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Evaluating the Impact of Business Intelligence Tools on Raising the Efficiency of Internal Audit

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ABSTRACT

Comprehensive studies have been conducted to update the information system and improve the performance of internal audit. Internal audit can help management make decisions more efficiently and effectively. This research investigates the effect of business intelligence tools on increasing the efficiency of internal audit with a case study in the Middle East. This research used a questionnaire construed on the previous research and the opinion of elites. Its statistical population was the companies in the Middle East with 230 internal audit personnel. 196 employees of these companies were selected as a statistical sample according to Morgan's table. Therefore, this research analyzes the studies and examines their findings. The analysis of the results of the questionnaire reveals that there is a significant relationship between business intelligence tools and an increase in internal audit productivity. Finally, this research shows that the key to business success for many companies is the correct use of data through business intelligence tools to make appropriate decisions.

Keywords: Business Intelligence, Internal Audit Efficiency, Middle East

1. Introduction

The approach of companies to dealing with the growing changes in the business world has undergone fundamental changes in the last decade. Companies are looking for unique strategies to compete better, maintain, and support customers and shareholders. the measurement of internal audit has gained great importance in the financial sector (especially in recent years) and the use of value-based financial criteria, because of more attention to value addition from the perspective of shareholders, has become a common tool for evaluating strategies, projects, and strategic decisions of companies (Bayrakdarglu Vialshan 1,0122,529). The mission of management and the main goal of forming any company is to earn profit and increase the wealth of shareholders (Katila, Chen, and Pizonka, 2012; Lassie, 2013; Raghuvanshi, Agrawal, and Ghosh, 2017). Thus, it is important to pay attention to the factors that can affect the company's internal audit, because companies have limited resources and information (Villar, Alegre, and Pella Barber, 2014).

More important than what guarantees the survival of an organization is its success, failure, and operations (Wanda and Setin, 2015). There is a long-term relationship between managerial and executive issues (Deh, 2011, Moose and Ertha, 2003; Stromar, 2021). companies are weaker and may not survive and fail in changing political, economic, and social conditions, especially among companies, innovative / start-up companies that are generally based on an idea (Mard, Lao, and Chan, 2002; Progmers, 2010). This failure affects adversely the economic sector of society, entrepreneurship, and the unemployment rate (Chen and Lin, 2021; Hawking and Veslito, 2010; Sajerif, Ezmi Yohnez, and Wang, 2021).

Therefore, the managers of these companies should pay more attention to these factors, besides paying attention to factors such as product quality, customer retention, increasing liquidity, increasing investment returns, etc., as necessary for sustainability among other companies. Complete cooperation with internal auditors is another duty of employees. The the internal auditor must find all the mistakes and problems in the financial reviews and internal processes of the company. We should expect huge losses without an internal audit. An auditor must have a complete grasp of financial affairs. Internal audit, as many economic experts say, plays various roles in society. It is noteworthy that every innovation will not necessarily succeed and this requires the investigation of various factors of failure (Fashion, 2021; Hamad et al., Jabar and Fakhri, 2021; Montain, Daanat, Horbin and Jud, 2021).

The auditor can be a natural or legal person. Likewise, the audit process can be done internally or externally. The auditor in both forms must request the necessary documents from all organizational units in the administrative chart. The internal auditor is in direct contact with top managers in the internal audit process and must report to them. Therefore, the interactions of the auditor and organizational units should lead to the classification of documents by creating an audit file. Internal auditors must carefully review financial and tax documents. One of the most important issues for investors, creditors, and internal and external decision-makers of companies in general is evaluating their performance. Therefore, investors and especially shareholders need criteria through which they can properly evaluate the performance of the company's management. The most important approaches to evaluating the performance of companies is their financial evaluation, which is often based on financial statements. Financial analysis provides valuable information about trends, correlations, the quality of profit and income of each share, and finally, the strengths and weaknesses of companies and their financial status (Qodratian Kashan and Anwari Rostami, 2004, 113). Internal audit, as one of the most important criteria for measuring organizational effectiveness, is a concern of many researchers and implementers of organizational development programs. One of the most important development levers in recent decades is business intelligence development programs. The financial effectiveness of business intelligence can play an important role in the attitude and desire of economic enterprises because of the role of the investment return index in financial decisions (Khodadad Hosseini, Fathi, and Elahi 2006, 61). Nowadays, business intelligence is one of the best and newest innovative weapons for banks and organizations to gain a competitive advantage, through which the banks gain operational advantages by focusing on providing individual services. Various authors have defined the concept of business intelligence. The first scientific definition of business intelligence was from Ghoshal and Kim (2000): business intelligence is a

management philosophy and a tool to help organizations manage and refine business information for making effective decisions in the business environment. They see business intelligence as including features such as the ability to collect, process, and accumulate information so that all levels of the organization can access them according to their needs help them shape the future, and protect them from competitive behaviors. Currently, when the markets are highly competitive and increasingly uncertain, the quality and timeliness of the organization's business intelligence can not only explain the difference between profit and loss, but even explain the difference between survival and bankruptcy (Bahrami, Arabzad, & Qorbani, 2012, 162). Indeed, business intelligence is the process of increasing the profitability of the organization in the competitive market by intelligently using the available data in the decision-making process in the organization, where the received information leads us to the desired goal in business. We should note that its use is not only specific to a specific industry or business but the principles and methods of business intelligence are usable in any business (Pasadast 2014, 2013). Seeing marketing activities as a tool to be present in the minds of customers and create a spiritual property called a brand is a new perspective in marketing science. As different studies have shown, the real value is not in the quantity of goods or services, but it exists in the minds of real and potential customers and the very brand creates the real value in the minds of customers (Divandari, Haqighi, Allahyari, and Bagheri, 2009, 43). An experienced auditor can easily find discrepancies in inventory. The internal auditor can identify the low efficiency and loss cases in the review of the internal purchasing unit and the activities of the contractors. The impact of each contractor's work should be measured in the internal audit. Finally, the internal audit finds the increase in wages in the review of the human resources unit. Moreover, the internal auditor can confirm the correctness of the payment of salaries, insurance, and benefits to employees and workers (Okas & Vietnam Negoe, 2007, 875).

Schumpeter (2001) believes that internal audits are likely to provide significant results when they cover areas with considerable risk for the company. We all know that the plan of internal audit measures is defined based on professional standards to cover the main risks. However, this important rule sometimes changes in smaller internal audit units. Many auditors understand the importance of risk assessment as part of their annual planning process, but they often skip the planning stage. Small internal audit units have fewer audit resources and focus their resources more on risks (Calanthon and Knight 3, 2000, 501). Ghasemi and Azizi (2012) see one of the biggest obstacles to internal audit productivity to be internal audit processes. It is possible to impose inefficiency because of the presence of multiple forces in large internal audit units. While such a thing is not tolerable in small units. The rise of "agile auditing" has helped to address inefficiencies to some extent, but the role of technology in addressing efficiencies is particularly important in this profession. Although internal auditors are professional in reviewing operations, qualitative reviews often show that internal audit units can improve the processes of planning, executing work, documenting results, reporting results, and monitoring results. A very important point is the mutual relationship to prevent the gap or reduce the existing gap between useful data in decision-making and internal audit, because, as theorists believe, the phenomenon of updating internal audit with business intelligence is an inescapable issue. We must see the phenomenon as a social issue and study it. This article investigates the effect of business intelligence tools on increasing the efficiency of internal audits through a case study of companies in the Middle East.

1-1- Research objective

It investigates the effect of business intelligence tools on increasing the efficiency of internal audits through a case study of companies in the Middle East.

2. Theoretical foundations

2-1- Business Intelligence

Howard Dresner, one of Gartner's research group experts, introduced in the late 1980s the concept of business intelligence (BI). Business intelligence information systems witnessed the rapid development of demand for systems and software that support management decisions. New data analysis tools, data warehousing technology, network data mining, and many other tools and techniques are being marketed by business intelligence vendors. Organizations must meet their customers' expectations to survive in

today's increasingly competitive business market. Although many organizations have implemented business intelligence, they have not yet succeeded in all areas of business intelligence. Executives and researchers have widely discussed the reasons for its success and failure. Some studies have discussed the capabilities of business intelligence and the decision-making environment as the success factors of business intelligence. Business intelligence capabilities fall into two technological and organizational groups. As the findings show, an appropriate technology to support decision-making can help increase the capabilities of decision-makers in an organization. One reason that organizations employ business intelligence is its support for the decision-making system. The firmness of laws, regulations, stability in a country, and business processes in an organization, support business intelligence in organizational decisions. Business intelligence can be expanded by using the collected information, and users in the organization can make, with its help, decisions based on the best data. The literature on business intelligence has revealed that more benefits can be obtained from the use of business intelligence in organizational systems, while few organizations have standards and indicators for measuring business intelligence in their organization and their organizational systems (Marin and Poulter, 2014). Ghazanfari adopts Gartner's (1989) definition of business intelligence: business intelligence is a general term to describe a set of concepts and methods to improve business decision-making using computer support systems. Kim and Ghoshal (1986) provide the first scientific definition of business intelligence: "a management philosophy and a tool to help organizations to manage and refine business information for making effective decisions in the business environment" (Ghazanfari, Taqavi, and Rohani Fard, 2008: 23). Business intelligence helps companies to methodize and automate their tasks of analysis, strategy preparation, and forecasting for better decisions. Likewise, Jalali, quoting Malhotra, sees business intelligence as a means of facilitating connections in organizations in a new way, which makes real-time information reach a centralized repository and analysis that can be obtained at any vertical or horizontal level, within or outside the business institution (Pour Jam; 2020: 381).

Business intelligence as a working framework includes various processes, tools, and technologies designed to move from data to information and from information to knowledge and create added value for the organization. The managers of the organization can carry out business activities through obtained knowledge more effectively by designing practical plans for the organization. Business intelligence is not only a tool but also an architecture, and different processes occur and different tools are used to identify, collect, process, and draw conclusions from data (Ronaghi and Faizi; 2013: 53).

Reviewing the literature on business intelligence shows "division" in the efforts to define this concept. This division is summarized in two managerial and technical perspectives with two different patterns. The managerial approach sees business intelligence as a process in which collected and integrated data from inside and outside the organization can create information on the decision-making process. So business intelligence creates an environment and information space where operational data acquired from transaction processing systems and external sources can be analyzed to provide strategic business knowledge to support business decision-making. The technical approach considers business intelligence as a set of tools that support the mentioned processes. This approach does not focus on processes, but on technologies, algorithms, and tools that create the ability to store, retrieve, collect, and analyze data and information (Rohani and Zare; 105:2012).

2-2- Internal Audit

Auditing is a control process. Errors and mistakes in the accounting process and other processes designed in the company increase possibly without internal audit. The quality of expenses, financing the company, identifying assets, and reviewing financial operations are some tasks in the internal audit. It is impossible to prevent financial mistakes and possible losses without an internal audit. Internal audit can determine favorably the deficiencies and weaknesses in the accounting of the company and organization. Moreover, auditing determines financial abuses and economic deviations and can prevent further losses. One of the advantages of internal audit is identifying wasted resources. The audit identifies all internal and external resources of the organization. Practically, an internal audit clearly states all payments and receipts of the company (Safarzadeh, 2019). It is a process of measuring the results of policies and operations of

companies in monetary terms. An internal audit questionnaire was used to measure this category. Internal audit as a broad term describes the two activities of money management and the actual process of receiving required funds. It includes the monitoring, creation, and study of money, banking, credit, investment, assets, and debts that make up financial systems. There are different methods to measure internal audits. All actions must be done in summation. It can comprise linear items such as income from operations, operating income or cash flow from operations, and total unit sales. Moreover, the analyst or investor may wish to examine the financial statements in a serious and detailed way. Thus, we can reduce the growth rate of the margin or any debt (Ghazanfari, 2011).

No matter how big (or small) the company or organization is, the accuracy and correctness of financial affairs cannot be determined without internal monitoring and auditing. Auditing in practice starts from the time of checking all the documents and transactions and continues until summarizing the accounts and obtaining the balance sheet. Internal audit of banks, internal audit of risk, and internal audit of companies are among its most common subfields (Rouhani, 2017).

2-3- Empirical background of the research

Musa Khani and Saeedi (2022), in research titled Increasing the Efficiency of Internal Audit and Business Intelligence, concluded that the integration of knowledge management and business intelligence improves the organization's performance.

Joh and Cronius (2022), in research entitled The Key Factors of Implementing Business Intelligence in Organizations, filled the gap between academic and executive studies on organizations and helped managers to improve the process of implementing business intelligence and monitoring and controlling critical areas.

Roya Rostam Khani and Mehdi Moradzadeh (2021), in research entitled "Investigating the effect of business intelligence tools on increasing the efficiency of modern management accounting integrated information systems", concluded that applying business intelligence to modern management accounting leads to greater efficiency by creating a more effective decision-making process.

Safarzadeh et al. (2021), in research entitled The Role of Business Intelligence in Increasing the Efficiency of Internal Audit in Organizations using the Method of Library Review and literature review, concluded that progress in strategic management requires business intelligence in all the departments of the organization.

Hosseini et al. (2020), in research titled Designing a Model for Measuring Intelligence on Increasing the Efficiency of Internal Audit, believed that strategic intelligence is measured through internal and external intelligence and that the average level of strategic intelligence of Iranian organizations requires a better understanding and implementation of this type of system expresses intelligence.

Rickard Ssona et al. (2018) showed that executives see technology, data, and analytics as transformative forces in business. In conclusion, many organizations are implementing business intelligence technologies and analytics to support reporting and decision-making. An internal audit is a main support center for decision-making and control in an organization. Thus, it has obvious links to business intelligence technologies and analytics and can benefit from the application of these technologies.

Nespecaand et al. (2018) also showed that business intelligence can affect the content of reporting. Reports can be customized based on the needs of decision-makers by implementing business intelligence systems and this customization of reports can significantly help internal audits.

Marjanen (2017) also showed that one of the most important factors in the successful implementation of reports is usable elements in all dimensions of the organization. Users should be educated and this can be a new responsibility for management. Accountants and companies should focus on implementing these trainings.

Lajavardi and Rahimipour (2019), in an article entitled Business Intelligence and its Impact on Improving Port Management Performance, stated that the business intelligence index including technical, organizational, commercial, and operational aspects affects port performance management.

Hamidizadeh and Khairkhah Askarabad (2018), in research titled Investigating the Effect of Marketing Knowledge Management Capabilities on

Organizational Performance through Increasing the Efficiency of Internal Audit in the Iranian petrochemical industry, stated that external marketing capabilities affect greatly the performance of the entire organization, market performance, and internal accounting. Internal marketing capabilities have the greatest impact on customer performance.

Akhawan Fomani and Chirani (2017), in an article titled The Relationship between Marketing Knowledge Management and the Performance of Manufacturing Companies on Increasing the Efficiency of Internal Audit in the Gilan Province, argued that the creation of marketing assets, investment in marketing assets, and external marketing capacities have a positive effect on corporate performance.

Ghazanfari et al. (2016), in research titled As A tool for evaluating the business intelligence of organizational systems through increasing the efficiency of internal audit based on the analysis of six factors in evaluating the business intelligence of organizations, conclude that organizations can achieve by using these tools better decision making and powerful competitive advantage in a highly competitive environment.

Nili Ahmadabadi et al. (2015), in a research on the use of smart business to increase the efficiency of internal audit as a method to complete the electronic government, saw the smart system as a set of programs and principles by which managers can have access to the daily information of the marketing environment.

Allameh et al. (2014), in an article entitled The Effect of Competitive Intelligence Components in Creating Innovation, argued that companies and organizations can achieve a competitive advantage in today's environment through competitive intelligence and maintain, survive, and grow more effectively.

Rouhani and Zare Ravasan (2013), in an article entitled A Practical Framework for Evaluating the Competencies of Business Intelligence of Organizational Systems through Increasing the Efficiency of Internal Audit using the fuzzy network analytical process approach, explain a framework for the evaluation of business intelligence competencies in organizational systems based on a set of emerging factors and the fuzzy network process, and then provide a method to help managers make better decisions by specifying this framework.

Pourjam et al. (2013), in an article entitled The Relationship between Organizational Reason and Knowledge Management, Competitive Intelligence, and Business Intelligence, argued that the increase in strategic intelligence in organizations is associated with the increase in organizational reason, which itself requires the use of competitive and business intelligence in all departments of the organization.

3- Research method

This article examines the effect of business intelligence tools on increasing the efficiency of internal audits, which includes two theoretical and experimental parts. The theoretical part uses the documentary and library method and the experimental part uses the survey method. It is applied research because it examines theoretical constructs in scientific and real contexts and situations and seeks a solution to increase internal accounting efficiency (Cochran and Wood, 1984; Kaier & Aslos, 2021; Wadock and Graves, 1997).

It is also a survey research for achieving scientific data because it uses a questionnaire tool to examine each of the criteria and variables. This field study is descriptive-correlational according to the measurement of relationships between variables (Sakhvidi, Rezaei, Shahrashtani, and Mahmoudi, 2019).

3-1- The statistical population of the research

The statistical population of the research is the companies in the Middle East. Sampling in this research is simply random. Morgan's table shows the sample size. The number of employees is 230 internal auditors of Safola, Coca-Cola, and Nestlé, and the number of questionnaires collected from the entire population is 196, and 230 questionnaires have been distributed in total.

3-2- Research data collection tool

An important step in research is data collection, which requires the use of appropriate tools. We cannot expect reliable results from inaccurate data. The design of the tool has requirements that, if not followed, will distort the accuracy of the collected data and ultimately the research, so paying attention to its psychometric quality for designing or choosing the tool is very important.

We designed the questionnaire of the current research using the opinion of experts, which includes

30 questions and was sent to 230 people according to the statistical population.

This questionnaire was distributed online to sample companies located in the Middle East[1]. We tried to collect information carefully and then tested research hypotheses by analyzing them.

3-2-1- Validity

Since the research's tool for gathering information and measuring variables is a questionnaire, its validity is of particular importance. Its validity indicates the degree of coordination of the questionnaire with the purpose of the research. The first step is for tool designers to identify the purpose, whether the tool is predictive, evaluative, or diagnostic. The questionnaire was used after the opinion of experts. Therefore, this questionnaire as a data collection tool for this research has a suitable validity.

The second step determines the target group. The third stage considers the method of selecting items and reducing them. Two qualitative (expert opinion) and quantitative validity calculation methods can calculate validity. The content credibility index is a process to calculate the validity of measurable value. Reliability is a technical characteristic of measuring instruments. Re-execution method, parallel method, combination method, and Cronbach's alpha mode are used to calculate the coefficient.

4- Research findings

The demographic data of the research was described by descriptive statistics and frequency tables and data was analyzed by SPSS software.

Cronbach's alpha approach is used in this research. It calculates the internal consistency of the measuring instrument. If the alpha coefficient is greater than 0.7, the questionnaire has acceptable validity. Table 2 shows Cronbach's alpha. Since Cronbach's alpha of all variables is greater than 0.7, the questions of the questionnaire have reliability for analysis.

The internal reliability of the questions was measured based on the sample. The correlation coefficient of the variables was at a significant level according to the table. Table 2 shows the results of the reliability and validity of the research questionnaire according to Cronbach's alpha model and the calculated coefficient greater than 0.7.

The skewness and kurtosis of the data are tested after checking the questionnaire. Descriptive statistics is a set of methods that provide data processing. The below Table gives descriptive statistics of research variables. Descriptive statistical quantities include mean, standard deviation, and variance. The mentioned statistical quantities for the variables of this research are extracted in Table 3.

It is necessary to be familiar with the descriptive statistics of the variables to examine the general characteristics of the variables and their detailed analysis. Descriptive statistics of data of the variables of business intelligence tools show the effectiveness of internal audits in research.

The skewness is zero for a completely symmetric distribution, skewness is positive for an asymmetric distribution with a skew toward higher values, and the value of skewness is negative for an asymmetric distribution with a skew toward smaller values. Skewness is a measure of the height of the curve at the maximum point and the skewness value for the normal distribution is equal to 3. These indicators that show the normality of the data distribution (skewness and kurtosis) lead to the conclusion that the research variables have a normal distribution.

The calculated variance and the standard deviation, which determine the reliability coefficient in statistical analysis, are within the desired range. Skewness is a measure of symmetry or asymmetry of the distribution function.

The statistical sample of the research was extracted from a questionnaire that was distributed among the companies. Then SPSS statistical software was used to analyze the data.

As Table shows, non-significant results (values higher than 0.05) indicate normal distribution, and values less than 0.05 indicate deviation from normal distribution. In conclusion, business intelligence tools are effective in increasing the efficiency of internal audits.

[1] Safola in Iran, Saudi Arabia, Egypt, Türkiye, Dubai, and Pakistani companies

Table 1 -Demographic characteristics of the respondents

Component	Description	Frequency	Percentage
Gender	Woman	۷۹	40.31
	Man	۱۱۷	59.69
Total		196	100
Age	Below 20	۱۲	6.12
	20-25	۲۸	14.29
	26-309	۳۵	17.86
	30-40	٦۷	34.18
	Over 40	٥٤	27.55
Total		196	100
Education	Two-year education	٤	2.04
	BSc	۲۷	13.78
	MSc	۹۰	45.92
	PhD & over	٥۸	29.59
	International degrees	۱۷	8.67
Total		196	100

Table 2 - Calculation of the reliability of the questionnaire

Variable	Number of questions	Cvr	Cronbach's alpha
Business Intelligence	16	۸٥٦.۰	0.852
Internal Audit	14	۹۱.۰	0.866
Entire questionnaire	۳۰	_	_

Table 3 - Descriptive analysis of variables

Variable	Mean	Variance	Standard deviation	Median	Maximum	Minimum
Business Intelligence	1.45	1.678	3.709	0.89	1.16	0.97
Internal Audit	1.1	1.567	2.68	0.78	1.32	0.78

Table 4 - Kurtosis and skewness of the research factors

Variable	Coefficient of skewness	Standard error	Coefficient of kurtosis	Standard error
Business Intelligence	۳۷.۰	۲۱.۰	۰۱.-۰	٥.۰
Internal Audit	٤۸.۰	٦۱.۰	۱۸۱.-۰	٥٦.۰

Table 5 - Normality test for raw data

Variable	Kolmogorov-Smirnov				Shapiro-Wilk		
	Statistic	Degree of freedom	Statistic	Sig.	Statistic	Degree of freedom	Sig.
Business Intelligence	۶۶.۰	۷۸.۰	۳۲.۰	۰۰.۰۰	۳.۰	۲۹٥.۰	۰۰.۰۰
Internal Audit	۶۸.۰	٥٤.۰	٥۱.۰	۰۰.۰۰	۴٥.۰	٦۷۸.۰	۰۰.۰۰

4-1- Hypothesis testing

Table 6 shows the results of the significant coefficients for each of the hypotheses, the standardized coefficients of the paths for each of the hypotheses, and the results of the hypothesis examination. The criterion for confirming or rejecting hypotheses is significance coefficients. If the significance coefficient is greater than 1.96 Watson, the hypothesis is confirmed, otherwise, the hypothesis is rejected.

The path coefficient or beta coefficient indicates the effect of one variable on another variable. Its negative value indicates an inverse relationship, and if it is positive, it is a direct relationship. The value of the beta coefficient is between [1 and -1], and the higher the absolute value of this value is greater than 0.3, the stronger the effect. As the results of the model test show, the path coefficient of 0.601 has been obtained for the components of this hypothesis, which indicates the strong impact of business intelligence and internal audit. If the t-statistic value is greater than 1.96, the relationship is significant. The t-statistic value is 5.65 in our research, which shows that the observed

correlation is significant. Therefore, business intelligence tools affect the increase in the efficiency of internal audits with a case study in the Middle East.

Table 6 - Investigation of the research hypothesis

Hypothesis	Path coefficient	Regression	Coefficient t	Result
Business intelligence tools have a positive and significant effect on increasing the efficiency of internal audits in the Middle East.	0.601	0.789	5.65	Confirmed

5- Discussion and conclusion

The current research examines the effect of business intelligence tools on increasing internal audit efficiency through a case study of companies in the Middle East, which used business intelligence systems of large international audit companies. As our research shows, the path coefficient shows the number 0.601, which indicates the impact of the variable of business intelligence on internal audit because this value is greater than 0.3 and between [1 and -1]. We realized that business intelligence tools increase the efficiency of internal audits, and now we have to investigate these tools in detail to implement them effectively and efficiently. Therefore, we should pay special attention to these things: Business intelligence systems must be implemented quickly, a very difficult thing because such systems are specific to each company. Although each implementation must adjust a special system under the special requirements of the company depending on the effective components in reducing the time of building business intelligence, we must be very careful in choosing the right solutions concerning business intelligence systems. Business intelligence solutions must be flexible. As business changes occur, organizations should adjust business intelligence systems according to the new conditions. Business intelligence systems should be independent of their hardware and software infrastructure plans. Therefore, a system that wants to provide multi-dimensional analysis should cooperate with different systems and work with operational systems that have been tested and become common. Such solutions will allow better compatibility of the discussed system with the company's IT infrastructure. It is necessary, in creating business intelligence systems, to pay attention to the different information technology systems in the organization. The proposals for the implementation of the business intelligence system should be scalable and measurable. The flexibility and open architecture of these systems provide the possibility of their easy development. This is especially necessary when new information needs arise or the amount of information to be processed increases significantly. Business intelligence systems should be based on new technologies. The solutions of business intelligence systems should be provided by well-known sources in the computer industry. In this way, one can expect the reliability and validity of the purchased technologies. Business intelligence systems provide a great chance for effective company management, although they require the hard work of users, system designers, analysts, and a strong organizational culture and information. Skills such as identification, modeling of organizational processes and structures, and knowledge sharing are just some of the factors that are effective in the regular development of business intelligence systems. Internal audit is a system that helps managers of companies and organizations to ensure the correctness of accountants' reports and to prevent mistakes and any abuse. Internal audit is carried out by relevant experts, and auditors control all financial activities of the institution from the beginning to the time of preparing the balance sheet and closing the accounts.

Since monitoring the financial affairs of the company is necessary, internal audit is also done in most companies and organizations. Indeed, the purpose of an internal audit is to better control and monitor the activities and financial affairs of the company and prevent mistakes. Auditors discover accountants' errors and mistakes and make managers aware of the company's financial situation and expenses. The objectives of internal audit are different according to the activities of the companies and the services they provide. The most important objectives of an internal audit are better monitoring of the organization's performance, preservation of the company's assets, the accuracy of the financial reports, and the identification of cases that waste the financial resources of the company. Just as the auditor must

control and supervise the accountant's financial activities, the internal auditor must also have expertise in accounting matters and be able to perform accounting activities. Likewise, the internal auditor should be able to review and analyze various financial events and operations besides discovering mistakes, and plan, and solve problems and issues.

One limitation of the research is the application of quantitative methods for measurement and modeling. Therefore, other researchers should use qualitative methods and techniques, such as in-depth interviews and participatory observation, etc. to model and theorize relevantly. One of the most important limitations of the current research is the impossibility of comparing its results with those of foreign researchers because of the novelty of the issue in organizations and the limited number of companies that have used these tools in practice. Another limitation concerns the lack of generalizability of its results to all individuals out of the respondent population. Future research can be evaluated scientifically in other populations. Likewise, more studies can be done to evaluate the conceptual model of research in other populations.

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