

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/349870508>

The Role of the Internal Auditor in Dealing with the Security and Confidentiality of Computerized Accounting Information Systems. A Proposed Framework

Article in INTERNATIONAL JOURNAL OF MANAGEMENT · February 2021

DOI: 10.34218/IJM.12.2.2021.059

CITATIONS

5

3 authors, including:



Salam Nawaf Almomani

Aqaba University of Technology

14 PUBLICATIONS 33 CITATIONS

[SEE PROFILE](#)

READS

1,359



Atallah Hosban

32 PUBLICATIONS 74 CITATIONS

[SEE PROFILE](#)



THE ROLE OF THE INTERNAL AUDITOR IN DEALING WITH THE SECURITY AND CONFIDENTIALITY OF COMPUTERIZED ACCOUNTING INFORMATION SYSTEMS. A PROPOSED FRAMEWORK

Atallah Ahmad Al-Hosban

Associated Professor, Faculty of Administration and Finance,
Aqaba University of Technology, Jordan
ahusban@aut.edu.jo

Salam Nawwaf Almomany

Assistant Professor, Faculty of Administration and Finance,
Aqaba University of Technology, Jordan

Mohannad Mohammad Al Ebbini

Faculty of Economics and Business, Ajloun National University, Ajloun, Jordan

ABSTRACT

The study aimed to create a proposed framework for the internal auditor's dealings with the security and confidentiality of accounting information. It also aimed to show the concept and goal of information security. The study relied on books and references to obtain the primary data for the study. Among the most important results: that there are new jobs for internal auditors, which is to ensure the reliability of computer networks, and to deal with big data. Among the most important of her recommendations: The necessity of introducing the importance of confidentiality of accounting information systems and how to document accounting information through the use of information technology tools.

Key words: Internal Auditor, Computerized Accounting Information System, Security

Cite this Article: Atallah Ahmad Al-Hosban, Salam Nawwaf Almomany and Mohannad Mohammad Al Ebbini, The Role of the Internal Auditor in Dealing with the Security and Confidentiality of Computerized Accounting Information Systems. A Proposed Framework, *International Journal of Management (IJM)*, 12(2), 2021, pp. 601-611.

<http://www.iaeme.com/IJM/issues.asp?JType=IJM&VType=12&IType=2>

1. INTRODUCTION

The auditing profession, like other important professions, began using technology when its emergence, so it employed it in the audit system in a way that made the implementation of the audit cycle a mechanism of a fast and accurate nature. Misleading outputs, and from this standpoint it became necessary to keep pace with the audits of this technology and the changes that it has brought to the system of the audit process, so that it has become a computerized system that lacks some factors of confidence and credibility (Tan, 2015).

It between employees or those authorized to receive and deliver that information, and information technology requires that information be delivered to the relevant parties in a timely manner so that it does not lose its validity, so the best way to transfer that information is computer networks, provided that verification is done. Of its reliability and appropriateness of information and information security. Therefore, this study came to search for a proposed framework for the work of internal auditing with computerized accounting information security policies. The evolution in the world of technology is precisely characterized by new accounting systems and new models in economics and business that are dealt with over the Internet. (Almaliki , 2018)

The developments have reduced the period and rate of business by simplifying improved dealings. Many organizations mainly use the information system to enhance the efficiency of business events by organizing existing processes. Nowadays, companies and companies change faster with globalization technology, and the accounting information system is one and part of these changes and development, and this change is contingent on the data and information that you produce for internal and external users for decision-making, reliable financial reports. Companies must collect reputable data that will produce valuable information about the business that can help guide users in making the right decision (Teru, 2015)

1.1 The Study Problem

Information security aims at preserving certain benefits and using this information and information and communication systems that help to deliver this information in a timely manner, and preserve it from old age, which often results in incompatibility, mistrust or lack of integration. There are several factors that play a role in information security from The most important of them are: Accountability and awareness of its importance. Information security is one of the important matters that require effort, time and accuracy from the internal auditor in transferring powers to officials in any facility, so the study is based on proposing a role for the internal auditor in the security of accounting information.

- What are the procedures that the internal auditor must take to maintain the security and confidentiality of computerized accounting information?
- What are the objectives that must be provided in information security so that the auditor can maintain the security and confidentiality of accounting information?
- What are the principles that the internal auditor must follow in order to keep pace with developments in the security and confidentiality of accounting information?

1.2 The Importance of Studying

The importance of the study lies in the following

- Information technology usually comes with what is new, which causes the existence of several sources of information of interest to the company, which requires management

first and secondly auditors to save this information from unauthorized spread, and keep pace with information technology so that the risks of information technology security can be controlled

- There are skills that must be in place so that it can help employees and customers to manage information security risks and spare them legal accountability resulting from viruses, misuse, or any other breaches of information security. Although the tools and routine procedures play an important role in ensuring that unauthorized access from Before individuals for the information stored on the computer, the human behavior plays a strong and effective role in the information security procedures by setting passwords and ensuring the security procedures on the information entrusted to him.
- Investing in company information security has always become important for organizations and companies
- An investment in information security is an allocation of resources to improve or protect the information security of the enterprise, products and services
- The accounting system receives financial data and then processes it to produce the accounting information for the beneficiary parties. It can be said that these parties, regardless of whether they are internal or external, depend entirely on the outputs of this system in making decisions. In order for the accounting information produced by these systems to be useful, influential and useful for decision-making, it must be appropriate and comparable.

1.3 Objectives of the Study

The study aims to achieve the following

- Proposing the role of the internal auditor in dealing with procedures that contribute to increasing the efficiency and effectiveness of computerized accounting information security.
- Knowing the information security principles that the internal auditor must follow to maintain the security and confidentiality of computerized accounting information.
- Identify the objectives of information security that contribute to maintaining the security and confidentiality of accounting information.

1.4 Previous Studies

Al-Obaidi study 2012 The study aimed to identify the risks of auditing computerized accounting information systems for internal auditing in companies listed on the Amman Stock Exchange. The questionnaire was used to obtain the primary information for the study. Among the most important results: the presence of environmental risks on the efficiency of internal audit. Among its most important recommendations: the need to take caution and caution in dealing with the risks surrounding computerized information systems, and train and qualify internal auditors to deal with electronic risks. This study contributed to defining the subject of study represented by computerized accounting systems, in addition to defining the field of internal auditing. It differs from it in that this study sets out a proposed framework for internal auditing and not an applied study

Abu Dilbough Study (2018) The study aimed to determine the effect of computerized information systems risks on the efficiency of the internal control system in Jordanian commercial banks. The questionnaire was used to obtain primary information, and the questionnaire was distributed to internal auditors and financial managers in commercial banks. Among the most important results of the study: The existence of a moderate degree of risk of accounting information systems. Among its most important recommendations: the need to pay

attention to, train and qualify internal auditors to deal with the risks of accounting information systems. This study contributed to formulating the theoretical framework and defining the topic of the study with the accounting information system, and differed from it in that this study proposes a method for the internal auditor to deal with the security of computerized accounting information.

Joabra study (2015) The study aims to identify the reality of accounting information systems in four and five-star hotels in terms of planning, control and decision-making. The descriptive analytical approach was used by collecting data through a questionnaire distributed to the various hotel accountants in the Jodhpur region in India, after the statistical analysis of the questionnaire, several main results emerged, the most important of which is that hotels in Jodhpur did not use the methods of accounting information system in planning, control and decision-making. The study concluded, respectively, that all classified items have a low average value, which means that these assumptions are rejected. Because there is no relationship between the accounting information system, planning and control, decision making in four and five star hotels in Jodhpur. The study recommends increasing the qualification of cadres and developing the information system in Jodhpur hotels for the effective application of accounting information system methods. This study contributed to the theoretical framework of the study and differed from it in the method of study that depends on the theoretical framework.

Meriyani study (2014) The study aimed to find out the effect of the quality of support required by senior management to obtain good quality accounting information systems that achieve the greatest benefit for the largest segment of financial statement readers. The study relied on the deductive approach of financial data for service sector companies in the United States. Among the most important results: Management support has a positive effect on improving the quality of accounting information systems by identifying their risks and how to deal with them in the event of those risks. Among its most important recommendations: the need to link workers in the information systems environment with senior management so that there is continuous and direct support to identify the risks of accounting and non-accounting information, and the need to employ senior management support to improve the accounting system in general.

1.5 Procedural Definitions

The system: It is a comprehensive framework for a set of parts and interrelated elements related to the surrounding environment that interact with each other to achieve specific goals that benefit the beneficiaries. (Al-Dalahma, 2008, p.79)

Accounting system: It is a set of manual and computer operations that aim to create accounting records, and then set controls and methods that help to analyze and summarize them; So that it is easy to deal with and use it in making decisions within the corporate environment (Romney, 2015, p215))

Information system: an operation and analysis process to provide managers with the necessary information to assist them in carrying out business and making decisions within the organization, provided that this information is appropriate in terms of quality, timing and cost. (Account, 2009)

Information: data that has been processed and formed to express economic events and facts, which confirms that it increases the ability of its users to make appropriate decisions (Ezz El-Din, 2015)

Internal audit: It is an independent body within the organization that monitors the efficiency and effectiveness of the internal control system in the facility in order to protect it from risks and activate institutional control (Al-Qadi, 2016)

Accounting information systems: They are the systems that collect, record and store evidence with the aim of converting it into useful information in making various decisions for stakeholders. (Naseer, 2018)

Computerized accounting information systems: are those that rely on information technology tools to perform the functions of recording, storing and retrieving accounting data to help in making decisions (Alhosban, Almagableh, 2014)

2. THE THEORETICAL FRAMEWORK OF THE STUDY

The concept of security is used for all information related to protecting a company's valuable assets against loss, loss, unauthorized disclosure and destruction. And the valuable assets in the company are meant all the data and information recorded, processed, stored, distributed, and recovered from electronic means (Francis, 2013).

The protection of information and data is also intended to protect it from the age or the pyramid, which in turn leads to loss or difficulty in accessing that data, and protection must be from government and non-governmental authorities, such as: passwords, user identification of information and the establishment of security measures for the information. (Abbott, 2015)

The audit organ in the company must possess the resources that enable it to assess information security and the ability to respond to its risks, so the internal audit department in companies can take the following measures to ensure information security in them: (Awesejo, 2013)

- That the information technology tools used in accounting information security are subject to control by the internal auditors, and the risks related to them are identified.
- Conducting documentation operations for persons authorized to use accounting information to maintain its security and confidentiality.
- Restricting the authorities to specific persons, and establishing supervision over those in charge of operating the systems.

2.1 The Goal of Information Security

Information security aims to protect the interests or benefits of that information for the benefit of the company, as well as the protection of information and communication systems that contribute to the delivery of that information to the concerned parties and preserving it from weakness or legacy resulting from failure to supply that information or trust or integration in it. (Harb, 2016) To achieve the goal of information security, the following conditions must be met: (Banker, 2019)

- That the systems be prepared and used upon request only.
- That data and information be disclosed to authorized persons, or only those who have the right to view it.
- That data and information be protected against unauthorized modification by specifying powers in the internal control system or by the company's management.

2.3 Information Security Principles

In order for the goal of information security to be achieved in an information technology environment, there are principles that must be present and applied by companies, especially the large ones, and these principles are: (Wang, 2019)

- That the information security policy be clear responsibility, summary and specific. The logic of this principle is that responsibility imposes auditing for all parties, and deals with the interaction between information, roles and responsibilities so that it is clear,

specific, understandable and authorized at the level at which information security is sensitive to the company

- That the information and information security procedures of the company be understood by the stakeholders, and there must be principles, standards, customs and a mechanism for implementing the information security process, which means that those concerned with information security are well aware of these systems and principles and understand them well, and thus the possibility of identifying the risks related to them and mitigating them for the company to a minimum Possible level.
- 3-The information must be used and managed in an ethical manner, because information systems are spread through employees, expectations, and instructions. Therefore, information security procedures and information systems must be developed in a manner consistent with the company's culture and social conditions.
- Information security control must be commensurate with risk adjustments, use or disclosure of information, and information security control must match the value of information assets, by focusing on the value and sensitivity of information, the likelihood of its occurrence, and the possibility of direct and indirect loss or loss.
- The principles, standards and norms of the information security mechanism must be coordinated and integrated with each other and be integrated with the policies and procedures related to maintaining information security through the information systems in the company. Because some breaches of information security may be the result of not controlling it, so the information security should be more appropriate when planning and coordinating it through the company's control systems and through the life of that information
- All parties concerned with information security must be effective and timely, and coordinated in a manner that prevents breaches and threats. Because organizations must be able to coordinate events and identify threats in order to discover or mitigate them, which means developing a mechanism to speed up security procedures for information in the company.

3. THE PROPOSED FRAMEWORK FOR INTERNAL AUDITING IN DEALING OF THE SECURITY AND CONFIDENTIALITY OF COMPUTERIZED ACCOUNTING INFORMATION SYSTEMS

- Using a file classification that enables device users to separate and isolate information on mobile storage devices according to the importance and confidentiality of the data, while specifying the password to access this information in safe places. (Tawfeq, 2014)
- Carry out procedures that ensure that treatment results are correct, and that only authorized persons receive or see the outputs obtained from the treatment. Control over the outputs represents the final stage of monitoring the electronic processing system, making them the final metrics that can be used to identify any defects in the quality of the system. (European Centre for Disease Prevention and Control, 2014)
- Limiting the internal control procedures, accounting information and procedural tasks to the organizational computer unit, Automation of some internal control procedures, including the means of control for the automatic construction of hardware and software programs for the computer that were not possible in the manual system (Ksim, 2019)
- When checking the inputs, the auditor examines the processes from beginning to end by obtaining the original documents for these processes to manually process them from

beginning to end. To make a comparison between manual and automatic treatment to ensure correct treatment. (Titania, 2016)

- The auditor audits electronic systems using electronic audit programs, and these programs are designed to implement the audit process. These programs may be general, that is, they can be used in any auditing process, or private, that is, they are specially prepared for a specific audit process. (weshah, 2012)
- The auditor should follow up and analyze the information stored in the form of computer language, and among the auditor's tests as a solution to this problem was for the designers of the client programs or others working on the computer processing system to write special programs to analyze the computer information files. (Harb, 2020)
- Describe the impact of information technology on the internal control system in a logical manner and assess the control risks.
- Description of the manual, which contributes to identifying the specialized skills required to determine the effect of computer processing on auditing and designing and completing audit procedures. (Al-Chahadah, 2018)
- In order to integrate the efforts of auditors and workers in the field of internal control in determining levels of risk and assessing their relative importance, this requires an effective method in evaluating those risks, because the ability to determine the degree and level of risk affects the procedures of the audit process. The best way to analyze and assess risk is to follow analytical procedures, which help to shorten time, in addition to being a preferred way to accomplish and understand the desires and requests of customers. (Eid, 2014)
- The most important work of auditing in general and internal control in particular in the IT environment is to identify the sites with high risks for the organization, and the auditor must participate with management in the risk assessment process, to ensure the stability of views on those risks. And auditors in evaluating the priorities of the risk analysis, so that it begins first with an analysis of the risk from the auditor, and then assesses the possibilities of exposure to it and finally determines the costs of those risks. (Awosejo, 2013)
- The role of the company's internal auditor is to assess the technology risks related to owning old computers and their suitability for the company's accounting programs and to assess the return from the additional costs of the company. (Abu Dilbough, 2018)
- The internal control system, in cooperation with the internal auditors, must draw up a list of risks to which the activities and business of the company may be exposed, by first identifying the risks, then the possibility of their occurrence and finally determining the costs of those risks if they occur, as well as the possibility of determining the cost of the results of their occurrence, where the company can avoid Or eliminating the costs incurred by the company, in addition to the benefits that can be obtained from those costs resulting from information technology on the activities and work of organizations .(Al-Hosban, 2009)
- Checking the reliability of computer networks, as auditing computer networks technology is constantly changing either according to the desire of the management or according to the requirements of the work or according to what happens to information technology or the circumstances surrounding the company, which means that information technology auditors must master the audit of computer networks by directing some Questions to the technical specialists in the company in addition to the presence of some basic concepts in computer networks, which helps computer

technology auditors to keep abreast of changes and help management to ensure the reliability of these networks. (Alsharairi, 2017)

- The success of auditing for computer networks as a whole depends on the level of technical knowledge possessed by an information technology auditor, and gaining that knowledge is not an easy thing, especially if the training budget is limited, and without detailed knowledge of computer networks and their components, it is difficult for the auditor to perform the audit in terms of maintenance And the processing of data and information owned by the networks and how they are communicated to the beneficiaries. (Alsharairi, 2017)
- The internal auditor must first understand the fundamentals that the networks operate on and that communicate data, and learn about the components of computer networks by asking questions to the technical staff about network design or referring to books and related references, and he must also understand that the components of networks change continuously. (Alsharairi, 2017)
- The internal auditor must be aware of the risks that may occur as a result of that access to information from outside the company and the possibility of information leakage through them, in addition to the need to ensure that they perform the duties assigned to them only and not enter forbidden sites, which means putting in place procedures to avoid these risks. In addition to identifying computer network users to increase security measures and trying to reduce risks related to computer networks and related technology. (Al-Chahadah, 2018)
- The role of the internal auditor and the internal control system in determining the extent of the company's existence of tools, auditing them, determining the costs of those programs and other costs related to them, in addition to assessing the company's need for these programs and other tools according to the changes in the information technology environment that affect the company's business and activities. One of the most important reasons for using accounting software in companies is to find and locate accounting programs and the participation of information technology employees in the company with employees in the internal control system, then the role of the internal auditor here comes in making sure that these accounting programs are consistent with the company's policies and strategies. (Abdullah, 2012)
- The internal auditor must ensure that the accounting programs have a maintenance and warranty period and try to increase them as much as possible, as well as ensure the availability of the parts necessary to operate the accounting programs with the company and the market and the possibility of identifying the risks that may arise from dealing with these programs and the extent to which these programs keep pace with the changes that occur to The company's business and activities and to ensure security policies for information and their suitability for these programs and that these programs achieve the interest of employees and provide the ability to obtain cadres to work and continue with these accounting programs ready.

4. CONCLUSION

Although the automated accounting systems are considered more accurate with the completeness of the types and policies of information security, they also provide a service to customers in providing the services they need in obtaining reports. In order to reach the highest desired benefit from ready-made accounting programs, internal auditors must understand and understand the security policies and procedures for information, as well as ensure the flexibility of policies related to accounting programs and help in making profit for the company, and these

programs must be appropriate for computer networks that help to collect and distribute Information, and the auditor must work with software providers cautiously and ensure that they operate successfully in the company in the environment of changes that occur in the activities and business of the company.

The auditor should try to mitigate it, especially in an IT environment that is not without risk. Therefore, the IT auditor must take into account the various types of auditing risks and try to mitigate them as much as possible, from the change in the environment surrounding the company and the changes in the activities and business of the company in light of information technology. Designate members of the documentation group to review responsibilities to understand the evidence in place and the nature and timing of the audit results tested. The auditor must document the audit procedures taken to understand, test and evaluate risks in addition to conducting analytical tests taken directly on the values and disclosure related to the financial statements. This guide is compiled in the auditor worksheet files. Internal auditors must realize the need to know the design and development of programs, their processing and how to test them, in order to ensure the survival and continuity of the programs in the company, and the possibility of determining the period during which these programs can remain suitable for the activities and business of the company, which helps to identify how to change the control system. These programs, and determine the required maintenance period and ensure the availability of suitable spare parts, in addition to conducting a periodic review to ensure the continuity of these programs, as well as identifying the changes that occur in the company and the surrounding environmental conditions.

RECOMMENDATIONS

- The need for the internal auditor to keep abreast of the latest developments in accounting science related to the security and confidentiality of accounting information
- The necessity for the internal auditor to be qualified to deal with computer networks as the basis on which to transfer computerized accounting information and to define the appropriate authorities for that.
- The necessity of paying attention to developments in the use of information technology tools, identifying the opportunities for using them in the facility, and determining the risks of using them on the security and confidentiality of accounting information.
- The necessity of qualifying and training the internal audit department with specialized training courses in the field of security and confidentiality of accounting information

REFERENCES

- [1] Abbott, L. J., Daugherty, B., Parker, S., & Peters, G. F. (2015). Internal Audit quality and financial reporting quality: The joint importance of Independence and competence. *Journal of Accounting Research*
- [2] Abdullah, Khaled (2012) " Auditing", Wael Publising, Jordan, Amman
- [3] Al-Chahadah, A.R., (2018). The impact of the internal audit on the quality of accounting information in the Jordanian commercial banks. *International Journal of Economics and Finance*, 10(9), 157-167.
- [4] Almaliki, Oday (2018) " The Effect of Accounting Information System on Internal Audit Effectiveness; Testing the Moderating Role of Experience", *Journal of Advanced Research in Dynamical and Control Systems* 10(10):65-75

The Role of the Internal Auditor in Dealing with the Security and Confidentiality of Computerized Accounting Information Systems. A Proposed Framework

- [5] weshah, Mahmoud (2012) " The use of accounting information systems in analytical procedures for the audit process, from the point of view of internal and external audit in the public sector (a case study of public universities", European Journal of Business and Management, Vol 4, No 18,
- [6] Abu Dilbough, Yazan (2018) "The Impact of Accounting Information Systems Risks on the Efficiency of Internal Control in Commercial Banks, Master Thesis, Al-Bayt University, Mafraq, Jordan.
- [7] Al-Dalahma, Sulaiman Mustafa Al-Dalahma (2017) "Fundamentals of Accounting Information Systems" Al-Warraq for Publishing and Distribution, Amman, Jordan
- [8] Al-Hosban, Atallah Ahmad (2009) "Auditing and Internal Control in the Information Technology Environment" Al-Hamed Publishing House, Amman, Jordan
- [9] Alhosban A. And Maqableh , A. (2014). The Role of Computerized Accounting Information in Product Pricing and Cost Measurement in Jordanian Industrial Corporations. International Journal of Sciences: Basic and Applied Research, vol 15(1).
- [10] Al-Qadi, Muhammad (2016) "The Impact of the Accounting Information System on the Quality of Internal Auditing in Jordanian Hospitals, Master Thesis, Middle East University, Amman, Jordan
- [11] Al-Obaidi, Fatima (2012) "The Risks of Using Computerized Accounting Information Systems and Their Impact on Internal Auditing", Master Thesis, Middle East University, Amman, Jordan
- [12] Alsharairi , Mohammed (2017) " Role of Internal Auditor in Dealing with Computer Networks Technology - Applied Study in Islamic Banks in Jordan ", International Business Research; Vol. 10, No. 6;
- [13] Awosejo, O. J., Kekwaletswe, R. M., Pretorius, P., & Zuva, T. (2013). The effect of accounting information systems in accounting. International Journal of Advanced Computer Research, 3, (3),
- [14] Banker, R., and C. Feng. 2019. The impact of information security breach incidents on CIO turnover. Journal of Information Systems 33(3)
- [15] European Centre for Disease Prevention and Control, (2014)" Data quality monitoring and surveillance system evaluation ', A handbook of methods and applications
- [16] Eid, Emaddine (2014)," The Impact of Accounting Information Systems (Ais) on Performance Measures with Value Relevance of Auditors' Communications", Internal Auditing and Risk Management, vol. 34, issue 1, 149-164
- [17] Ezz El-Din, Omar Zuhair (2015) "The Effect of the Effectiveness of the Internal Control System on the Performance of the Internal Auditor in Jordanian Private Universities", Master Thesis, Middle East University, Amman, Jordan
- [18] Francis, udeh, and olayemi, ayoola, (2016), accounting information system as aids to managerial performances, scientific research journal, Vol 15
- [19] Harb, Ayman (2016) " The Impact of Internal Audit in the Protection of Accounting Information Systems in Commercial Banks in Jordan, Journal of Business & Management (COES&RJ-JBM) , Vol.4, No.4

- [20] Jawabreh, Omar AA, and Alrabei, Ali Mahmoud Abdallah, 2012, The Impact of Accounting Information System in Planning, Controlling and Decision-Making Processes in Jodhpur Hotels, Asian Journal of Finance & Accounting, Vol.4., 1.
- [21] Kasim, Erlynda (2019) " Influence of accounting information systems and internal audit on fraudulent financial reporting ", Opción, Año 35, Especial No.21
- [22] Lehman, David (2020) " The Next Generation of Internal Audit Harnessing Value from Innovation and Transformation, CPA Journal
- [23] Meiryani. 2014. Influence of Top Management Support on The Quality of Accounting Information System and its impact on the Quality of Accounting Information Research Journal of Finance and Accounting, Vol. 5, No. 11,
- [24] Naseer Ahmad (2018) "The Impact of Computerized Accounting Information Systems on Enhancing the Efficiency of Administrative Decisions in Jordanian Hospitals, Master Thesis, Jadara University, Irbid, Jordan.
- [25] Romney, (2015) "Accounting Information System "13 Edition, Pearson.
- [26] Tan, Omer (2015) " Impact of Accounting Information Systems on Internal Auditors in Turkey", Marmara Üniversitesi Öneri Dergi, Öneri Dergisi 12(46):245
- [27] Tawfeq, Rmi(2014) " The Relationship between the Information Systems of Accounting, Auditing, And How to Provide Reliable Information to Characterize the Service Auditor" , Global journal of Commerce and Management Perspective, .,Vol.3(2):95-101
- [28] Teru, Suzan (2016) " Efficiency of Accounting Information System and Information Security Investment Impact on Firms Performance: A Review, Vol.8, No.29, 2
- [29] Titania (2016)" Role and Constraint of Internal Control Toward The Implementation of Accounting Information System Audit Based on Information Technology, Jurnal Akuntansi Universitas Jember – Vol. 14 No. 1
- [30] Wang, Tawei (2019) " Implications of Cybersecurity on Accounting Information 'journal of Information Systems 33(3"