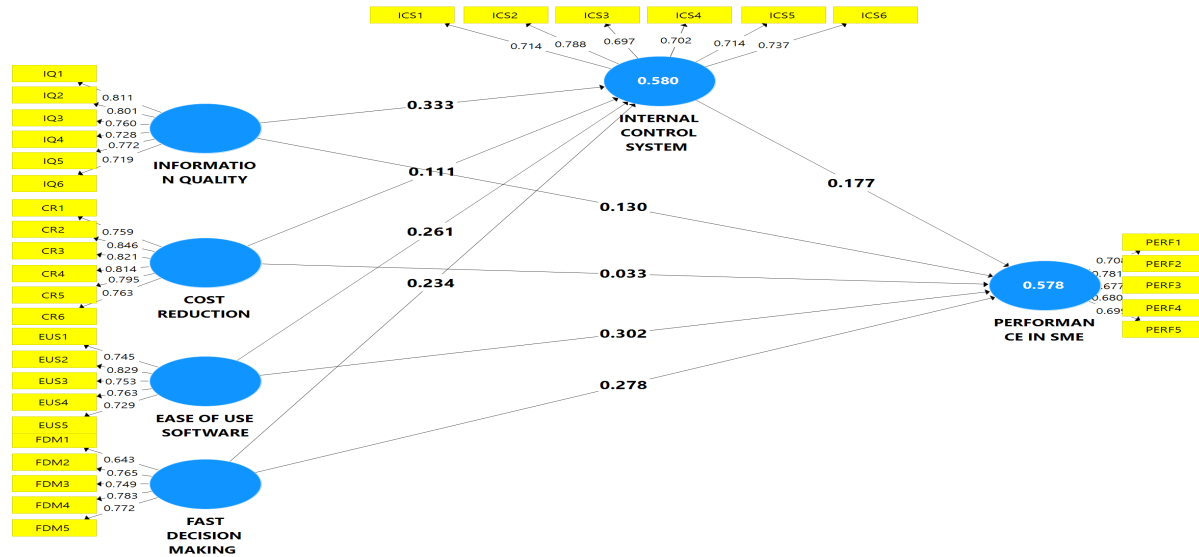


Figure 2: Measurement model with standardized values

If the discriminant validity is vibrant and the variance from other constructs is observed by standards. The development of discriminant validity, therefore, means that a paradigm is exclusive and catches the marvels of not being identified in the model by other constructs. Hair et al., (2014) states segregate cogency could be dignified based on three approaches namely:

- Fornell Larcker's (1981) criterion
- HTMT (Hetrotrait-Monotrait ratio of correlations) criterion
- Cross Loading criterion

The square root of each paradigm or the AVE could be contrasted with the relationship of the paradigm with all the other concepts to regulate the single out dependability. Based on Fornell and Larcker's, (1981) the square root of the AVE is greater than the relationships amid the latent variables. This finding maintains the fact that the model of measurement has discriminant validity (Chin, 1998). Though, the Fornell Larker, (1981) refer to criterion for differentiating discriminant legitimacy. This is assessed by many scholars, and utilized by researchers. Henseler et al., (2015) recommends another way to evaluate

discriminant validity, and that is by using Hetrotrait- Monotrait ratio of criterion (HTMT). HTMT is a new approach in evaluating single out cogency in SEM based on variance, and it calculates what would be the exact connection between two constructs if they have been tested perfectly (i.e., if they are perfectly reliable with no error). Furthermore, HTMT has also been used in the model to assess discriminant validity for the purpose of this study. Hair et al., (2010) proposes that the value of the HTMT would be between 0.85 and 0.90, indicating that the two constructs are separated. Table 2 reveals the HTMT values for all of the constructs in this research. Therefore, the items indicate adequate single out credibility..

### 5.3 Assessing the structural model

The significance of the first model suggested by the hypotheses utilizes the bootstrapping approach. Casual re-sampling of the unique dataset to create fresh mockups of the equal proportions of the dataset is used in bootstrapping. This technique is used to assess the consistency of the dataset and the significant of the numerical measurements and later its inaccuracy of the probable path measurements (Chin, 1998). Figure 3 specifies the consistent path coefficients ( $\beta$ ) and p-values, the significance of the paths, and the R2 for each endogenous construct are measured.

Table 2 Assessment of Direct Effects in Using Bootstrapping

Path	$\beta$	SE	t value	P Values
Information quality -> internal control system -> performance of SMEs	0.059	0.023	2.551	0.011
Cost reduction -> internal control system -> performance of SMEs	0.02	0.011	1.799	0.075
Fast decision-making -> internal control system -> performance of SMEs	0.042	0.016	2.596	0.009
Ease of use > internal control system -> performance of SMEs	0.046	0.02	2.35	0.019

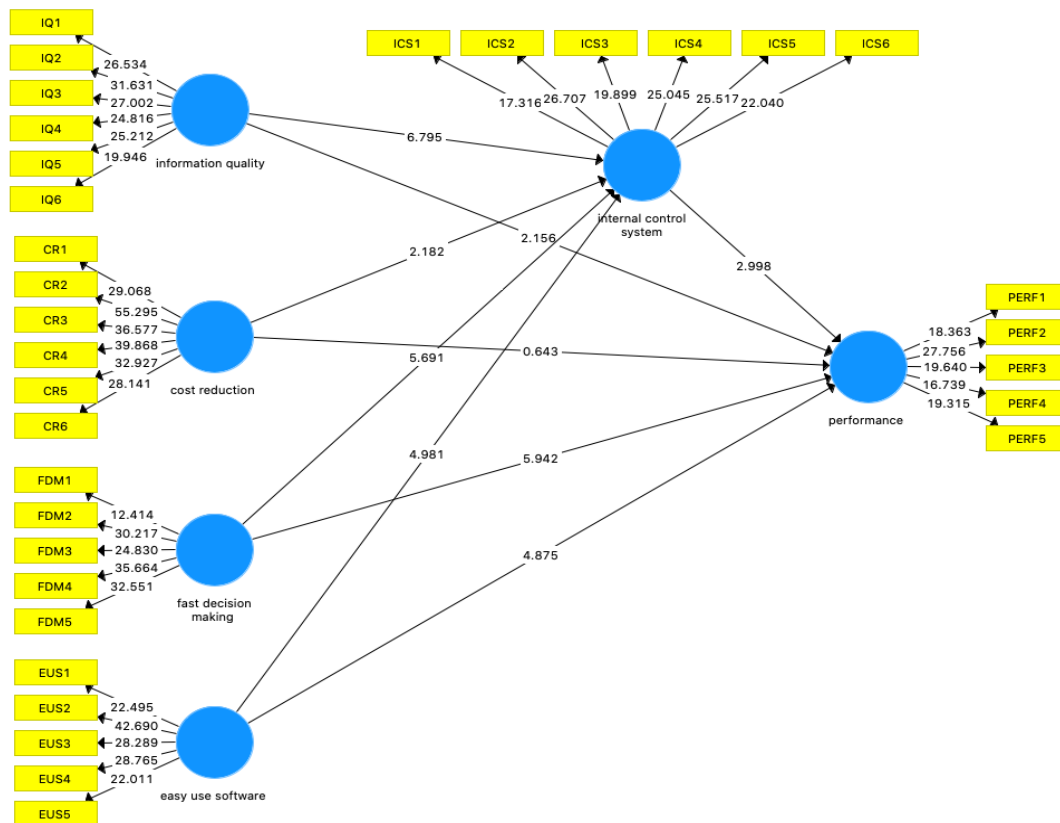


Figure 3 Path model

The outcome of boot strapping method displays in Table 2 demonstrates p-values for each measurement. Accordingly, the consequence of information superiority, cost reduction, fast decision making and easy to use and mediated by internal control system on the performance are statistically significant (path a). These results prove the influence of information quality and mediated by internal control system on the performance is positive and significant ( $\beta = 0.059$ ,  $p < 2.551, 0.011$ ) and mediated by internal control system on the performance. But, cost reduction isn't positive and significant ( $\beta = 0.02$ ,  $p < 1.799$ ,  $0.075$ ) and mediated by internal control system on the performance. Fast decision is making a positive and significant effect ( $\beta = 0.042$ ,  $p < 2.596$ ,  $0.009$ ) and mediated by internal control system on the performance. Finally, the easy to use is positive and significant ( $\beta = 0.046$ ,  $p < 2.35, 0.019$ ) and mediated by internal control system on the performance.

The R<sup>2</sup> value shows is clarified by the independent variables. Hence, R<sup>2</sup> value increases the analytical capacity of the structural model. Smart-PLS algorithm function is utilize to attain the R<sup>2</sup> values. The accustomed R<sup>2</sup> for internal control system in this model is 0.575 and it indicates 57.5% of internal control system could be explained by two endogenous concealed variables. R<sup>2</sup> is 0.572 and adjustable to fit into performance model which means 57.2% of the performance among respondents could be explained by the evidence superiority, decrease in expenses, quick policy making, and user friendly and internal control system as mediator on the performance.

## **6. Discussion**

In the context of the link between e-accounting characteristics which act as an antecedent, the internal control system and the performance are crucial (Soudani, 2013; Liu, 2016; Teru and Hla, 2015; Rashedi and Dargahi, 2019; Trabulsi, 2018; Ganyam and Ivungu, 2019; Oladejo and Yinus, 2020). Therefore, based on the support from the theory and empirical evidence which are obtained in the data analysis, the current study has posited significant and positive relationships amid dimensions of e-accountancy features which include quality of information, decrease in expenses, quick pronouncement, user friendly) as well as the internal control system. The relations amid e-accountancy system besides internal control system have been first tested by Soudani, (2013) with a limited range of items for measuring the above dimensions of e-accounting characteristics. In contrast, the current study provides a finer understanding of the above relationships with a wider array of measurements items. The current study addresses the limitations which have been mentioned in the preceding paragraph and the investigation on the relationships with twenty-two (22) components representing the four dimensions which include evidence superiority, decrease in expenses, quick pronouncement and user friendly, and in relation to inner authority structure and the performance.

The consequences of the statically investigation point out information quality, fast decision making and user friendly; positively effect and mediated the internal control system on the performance except for cost reduction. The statistical analysis shows the investigation in mediated by internal control system on the performance is not significant and has no effect even with more inclusive and robust measures of e-accounting dimensions. Hence, the findings confirm the theoretical position which describes a modern accounting system such as e-accounting could provide an effective internal control system. Hence he firms to develop their organizational performance. The research provides significant impact on e-accounting literature especially in relation to technology acceptance model (TAM) theory, contingency theory as well as stakeholder theory. A limited number of studies have examined the correlation amid e-accountancy and SME performance in Iraq. Previous studies have revealed mixed results

with regards to the correlation amid e-accountancy, internal control structure and the performance based on the guidance of TAM theory. The consequences of this research demonstrate the level of e-accountancy of Iraqi companies has slightly increased over the study period. The current research provides additional literature and suggestions on restructuring economy and developing SME. Based on the literature review and previous studies, the researcher is confident that by enhancing the use of e-accounting in SMEs, it could elevate the image and business capacity of the industries . E-accounting could strengthen the economic status of SMEs and thus, allowing it to compete with the other companies. The findings on the mediator analysis contribute to the stewardship and stakeholder's theory. The positive correlation amid internal control system as performance mediator reveals the facts that stewardship and stakeholder's theories serve as accountability mechanism that could be used in ensuring good auditing, monitoring and reporting with the aim of improving performance in the organizations.

### **6.1 Limitations**

This study explained the effects of some characteristics of the computer-generated financial activities and the intervene impact of the inner authority structure on the SME's performance. Therefore, one of the limitations of this study is the unstable situation in most countries of the world, due to the Covid19. Iraq is also affected by the epidemic, thus the distribution of questionnaires and getting back the response are rather limited and slow respectively. The questionnaire is emailed to the selected population. Physical and face to face interactions are not possible at all.

The second limitation of the study is the number of questionnaires that could be gathered is only 76%. 450 sets of questionnaires are distributed and only 345 responded. The remaining 105 participants, did not respond or return the questionnaire, although the researcher sends friendly reminder to them several times. Therefore, the duration of data collection has to be extended and costs the researcher time and data collection constraints.

### **6.2 Suggestion for future research**

Firstly, the study embraces the opinion survey as a mechanism for gathering statistical input. The method is applicable because the survey is operational in prompting and gathering information from enormous percentage of the research populace.

Nevertheless, other approaches such as case study, in-depth interview could also be embraced, but the present situation could hinder the plans. Annual reports from SMEs could be used as reference in future similar research.

Secondly, the research emphasizes the issues which effect the performance while using e-accountancy scheme in SME to inaugurate the features which the scheme. Nonetheless, supplementary studies could be conceded to support experiments in employing e-accountancy scheme in SMEs in the different locations in the developed and developing countries.

Thirdly, this study has adopted the four e-accountancy features, which are the supremacy of the evidence, decrease in expanses, quick policymaking and user-friendly software. Future research could include the other e-accounting characteristics and benefits. However, avoid the extra processes of a single or multiple shared data base, and modification in data is possible. Keep the financial data safe and avoid opportunities for software developers and accountants to misused the information.

Fourthly, as the current study determines the effect of e-accounting on SMEs' performance in Iraq with the mediating effect of internal control system; future research could re-examined the mediating effect of internal control system in the other developed and developing countries.

Lastly, other moderation and mediation variables for example environment, culture of the company, security risk, training could also be included to explore the consequence of these variables on the correlations amid e-accounting performance in Iraqi SMEs.

## **7. Conclusion**

The core aim of the research is to ascertain the consequences of the e-accounting characteristic on the SMEs' performance in Iraq with the mediating effect of internal control system. This is carried out by gathering and analyzing pertinent statistics. Consequently, the consequences are extended and debated. The first empirical studies that explore the effect of e-accounting on performance, has been conducted by Soudani, (2013). His study stands out as it investigates the effect of e-accounting application on economic achievements by focusing on the properties of the inner authority structure. This aforementioned investigation depicts a very simple linear model without considering pertinent aspects of risk. The current research takes a step further by examining and presenting a more robust model that shows the relationships concerning the features of electronic book-keeping which includes the supremacy of the evidence, decrease in expanses, quick policymaking and user-friendly software , internal control system as well as SMEs' achievements in Iraq. Deploying the support from technology acceptance model (TAM) theory, stewardship theory and stakeholder's theory, along with the support from empirical literature, anecdotal evidence and rational arguments, a set of four (4) hypotheses have been developed. The hypotheses are tested based on the collected data

from 345 respondents who answered the questionnaire sent through e-mail. The respondents are the accountants in Iraqi SMEs commercial companies. By using an exhaustive literature review process, the above model has been further improved by incorporating the aspects and features of e-accountancy which includes the supremacy of the evidence, decrease in expenses, quick policymaking and user friendly software), the researcher could have possibly overlooked in the previous empirical research on e-accounting, inner authority system and the performance link. Each dimension of e-accounting is measured using a wider spectrum of indicators that attempt to capture previously overlooked elements of the characteristics of e-accounting.

The collected data is analyzed using multivariate analysis by deploying structural equation modeling (SEM), particularly SEM-PLS (partial least squares) technique to test the dimension model and the operational model. The tests for convergent validity show that all the items could be retained and the scales have sufficient internal consistency reliability. While the path analysis reveals 3 out of 4 hypotheses are supported. The findings of the statistical analysis reveal that the characteristics of e-accounting have an effect on the SME performance in Iraq with the successful inner authority structure. The current research endeavors significance for academic research, future researchers and as well as for the key stakeholders in SME.

## References

1. Abba, M., Yahaya, L., & Suleiman, N. (2018). Explored and critique of contingency theory for management accounting research. *Journal of Accounting and Financial Management ISSN*, 4(5), 2018.
2. Abdullah, N. A. H., Ahmad, A. H., Zainudin, N., & Rus, R. M. (2019). Predicting financially distressed small-and medium-sized enterprises in Malaysia. *Global Business Review*, 20(3), 627-639.
3. Abiodun, E. A. (2020). Internal Control Procedures And Firm's Performance. *International Journal of Scientific and Technology Research*, 9 (02), 6407, 6415.
4. Adebayo, M., Idowu, K. A., Yusuf, B., & Bolarinwa, S. A. (2013). Accounting information system as an aid to decision making in food and beverages companies in Nigeria. *Australian journal of business and management research*, 3(9), 26-33.
5. Adenike, A. T. (2017). Accounting information system and management decision making: a case study of manufacturing company in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 5(11), 66-74.

6. Aguinis, h., & vandenbergh, r. J. (2014). An ounce of prevention is worth a pound of cure: improving research quality before data collection. *Annu. Rev. Organ. Psychol. Organ. Behav.*, 1(1), 569-595.
7. Ahmad, M. A., & Al-Shbiel, S. O. (2019). The effect of accounting information system on organizational performance in Jordanian industrial SMEs: The mediating role of knowledge management. *International Journal of Business and Social Science*, 10(3), 125-133.
8. Alawaqleh, Q. A. (2021). The Effect of Internal Control on Employee Performance of Small and Medium-Sized Enterprises in Jordan: The Role of Accounting Information System. *The Journal of Asian Finance, Economics and Business*, 8(3), 855-863.
9. Alawi, M., Rashid, N., Al-Shami, S. A., & Al-Lamy, H. (2018). The determinants of E-commerce quality on small business performance in Iraq case study from ceramic industry. *Journal of Advanced Research in Dynamical and Control Systems*, 10(2), 1348-1360.
10. Al-Dalabih, F. A. (2018). The Impact of the use of accounting information systems on the quality of financial data. *International Business Research*, 11(5), 143-158.
11. Al-Delawi, A. S., & Ramo, W. M. (2020). The impact of accounting information system on performance management. *Polish Journal of Management Studies*, 21.
12. Al-Dmour, A. H., & Al-Dmour, R. H. (2018). Applying multiple linear regression and neural network to predict business performance using the reliability of accounting information system. *International Journal of Corporate Finance and Accounting (IJCFA)*, 5(2), 12- 26.
13. Alfartoosi, A., & Jusoh, M. A. (2020). A Conceptual Model of E-accounting: Mediating effect of Internal Control System on the Relationship Between E-accounting and the Performance in the Small and Medium Enterprises.
14. Alhasan, A., Audah, L., Ibrahim, I., Al-Sharaa, A., Al-Ogaili, A. S., & Mohammed, J. M. (2020). A case-study to examine doctors' intentions to use IoT healthcare devices in Iraq during COVID-19 pandemic. *International Journal of Pervasive Computing and Communications*.
15. Ali, S. I., Flayyih, H. H., & Talab, H. R. (2018). Effect of Ethical Culture on the Opinion of an Auditor: An Analytical study of Iraq Environment. *Journal of Economic & Management Perspectives*, 12(2), 432-447.
16. Alshikhi, O., & Abdullah, B. (2018). information quality: definitions, measurement, dimensions, and relationship with decision making. *European Journal of Business and Innovation Research*, 6(5), 36-42.
17. Al-Waeli, A. J., Hanoon, R. N., Ageeb, H. A., & Idan, H. Z. (2020). Impact of Accounting Information System on Financial Performance with the Moderating Role of Internal Control in Iraqi Industrial Companies: An Analytical Study. *Jour of Adv Research in Dynamical & Control Systems*, 12(8), 246-261.

18. Andarwati, M., Zuhroh, D., & Amrullah, F. (2020). Determinants of perceived usefulness and end-user accounting information system in SMEs. *International Journal of Advanced Science and Technology*, 29(8), 46-61.
19. Azmi, f., & Azhar, s. (2020). The accounting information system quality improvement through internal control and top management support effectiveness. *Similarity*.
20. Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of social and clinical psychology*, 4(3), 359-373.
21. Bardhan, I. R., & Thouin, M. F. (2013). Health information technology and its impact on the quality and cost of healthcare delivery. *Decision Support Systems*, 55(2), 438-449.
22. Bastian, H., & Andreas, W. (2012). A Bibliometric View on the Use of Contingency Theory in Project Management Research. *Project Management Journal*, 43(3), 4-23.
23. Bataineh, A. (2018). the effect of using computerized accounting information systems on reducing production costs in Jordanian pharmaceutical companies. *International Journal of Business and Management Invention (IJBMI)*, 7(7), 1-10.
24. Beg, K. (2018). Impact of Accounting Information system on the financial performance of Selected FMCG companies. *Asian Journal of Applied Science and Technology*, 2(3), 08-17.
25. Chenhall, R. H. (2003). Management control systems design within its organizational context: findings from contingency-based research and directions for the future. *Accounting, organizations and society*, 28(2-3), 127-168.
26. Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, 29(2), 295-336.
27. Chirchir, L. K., Aruasa, W. K., & Chebon, S. K. (2019). Perceived usefulness and ease of use as mediators of the effect of health information systems on user performance, 7(1), 22 -37.
28. Choudhari, A. A. (2018). Techniques to reduce the cost of raw material and to gain the profits. *International Research Journal of Engineering and Technology (IRJET)*, 5.
29. Cicea, C., Popa, I., Marinescu, C., & Catalina Ștefan, S. (2019). Determinants of SMEs' performance: evidence from European countries. *Economic research-Ekonomika*.
30. Cohen, L., Manion, L., & Morrison, K. (2002). *Research methods in education: Routledge Falmer, (6<sup>th</sup> edition)*.
31. Cribb, J. (2006). Agents or stewards? Contracting with voluntary organisations. *Policy Quarterly*, Vol 2- No 2.
32. Daniel, C. O., & Inim Victor, (2019), E. Impact of Accounting Information System as a Management Tool in Organisations 3, 4, 14-20.
33. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.

34. Davis, F. D. (1986). A technology acceptance model for empirically testing new end-user information systems. *Cambridge, MA*.
35. Donaldson, L. (2006). The contingency theory of organizational design: challenges and opportunities. In *Organization design* (pp. 19-40). Springer, Boston, MA.
36. Donaldson, L., & Davis, J. H. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of management*, 16(1), 49-64.
37. Ebimobowei, A., & Binaebi, B. (2013). An Examination of the effectiveness of auditing of local government financial reports in Bayelsa State, Nigeria. *Current Research Journal of Social Sciences*, 5(2), 45-53.
38. Eisenfuhr, F. (2011). Decision making. New York, NY, *American Journal of Nursing Research*, 6 (6), 524-532.
39. Ejoh, N., & Ejom, P. (2014). The impact of internal control activities on financial performance of tertiary institutions in Nigeria. *Journal of Economics and Sustainable Development*, 5(16), 133-143.
40. Ekienabor, E., & Oluwole, O. S. (2018). Reliability of Timeliness in Financial Reporting in Nigeria. *International Journal of Research Publications*, 1(1), 1-15.
41. El-dalabeeh, A. E. R. K. (2019). The Impact of Accounting Information Systems Development on Improving E-Commerce in the Jordanian Public Shareholding Industrial Companies. *Academy of Accounting and Financial Studies Journal*, 23(2), 1-11.
42. Ernawatiningsih, N. P. L., & Kepramareni, P. (2019). Effectiveness of Accounting Information Systems and the Affecting Factors. *International Journal of Applied Business and International Management*, 4(2), 33-40.
43. Fishbein, M., & Ajzen, I. (1977). Belief, attitude, intention, and behavior: An introduction to theory and research.
44. Flayyih, H. H., Mohammed, Y. N., & Talab, H. R. (2019). The role of accounting information in reducing the funding constraints of small and medium enterprises in Iraq. *African Journal of Hospitality, Tourism and Leisure*, 8(4), 1-10.
45. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
46. Ganyam, A. I., & Ivungu, J. A. (2019). Effect of accounting information system on financial performance of firms: A review of literature. *Journal of Business and Management*, 2(5), 39-49.
47. Gefen, D., Straub, D., & Boudreau, M. C. (2000). Structural equation modeling and regression: Guidelines for research practice. *Communications of the association for information systems*, 4(1), pg. 7.
48. Gomezelj Omerzel, D., & Smolcic Jurdana, D. (2016). The influence of intellectual capital on innovativeness and growth in tourism SMEs: empirical evidence from Slovenia and Croatia. *Economic research-Ekonomska istrazivanja*, 29(1), 1075-1090.

49. Gonzalez, G. C., & Hoffman, V. B. (2018). Continuous auditing's effectiveness as a fraud deterrent. *Auditing: A Journal of Practice & Theory*, 37(2), 225-247.
50. HA, V. D. (2020). Impact of organizational culture on the accounting information system and operational performance of small and medium sized enterprises in Ho Chi Minh City. *The Journal of Asian Finance, Economics, and Business*, 7(2), 301-308.
51. Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2019). PLS-SEM or CB- SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107-123.
52. Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European business review*.
53. Hair, j. F., ringle, c. M., & sarstedt, m. (2011). Pls-sem: indeed, a silver bullet. *Journal of marketing theory and practice*, 19(2), 139-152.
54. Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice hall, 5(3), 207-219.
55. Haldma, T., & Laats, K. (2002). Contingencies influencing the management accounting practices of Estonian manufacturing companies. *Management accounting research*, 13(4), 379-400.
56. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(1), 115-135.
57. Holjevac, z. (2012). The importance of equality before the law and the communication revolution in the process of shaping modern European nations. *Teaching History*, 19 (1), 65-70.
58. Holz hacker, H., & Skakova, D. (2019). Kyrgyz Republic Diagnostic.
59. Hutahayan, B. (2020). The mediating role of human capital and management accounting information system in the relationship between innovation strategy and internal process performance and the impact on corporate financial performance. *Benchmarking: An International Journal*, 27(4), 1289-1318.
60. Huy, P. Q., & Phuc, V. K. (2020). The impact of Public Sector Scorecard adoption on the effectiveness of accounting information systems towards the sustainable performance in Public Sector. *Cogent Business & Management*, 7(1), 1717718.
61. Ibrahim, R., Leng, N., Yusoff, R., Samy, G., Masrom, S., & Rizman, Z. (2017). E-learning acceptance based on technology acceptance model (TAM). *Journal of Fundamental and Applied Sciences*, 9(4S), 871-889.
62. Ibrahim, S., Diibuzie, G., & Abubakari, M. (2017). The Impact of Internal Control Systems on Financial Performance: The Case of Health Institutions in Upper West Region of Ghana. *International Journal of Academic Research in Business and Social Sciences*, 7(4), 684-696.

63. Jokipii, A. (2010). Determinants and consequences of internal control in firms: a contingency theory-based analysis. *Journal of Management & Governance*, 14(2), 115-144.
64. Kanakriyah, R. (2017). The impact of accounting information systems on the banks success: Evidence from Jordan. *Research Journal of Finance and Accounting*, 8(17), 1-15.
65. Lanlan, Z., Ahmi, A., & Popoola, O. M. J. (2019). Perceived ease of use, perceived usefulness and the usage of computerized accounting systems: A performance of micro and small enterprises (mses) in china. *International Journal of Recent Technology and Engineering*, 8(2), 324-331.
66. Lawita, N. F. (2020). The Influence of Accounting Information System (AIS) on Internal Control in a Company. *Jurnal Ilmiah MEA (Manajemen, Ekonomi, & Akuntansi)*, 4(3), 459-471.
67. Leitao, J., & Franco, M. (2008). Individual entrepreneurship capacity and performance of SMEs. *Management and Economics Department*, Available at SSRN 1118257.
68. Levitt, h. M., bamberg, m., creswell, j. W., frost, d. M., josselson, r., & suarez-orozco, c. (2018). Journal article reporting standards for qualitative primary, qualitative meta-analytic, and mixed methods research in psychology: the apa publications and communications board task force report. *American psychologist*, 73(1), 26.
69. Lutfi, A., Al-Okaily, M., Alsyuf, A., Alsaad, A., & Taamneh, A. (2020). The Impact of AIS Usage on AIS Effectiveness Among Jordanian SMEs: A Multi-group Analysis of the Role of Firm Size. *Global Business Review*, 1(19).
70. Mardi, M., PERDANA, P. N., SUPARNO, S., & MUNANDAR, I. A. (2020). Effect of Accounting Information Systems, Teamwork, and Internal Control on Financial Reporting Timeliness. *The Journal of Asian Finance, Economics, and Business*, 7(12), 809-818.
71. Meagher, K. J., & Wait, A. (2013). Delegation of decisions about change in organizations: the roles of competition, trade, uncertainty, and scale. *The Journal of Law, Economics, & Organization*, 30(4), 709-733.
72. Memon, m. A., ting, h., ramayah, t., chuah, f., & cheah, j. H. (2017). A review of the methodological misconceptions and guidelines related to the application of structural equation modeling: a Malaysian scenario. *Journal of applied structural equation modeling*, 1(1), 1-13.
73. Mulyani, m. (2020). the use of importance-performance analysis (IPA) in evaluating factors influencing data quality of public sector accounting information system in Indonesia. *accounting and business journal*, 2(1), 61-70.
74. Neziraj, E. Q., & Berisha Shaqiri, A. (2018). The Impact of Information Technology in Decision Making Process of Companies in Kosovo. *Informatologia*, 51(1-2), 13-23.
75. Nirwanto, N., & Andarwati, M. (2019). End-user satisfaction as an impact of the system quality, information quality, and top management support, upon the perceived usefulness of technology utilization.

76. Nwinee, K., Akpos, Y., Vincent, N., & Ibinabo, T. (2016). Impact of Accounting Information System on Organizational Effectiveness: A Study of Selected Small and Medium Scale Enterprises in Woji, Portharcourt. *International Journal of Research*, 3(1), 974-982.
77. Oladejo, M. O., & Yinus, S. O. (2020) Electronic Accounting Practices: An Effective Means for Financial Reporting Quality in Nigeria Deposit Money Banks. *of Managerial Studies and Research (IJMSR)*. 8(3), 13-26.
78. Omer, T. A. N. (2016). Impact of accounting information systems on internal auditors in Turkey. *Öneri Dergisi*, 12(46), 245-260.
79. Prima, A. P., & Akbar, J. 2020. Analysis of the Implementation of Accounting Information System Using Acosys Software at Pt Ladfanid Konsultindo Batam. *Barelang Accounting Journal*, 4 (2), 1-6.
80. Putri, P. A. Y., & Endiana, I. D. M. 2020. The Effect of Accounting Information System and Internal Control System on Company Performance (Case Study on Cooperatives in Payangan District). *KRISNA: Accounting Research Collection*, 11 (2), 179-189.
81. Rashedi, H., & Dargahi, T. (2019). How Influence the Accounting Information Systems Quality of Internal Control on Financial Reporting Quality. *Journal of Modern Developments in Management and Accounting ( JMDMA)*, 2(5), 33-45.
82. Reinartz, W., Haenlein, M., & Henseler, J. (2009). An empirical comparison of the efficacy of covariance-based and variance-based SEM. *International Journal of research in Marketing*, 26(4), 332-344.
83. Sanusi Fasilat, A., & Hassan, H. (2015, December). Evaluation of information technology impact on effective internal control in the University system. In *Innovation and Analytics Conference and Exhibition (IACE 2015)* (Vol. 1691, No. 1, p. 050004).
84. Soudani, S. (2013). The impact of implementation of e-accounting system on financial performance with effects of internal control systems. *Research Journal of Finance and Accounting*, 4(11), 17-29.
85. Soundararajan, K. (2019). Cost-reduction and quality improvement using DMAIC in the SMEs. *International Journal of Productivity and Performance Management*.
86. Susanto, A., & Meiryani, M. (2019). The impact of environmental accounting information system alignment on firm performance and environmental performance: A case of small and medium enterprises s of Indonesia. *International Journal of Energy Economics and Policy*, 9(2), 229-236.
87. Suzan, I., sudrajat, j., & daud, z. M. (2020). Accounting information systems as a critical success factor for increased quality of accounting information. *Revista ESPACIOS*, 4(15).
88. Teru, S. P., Idoko, I. F., & Bello, L. (2019). The Impact of E-Accounting in Modern Businesses. *International Journal of Accounting & Finance Review*, 4(2), 1-4.

89. Teru, S. P., Idoku, I., & Ndeyati, J. T. (2017). A Review of the Impact of Accounting Information System for Effective Internal Control on Firm Performance. *Indian Journal of Finance and Banking*, 1(2), 52-59.
90. Teru, S. P., & Hla, D. T. (2015). Appraisal of Accounting Information System and Internal Control Frameworks. *International Journal of Scientific and Research Publications*, 5(9), 1-3.
91. Thabit, T., & Abbas, N. (2017). A Proposed Fuzzy Logic Based Framework for E-Accounting Evaluation in Iraq. *Qalaa Zanist Scientific Journal*, 2(6), 22-48.
92. Trabulsi, R. U. (2018). The Impact of Accounting Information Systems on Organizational Performance: The Context of Saudi's SMEs. *International Review of Management and Marketing*, 8(2), 69-73.
93. Yas, H., Mardani, A., & Alfartoosi, A. (2020). The Major Issues Facing Staff in Islamic Banking Industry and its Impact on Productivity. *Contemporary Economics*, 14(3), 392-406.
94. Zaineldeen, S., Hongbo, L., & Hassan, B. M. A. (2020). Technology Acceptance Model Concepts, Contribution, Limitation, and Adoption in Education. *Universal Journal of Educational Research*, 8(11), 5061-5071.
95. Zimon, G. (2018). Influence of group purchasing organizations on financial situation of Polish SMEs. *Oeconomia Copernicana*, 9(1), 87-104.
96. Z. Lanlan and A. Ahmi, (2018), "Exploration on the Use of Computerized Accounting Systems by Micro and Small Enterprises (MSEs) in China," *Int. J. Eng. Technol.*, 7 (32), 806-810.