

The Role of the Strategic Audit in Improving Industrial Companies' Performance: A Field Study of Companies Operating in Basra Province, Iraq

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The strategic audit is a system to identify the extent of implementing a company's strategies, its purposes, and how to reach its goals. It requires drawing a strategic plan and seeking to implement this plan in order to achieve the company's message and goals. This study aims to identify the concept of strategic auditing and its importance as an alternative, integrative, and comprehensive managerial system that reflects the company's strategic vision and assesses the extent of achieving its goals. Furthermore, it works on improving the various aspects of performance — organisational, economic, social, and environmental — in addition to highlighting the contribution of the strategic audit in the efficiency of controlling the performance in order to achieve the company's goals. To achieve the goals of the study, a pilot study was conducted where 130 questionnaires were distributed. One hundred and nineteen were valid for analysis with a response rate of 92.97 per cent, which is an acceptable level for generalising the results on the population of the study. The study population included a group of employees working in industrial companies operating in the Basra Province in Iraq. Among the important results revealed by the study, was that the strategic audit contributes in improving economic, organisational, social, and environmental performance of the company.

Keywords: *Strategic audit, Industrial companies, Performance, Performance improvement.*



Introduction

Recently, all Iraqi industrial companies, both public and private, have faced environmental conditions that are characterised by a continuous and fast change which imposes a group of challenges and a continuous search for what guarantees survival and persistence through all the available methods that contribute to improving the levels of their performance (Alsaegh, 2018). In the past, companies' managements were interested in reducing costs as a single standard for performance, but these companies became powerless with the multiple goals they seek to achieve. In addition to the scarcity, the increased competition, and the various desires of clients imposed the necessity for companies to seek methods to improve their performance. Among these methods is the strategic management approach (Renna & Izzo, 2018; Byron et al., 2018).

Strategic management represents an intellectual approach that is characterised by modernity and leadership. In addition, it is also characterised with its processes and methods by the ability to increase the competitive capabilities of a company and develop its performance (Shmelev et al., 2018). Due to the spread of globalisation and the openness among companies all over the world, there were new opportunities that led to increase the companies' transactions, which in turn led to an increase in high level risks (Castro, 2018). There have been serious mistakes and errors in the strategic management of these companies and the competitive elements did not stop at the limits of business and work tactics, but exceeded these limits to the long-term strategic competition which gave the strategic information a great importance in preventing risks, identifying risks, and evaluating them (Rincon et al., 2018; Festa et al., 2017). From this point, there has been a need to utilise audit services to understand the company's strategic status, in addition to that of the environment within which this company exists (Hsieh & Lin, 2017).

Accounting and financial auditing became inadequate and was unable to provide an integrated image of companies' performance. In addition, was its inability to provide adequate analysis of specific constraints and problems related to operational processes and the inability to provide adequate recommendations to treat constrains and problems to assess the company in increasing its control on its internal and external performance, in both the short and long terms, based on its strategic needs (Attaran & Gunasekaran, 2019; Kumar, 2016). This has led to the search for an effective tool to evaluate companies' activities, including environmental activities, activities for implementing the strategy, evaluation activities, and control, and this is represented by the strategic audit which has not attracted interest to date (Michalski et al., 2018).

The tools used for performance assessment and evaluation have been limited to the traditional and are related to the financial aspect and have neglected the non-financial aspect (Ghauri,

2018). The strategic audit is the most important starting point among auditing types because the financial audit controls expenses and corrects the orientation of imports and rationalises expenditure. Furthermore, the quality audit ensures the reduction of waste and loss, the optimal use of resources, and improves productivity (Fonrouge & Bolzani, 2019). The role of the strategic audit contributes in evaluating the strategic orientation of companies and ensures that operational processes are effectively performed. It also concerns the optimal use of resources, which reinforces expenses rationalisation, that in turn contributes to improving the companies' overall performance (Tron et al., 2018). At present, Seidler (2016) contends that the strategic audit has become a main function for financial control systems in large economy countries (Group of Twenty/G20). Pham (2018) indicates that the importance of the strategic audit comes from its evaluation of the extent of sources availability and the feasibility of the prepared plans, making the operations and processes controllable. That is, they can be controlled and managed (Kwakye et al., 2018). The importance of the strategic audit topic comes from linking the strategic audit and companies' performance. In particular, in light of the lack of studies addressing this topic, as well as to clarify the role of the strategic audit in improving companies' performance and to achieve a better performance to ensure their persistence and survival, and to achieve their strategies.

Literature Review

Gilmour (1999) conducted a study in Australia which aimed to draw a conceptual frame for the strategic audit to improve the performance of the supply chain. It could be used by any company for assessing and evaluating the supply chain activities and elements' performance. The study also aimed to investigate the extent of the supply chain elements' integration and the use of technology as an appropriate method for this integration. The results revealed that the strategic audit is a useful tool for evaluating the characteristics of the supply chain within a company and offers a base for improving and developing the performance of the supply chain elements within a company.

The study of Wutipphan et al. (2015) aimed to identify the concept of the strategic audit and the importance of the relationship between the strategic audit and the success of the auditing process. Five dimensions were determined for undertaking a strategic audit, including the dynamic learning of auditing, excellent knowledge, modern audit skills, continuous education within the audit environment, and the valuable experiences of auditing. The results indicated a positive relationship between the strategic audit and the success of the auditing process.

The study of Hsieh and Lin (2017) investigated the organisational performance of auditing companies that practice strategic auditing, and the effect of the human resources management strategy and business strategy on auditing companies' performance in Taiwan. The results of the study indicated that auditing companies that practice the strategic audit have a better



organisational performance than companies that do not practice it. The results also indicated that there was no effect of the business strategy on the organisational performance of auditing companies, while the strategy of human resources management had an effect on these companies.

Grant et al. (2017) conducted a study in the health sector, namely in hospitals, to investigate the extent of strategic ability to achieve resources planning within hospitals and to what extent this contributes to reducing patients' stay period. The results indicated that the strategic audit contributes in improving the use of human resources optimally within the organisation and contributes in evaluating the organisation's performance after implementation, as well as assisting in determining the responsible parties for using the resources in inappropriate ways. Finally, the results indicated that the use of the strategic audit led to a great reduction in the average stay of patients within hospitals.

Alnadi (2019) investigated the effect of the strategic audit on human resources management, in light of employees' competency in the Customs Department in Jordan, and also the extent of practising strategic auditing by this department. The results indicated that the Jordanian Department of Customs practises strategic auditing at all levels, and also indicated an effect for strategic auditing on human resources management in several aspects, such as policy auditing, employee auditing, operations efficiency auditing, and employees' job competency.

The study of Lin (2019) investigated the contribution of strategic auditing in analysing the process of auditing the supply chain in Chinese industrial companies and increasing the company's market share. The results of the study indicated that the strategic audit contributed to applying and auditing the industrial companies' supply chain. The study recommended the necessity of cooperation between all company departments and managements, as well as auditors to develop the auditing of the supply chain activities in the future for Chinese industrial companies. Furthermore, there should also be a professional group of reserve staff.

Mohammad (2019) aimed to identify the importance of strategic auditing and strategic planning in public sector companies in Iraq. The results indicated that strategic auditing is a control tool for the country's strategies, which aims to achieve economic, social, and environmental development.

The study of Bushuyev et al. (2019) aimed to identify the relationship between strategic auditing for infrastructure projects and the organisational management strategy due to the problems in these projects and the programs implemented by companies. The strategic audit adopted various methods to evaluate the ability and the response of projects and the infrastructure system in regard to an uncertainty of strategic changes and improvements. The results indicated a relationship between the strategic audit concept for infrastructure projects

and the organisational management strategy, and that the strategic audit can be achieved by using a development algorithm for the organisation.

The study of Lei and Xu (2019) was conducted on Chinese operating industrial companies to identify the performance of most Chinese companies and the causes of the increased operational expenses with the continuous reduction for the profitability in companies owned by the State, despite the increased and developed trend of the market. The results indicated that adopting the strategic audit and improving audit quality leads to limit collusion among audit companies and auditors, and also leads to improving the way by which companies owned by the State are evaluated, as well as forbids companies to maximise their profits and financial fraud.

Theoretical Framework

The Concept of the Strategic Audit

The strategic audit is viewed as dealing with an economic unit in a comprehensive perspective by providing the management with an overall and comprehensive report about its strategic status regarding the various aspects in a frame of decision-making processes (Mizrahi, 2017). The strategic audit also expresses the general introduction of the audit task planning, as well as draws a strategy that is based on internal control or the main tests in collecting data and evidence related to the audit process (Goosen & Van, 2017). Goosen and Van (2017) define the strategic audit as the final step in strategic management, and while conducting audit processes, interest should be focussed on following up both the internal and the external factors, assessing actual performance, and making the correctional procedures. The strategic audit is one of the vital processes as future success depends on the accuracy in following up today's' actions and continuously evaluating them. Wimonard et al. (2017), on the other hand, define strategic auditing as one of the tools related to the strategic choices at the internal level and the environment at the external level. Bushuyev et al. (2019) consider the strategic audit as a methodological and comprehensive approach for the strategic processes of the company to determine the strengths and weaknesses that affect the company. In particular, the causes of the company's failure and the inability to obtain profitability as expected, and seeks new fields and dimensions that may be the reason for adding a real value. Strategic auditing is also defined by Parkotdee et al. (2018) as the approach used by an auditor in planning the audit process to collect and evaluate evidence. Bain and Band (2016) define the strategic audit as a system to ensure that the company achieves its goals through drawing levels for the target actual performance and then assessing the actual performance and comparing it with the existing standards to identify the achievement of the strategic goals of performance. For Jumbad and Chel (2018), strategic auditing is the approach used by an auditor to plan the auditing process to collect and evaluate evidence. Meanwhile, Kesimli (2019) sees the strategic audit as an independent evaluation for development horizons, and is

implemented based on information expectations to reflect the auditor's opinion about the possibility of achieving goals.

Importance of the Strategic Audit

The importance of strategic auditing is represented by the following points (Fleming et al., 2018; Baltos et al., 2018; Sompong, 2018):

- A. Ensuring that companies continue to add a value through the overall testing for the company's strategic status.
- B. Evaluating the extent of the success of activities implemented within the company.
- C. Assisting managers to identify and recognise the problems and deficits that cannot be identified and resolved at the appropriate time.
- D. The strategic audit contributes in overcoming the unnecessary practices that in turn lead to achieve abundant costs and increased supply, as well as increasing the company's competency.
- E. The strategic audit assists in ensuring that the company's goals, plans, and policies do not conflict with its strategic decisions, through the testing and evaluation processes for the internal and external environment of the company.
- F. The strategic audit contributes to treating the weaknesses of the company and addressing the challenges faced by the company and reducing them to the lowest limit.
- G. The strategic audit contributes to initially offering the necessary instructions and recommendations to treat the deficits and negative aspects at the appropriate time.
- H. The strategic audit assists companies to efficiently supervise and to instruct strategic performance, as well as understanding the relationships among the operational and strategic aspects.
- I. The strategic audit assists companies to report their strategic performance and achievements following real evidence.

Requirements of the Strategic Audit

To implement the strategic auditing process, a group of necessary requirements should be available. These include (Rodríguez et al., 2018; Jeppesen et al., 2017):

- A. *Offering an efficient managerial information system*: to conduct the strategic audit process an efficient managerial information system should be available and should include a group of measures and information characterised by the following:
 - a. *Focus*: there should be a focus on the goals the company seeks to achieve.

- b. *Appropriateness*: information should be appropriate for the management and assists it in making the appropriate decisions and should be directed to a specific level with appropriate details.
 - c. *Balance*: not to neglect the incommensurable activities and focusses on the measurable ones.
 - d. *Flexibility*: the information system should be able to respond to the organisational changes.
 - e. *Integrity*: information should be characterised by inclusiveness and generality to include the whole company's activities and goals.
 - f. *Cost/Profitability*: the cost of collecting information should be justified by the benefits that can be obtained. That is, benefits should be greater than the costs.
- B. *Offering specific standards for performance*: the availability of such standards is necessary for the auditor to be able to provide a technical and non-neutral opinion.
- C. *The availability of the qualified staff to conduct the strategic audit process*: an auditor should be qualified to achieve the task of strategic auditing and the qualification should not be different from those necessary for the financial auditing task. In addition, an auditor can resort to experts in strategic matters.
- D. *Management's conviction of the importance of the strategic audit*: management should have a positive reaction to the results of the strategic audit and the recommendations of the auditor, especially with regard to the aspects that the management gives "sufficient" attention. Hence, not achieving their goals (Trotman & Duncan, 2017).

Strategic Audit Stages

Strategic auditing has a great importance as a diagnostic tool for the problems facing companies at all aspects and levels, and in offering the appropriate solutions for these problems. This kind of audit looks with an inclusive and integrative perspective to all the activities practised by an economic unit within the company. The strategic auditing process undergoes four sequential stages, as follows (Aguolu et al., 2018; Lonsdale et al., 2011; Thollander & Palm, 2012):

- A. *Marketing audit*: the aim of auditing the marketing process at the company is to identify the company's current marketing goals, strategies, policies, and programs, and the extent to which they are consistent with the company's message, goals, strategies, and policies. Furthermore, to identify what the level of the company's marketing performance is, as well as the company's status at both local and international markets, and the extent of the competitive advantage achieved by the current marketing.

- B. *Auditing funding*: the auditing of funding is one of the key elements that helps the company to ensure its financial independence and maintain its balance of work. An auditor should consider the company's current financial goals, strategies, policies, and programs and their clarity and consistency with the company's internal and external environment. The degree of the company's success in performing the financial analysis and the trends shown by this analysis, in addition to the financial trends of the company regarding its past and present performance, as well as the effect on its future performance and the company's current financial status, ensuring that it supports the company's future strategic decisions and offers a competitive advantage (Kusano & Sakuma, 2019).
- C. *Research and development auditing*: the research and development (R&D) function is one of the core functions that develops knowledge for management and staff, designing new products, and developing existing products. Therefore, the R&D audit ensures the achievement of the company's competitive advantage (Stanworth et al., 2019). The current development of the company, its visibility, and its inference through performance or budgets, and the role of technology in the company's performance (Agevall et al., 2018), focusses on the extent to which the mix of basic and applied engineering research is compatible with the mission and strategies. Furthermore, the extent provided by the research and development of a competitive advantage for the company, and what return you obtain for the company through its investment in research and development (Klychova et al., 2017).
- D. *Auditing of operations and physical distribution*: through the audit of this element is the efficiency and effectiveness of production machines, the compatibility of company policies and strategies with manufacturing programs, and the ability of the company to provide raw materials at a low cost (Li et al., 2019). To know the extent to which process managers use acceptable methods and tools to evaluate and develop current performance through cost systems, quality control and inventory control management, total quality management programs and technical programs to improve production efficiency, and advanced information systems in the field of physical production and distribution. Finally, assessing the role of the operations manager and physical distribution in the strategic management process (Teoh et al., 2017; Concha et al., 2017).
- E. *Human resources management audit*: the strategic audit aims to measure the effectiveness of human resources (HR) in relation to the needs of other departments, and the extent to which the HR strategy contributes to the organisation's mission and objectives (Brierley & Gwilliam, 2017). The strategic audit seeks to answer this set of questions, the most important of which is to know the extent to which the company's HR managers use accepted concepts, methods, and tools to evaluate and develop the company's performance. This includes job analysis and evaluation programs and performance evaluation systems (Carcello et al., 2018). It assesses the extent of

continuous updating of job descriptions, training programs, and the role of the HR manager in the strategic management process (Roussy et al., 2018).

Performance Improvement and its Relationship with Strategic Auditing

Performance Improvement Concept

The concept of performance is a broad, comprehensive and important concept for any companies. Although there have been many studies on performance and evaluation, no specific concept of performance has been found (Yogi & Kotzab, 2019). Stiglitz and Fitoussi (2017) consider that this is due to the different criteria and measures used for studying performance and assessing it, and this difference in turn is due to the variant objectives and trends among researchers in their studies, where the criteria of classifying performance are varied. Philips et al. (2019) define performance as the company's ability to survive and to achieve balance between shareholders and employees. Meanwhile, Derindag and Canakci (2019) define performance improvement as a reflection for the use of financial resources and human resources and exploiting them efficiently in a way that makes them able to achieve goals. Improving the performance of a company is represented by its ability to implement its strategy and enable it to face competitive forces. The source of these activities is automated, physical or "joint." Kanapathy et al. (2017) argue that the basic principles of performance improvement are increased awareness of the fulfillment of customer needs and expectations, with a focus on systems, processes and the removal of barriers, and encourages the participation of all employees.

Performance Components

The term performance consists of two main elements: effectiveness and efficiency. They are often used to denote the concept of performance. That is, a company that is characterised by performance combines effectiveness and efficiency (Villajos et al., 2019).

Effectiveness

Effectiveness is expressed at the degree of achievement of goals and is shared through the relationship between the actual outputs and estimated outputs. As more and more outputs contribute to the achievement of goals, the company is more effective (Wijesiri et al., 2019). Spyropoulou et al. (2018) defined effectiveness as the company's ability to achieve its strategic objectives of growth and sales and maximise its market share compared to competition.

Efficiency

Efficiency is the ability to choose the route that achieves the best result using the possibilities available or with the latest access to the greatest goal the company seeks to achieve the

greatest profitability available (Govindan et al., 2017). Efficiency is defined as the optimal use of the productive resources available to the company and is primarily related to the cost element and the relationship between inputs and outputs and is therefore an element of efficiency (Nattassha et al., 2017).

Factors Affecting Performance

There are several factors that affect company performance and the process of performance evaluation, several of which are internal and external factors, so some of them are controllable and some are not (Gupta et al., 2017). The internal factors include the organisational structure, a company's culture, technological development, a company's resources, corporate resources, strategic financial factors, and leadership (Taştan & Davoudi, 2017). External factors can include customers, competitors, political and government factors, economic factors, and social and cultural factors (Rezvani & Khosravi, 2019).

Dimensions of Performance

Performance is related to several economic, organisational, social, and environmental dimensions as it is affected by the emergent change at the modern company level (Mallouh & Tahtamouni, 2018). These dimensions are related to several influential parties, which are called stakeholders or actors, such as customers, suppliers, creditors, lenders, and workers. The dimensions of performance are represented by (Caputo & Tron, 2016; Akanmu et al., 2017):

- A. *Economic dimension*: this dimension includes the company's financial performance which determines its profitability and the extent of market share expansion, and the competitive performance which measures the company's ability to achieve a competitive advantage compared to its competitors.
- B. *Organisational dimension*: this dimension relates to the internal performance of the company, as it reflects how the company uses its material and human resources and invests them in a way that enables achieving its objectives..
- C. *Social dimension*: this dimension has attracted interest with the emergence of new management concepts, such as corporate social responsibility, which seeks to improve the social performance of workers and intellectual capital, which is no less important than its financial and material resources (Michalski et al., 2018).
- D. *Environmental dimension*: this dimension is one of the new dimensions of performance and it emerged with the social dimension and recently has been separated from it. It is part of the corporate social responsibility (Janker et al., 2019), and the environmental performance of companies emerged and increased with the progress of industry and the use of modern machinery. Outstanding environmental performance has become an

important entry point for competitive advantage. In line with the requirements of sustainable development, companies that strive for excellence, leadership, and market positioning must build a system to develop and regulate their environmental performance (Arda et al., 2019). Fuzi et al. (2019) define environmental performance as a measurable outcome of an environmental management system, which is based on the company's environmental policy and objectives.

The Relationship Between the Strategic Audit and Performance Improvement

The strategic audit has an effective role in a company's performance improvement through managing the company's risks and defining errors (Ishak et al., 2019), as it offers managers information about the changes and developments occurring within the company's economic, competitive, commercial, political, legislative, social, and cultural environment to assist them in making the appropriate decisions (Khelil et al., 2018). The strategic audit plays a basic role in investigating errors and solving them, as is outlined below (Michalski et al., 2018; García et al., 2017):

- A. *Analysing the internal environment*: auditing and analysing the company's internal environment is the appropriate base to identify risks, treat them by the workers and employees, and identify how to manage these risks.
- B. *Sitting goals*: the process of setting and determining goals and is carried out by the senior management of the company, where the strategic audit is able to identify potential events that affect its strategy. It therefore includes the process of risk management, and the strategic audit supports objectives that in return support the company's mission and are consistent with the level of risk (Tron et al., 2017).
- C. *Identifying and distinguishing action*: internal or external events affect the achievement of the company's objectives. The strategic audit contributes to the distinction between risks and opportunities and its primary task is to collect and use information in the prediction process to seize opportunities and avoid threats (Pazzi & Pellicciari, 2017).
- D. *Risk assessment*: the strategic audit contributes to the assessment of current and potential hazards, taking into account available possibilities and their impact as a basis for determining how current risks are managed on clear bases and rules (Giannakis et al., 2019).
- E. *Control*: the strategic audit seeks to develop the control system and to make the necessary adjustments to keep it up to date with developments in the company's environment, to face the risks that are a repetitive and multi-directional process. It includes company activities and risk response (Garza et al., 2017).

- F. *Response*: the strategic audit helps senior management to choose appropriate responses to risk (avoidance, acceptance, reduction), and helps prioritise risks (Gupta et al., 2019).

Hypotheses

The strategic audit is the starting point and the most important type of auditing. The financial audit controls expenditures, corrects supplies instruction, and rationalises expenditures. The quality audit ensures the reduction of waste and the optimal use of resources, improving productivity (Etchings, 2017). Hence, emerges the role of strategic auditing, which contributes to the evaluation of the strategic direction of the company and ensures that operational processes are performed effectively, as well as the optimal use of resources, which enhances the rationalisation of expenses and contributes to improve the overall performance of companies (Akumu, 2018). Given the importance of the strategic audit and its effective role in instructing the company's strategy, as well as the importance of the overall performance of companies, the problem of this research can be formulated in the extent of the contribution of the strategic audit in improving the performance of the industrial company. In order to familiarise the subject with its various aspects and briefing from multiple angles, several questions were raised and included:

- What is the relationship between strategic auditing and performance?
- What is the motivation for industrial companies to implement strategic auditing?
- To what extent does strategic auditing contribute to the desired results that the company seeks to achieve?

To answer these questions and accurately address the research variables, the following hypotheses were formulated:

H1: Industrial companies operating in the Basra Governorate in Iraq use strategic auditing.

H2: The strategic audit contributes to improving the level of overall performance in industrial companies operating in the Governorate of Basra in Iraq.

The first sub-hypothesis: the strategic audit contributes to improving the level of economic performance in the industrial companies operating in the Governorate of Basra in Iraq.

The second sub-hypothesis: the strategic audit contributes to improving the level of organisational performance in the industrial companies operating in the Basra Province in Iraq.

The third sub-hypothesis: the strategic auditing contributes to improving the social performance in the industrial companies operating in the Basra Governorate in Iraq.

The fourth sub-hypothesis: the strategic auditing contributes in improving the environmental performance in the industrial companies operating in the Basra Governorate in Iraq.

Methodology

Sample

The population of the study included a group of industrial companies operating in the Basra Governorate in Iraq, and 128 questionnaires were distributed to employees within these companies. Of the distributed questionnaires, 119 were retrieved and valid for analysis with a response rate of 92.97 per cent, which is an acceptable rate to generalise the results of the population as a whole.

Data Collection

The questionnaire was utilised as a tool for data collection and this tool is one of the main tools for collecting the necessary data to achieve the goals of this research. The hypotheses were tested using the SPSS software. The researchers developed the tool depending on the theoretical framework of the research and included 38 items. The responses were scored using a five-point Likert scale to identify the participants' views. Each category of responses was given a score as follows: 5 or strongly agree, 4 or agree, 3 or neutral, 2 or disagree, and 1 or strongly disagree. The results were tested and analysed based on the appropriate statistical methods to prove the research hypotheses.

Statistical Treatment

A number of statistical methods were utilised for the purpose of describing and analysing the data of the study variables and testing the hypotheses. This was achieved through the use of a computer in the extraction of results, by relying on the SPSS V.20 software, and the equation AMOS V. (20) where α – Cronbach ' was used to measure the stability of the study tool and the extent to which similar results were achieved under similar conditions, at all times. The mean and standard deviation were used to describe the variables, while the Pearson correlation coefficient was used to determine the direction of the relationship and the extent to which the results support the hypotheses.

Data analysis

Reliability of the Tool

Analysing the reliability of the tool refers to ensuring the stability and reliability of the tool used for data collection. In other words, it expresses the internal consistency, in addition to reliability, that indicates the extent to which the test reveals similar results under similar

conditions and at various times (Zikmund et al., 2010). For the purpose of ascertaining the consistency and reliability of the tool of the current study, the Cronbach's Alpha coefficient was used to verify the 'internal consistency' of the study variables, as shown in Table 1 (Pallant, 2011):

Table 1: Tool reliability

Variables	Cronbach's Alpha	Reliability
Strategic audit	0.865	Good reliability
Economic performance	0.875	Good reliability
Organisational performance	0.887	Good reliability
Social performance	0.922	Good reliability
Environmental performance	0.903	Good reliability
Performance	0.858	Good reliability

Normal Distribution

Appropriate statistical methods are determined depending on the nature of the data distribution. If the distribution of data is normal, census statistics are used. Meanwhile, non-parameter statistics are used if the data does not follow the normal distribution (Zikmund, Babin, Carr, and Griffin, 2010). For this purpose, the Kolmogorov-Smirnov test was used to ensure the nature of the data. The distribution of the data is normal if the value of significance of the calculated value of Kolmogorov-Smirnov is greater than the significance level used in the study of 0.05. The data was greater than 0.05, as shown in Table 2. This serves as evidence that the data was normally distributed naturally, and required the use of parameter methods.

Table 2: Normal distribution test

Variables	Strategic audit	Economic performance	Organisational performance	Social performance	Environmental performance	Performance
Test Statistic	0.132	0.122	0.174	0.113	0.134	0.143
Asymp. Sig. (2-tailed)	0.066	0.072	0.086	0.077	0.096	0.096

Descriptive Statistics and Correlation Coefficient

Descriptive statistics focus on processing and describing raw data and transforming them into totals and small numbers in a way that can draw conclusions and signals that can be generalised to the population. The average mean refers to the mean where the data is centred,

while the standard deviation refers to the degree of dispersion of data from its mean, as shown in Table 3 below:

Table 3: Descriptive statistics and correlation

Variables	Mean	Standard deviation	Strategic audit	Economic performance	Organisational performance	Social performance	Environmental performance	Performance
Strategic audit	3.14	0.669	1			.		
Economic performance	2.95	0.587	0.573**	1				
Organisational performance	3.19	0.623	0.628**	0.692*	1			
Social performance	2.95	0.555	0.339**	0.445*	0.543**	1		
Environmental performance	3.15	0.596	0.674**	0.612*	0.435**	0.169	1	
Performance	3.06	0.500	0.664**	0.676*	0.639**	0.644**	0.560**	1

** . Correlation is significant at the level of 0.01 (2-tailed).

Based on the table above, it can be seen that the means ranged from 3.19 to 2.95, which refers to a moderate or neutral degree of agreement on the study variables from the sample perspective. Meanwhile, the standard deviation was statistically at an acceptable level. For the correlation between the variables and the dimensions, they were all positive ranging between average to strong and at the level of significant of $p < 0.05$, except the relationship of social performance to environmental performance, where there was no significant correlation between them. Finally, this provides initial support to the study hypotheses.

Testing the Hypotheses

As the current study model consists of a one-dimensional independent variable (strategic audit) and a multi-dimensional dependent variable (performance), the hypotheses test was conducted through the path analysis in the Amos program, which enabled testing the independent variable on more than one dependent variable, and this is not provided by regression analysis in SPSS. Table 4 and Figure 1 show the results of the main and sub-hypothesis test, as follows:

Table 4: Testing the hypotheses

Hypotheses			Estimate	S.E.	C.R	p	Label
H1	Strategic audit	Performance	0.864	0.035	18.676	***	Accepted
H1a	Strategic audit	Economic performance	0.773	0.051	13.250	***	Accepted
H1b	Strategic audit	Organisational performance	0.628	0.067	8.755	***	Accepted
H1c	Strategic audit	Social performance	0.339	0.072	3.917	***	Accepted
H1d	Strategic audit	Environmental performance	0.874	0.053	19.492	***	Accepted

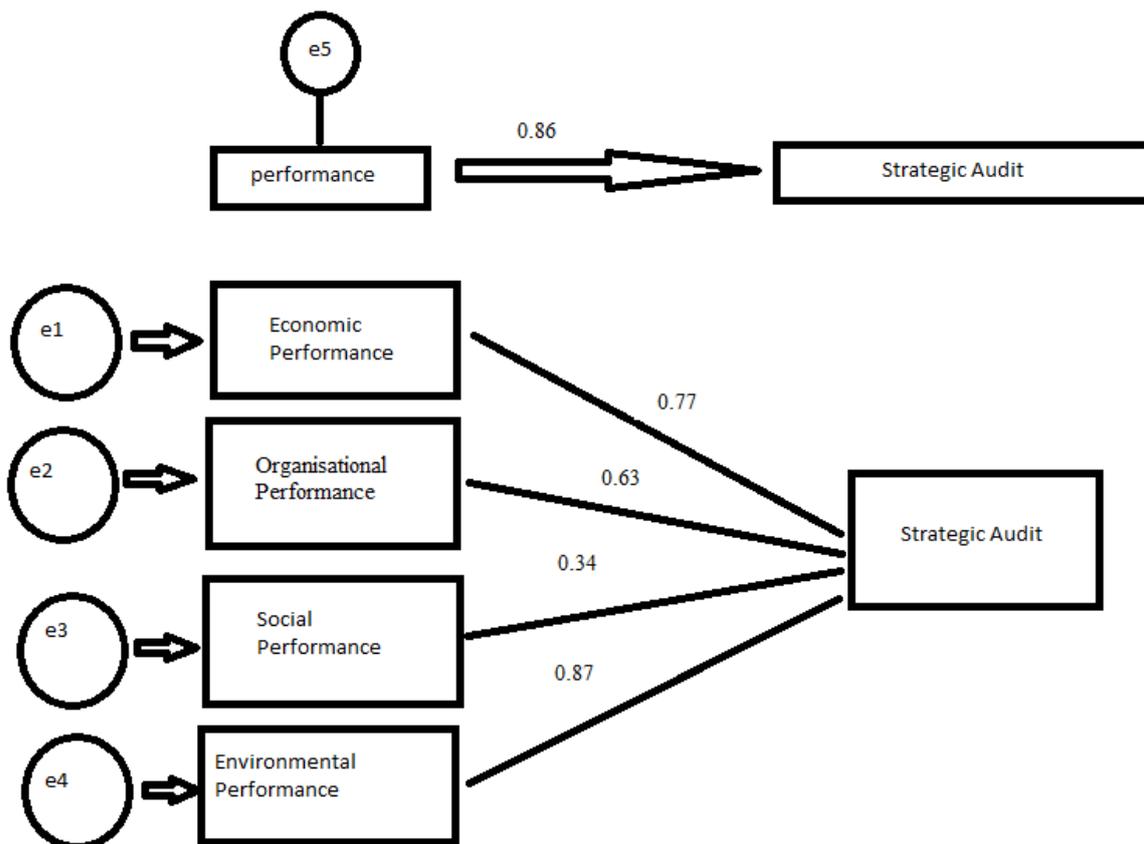


Figure 1. Testing the hypotheses

Based on the results indicated in Table 4, it can be seen that:

1. There is a positive effective relationship between the strategic audit and the total performance (H1: $p < 0.01$).
2. There is a positive effective relationship between the strategic audit and the economic performance (H1a: $p < 0.01$).
3. There is a positive effective relationship between the strategic audit and the organisational performance (H1b: $p < 0.01$).
4. There is a positive effective relationship between the strategic audit and the social performance (H1c: $p < 0.01$).
5. There is a positive effective relationship between the strategic audit and the environmental performance (H1d: $p < 0.01$).

Conclusions and Impacts

Based on the hypotheses testing, we can conclude the following:

- A. Corporate strategic auditing will improve overall performance. By scrutinising strategies during their implementation in general and in financial and accounting strategies in particular, this will expose many of the pitfalls that occur and which cannot be paid attention to through the conduct of strategic financial audits alone. It reveals many important things that contribute to the improvement of the overall performance of the company.
- B. The strategic audit also contributes to the audit of the overall economic performance of companies. It achieves this through the reports and feedback on profitability and market share, compared effectively with planning for the purpose of ensuring the conduct of things as planned on the ground. Furthermore, it addresses the problems that may occur and limit the achievement of what is planned. This, in turn, will contribute to raising and improving the economic performance of the company.
- C. Strategic auditing also contributes to improve the organisational performance of the company by exploring the problems and constraints that occur in the internal environment of the company or the incompatibility of internal factors with the requirements of the external environment. For example, when it is discovered that the organisational structure or culture does not fit with the strategy that is working according to strategic audits, senior management will make adjustments to the structure or intervene to modify cultural aspects in order to enhance and improve the organisational performance.
- D. Strategic auditing also contributes to the improvement of social performance. Through the conduct of a strategic audit, it may be discovered that the imbalance or problem lies in the failure of the company to respond to social requirements and

needs, which greatly affects the profitability and market share of the company. By addressing the deficiencies and increasing the level of response to the social factors surrounding the company, through the strategic audit outputs, the level of social performance will be raised and therefore, the overall performance of the company.

- E. Finally, the strategic audit also contributes to improving environmental performance. This is because the environmental factor is characterised by being of a long-term impact and shows its effects in the future or after long periods. Therefore, the strategic audit related to environmental impacts and aspects reveals many problems, even before they occur or the impact of the effects. Accordingly, it addresses and removes the negative effects in the medium and long-term to enhance the company's environmental performance and thus, the company's overall performance.

Limitations and Future Research

In any study there are limitations. The limitations of this study pave the way for the purpose of future research. In conclusion, the limitations and recommendations for future research are stated below:

- A. The current study sample is limited to the industrial companies operating in the Basra Governorate and thus, the inclusion of other companies in different sectors may contribute to more clear results, as well as the possibility of generalising the results more widely. The study dealt with the case of a sample of individuals working in industrial companies in Iraq and consisted of 119 workers. Therefore, this is one of the determinants that lead to the risk of generalising the results.
- B. The present study sought to clarify the importance of strategic auditing as a comprehensive and integrated management system that reflects the strategic vision of the company and measures the extent to which it achieves its objectives and works to improve the various aspects of performance. It focussed on the four variables of economic performance, organisational performance, improvement of social performance, and improvement of the level of environmental performance (Machfudiyanto et al., 2017). Thus, the current study model did not include some variables that contribute to the enrichment of the current study. For example, the addition of an interactive variable, which is the planning and monitoring of performance. Contributions included the importance of the strategic audit in improving the economic performance of industrial companies. However, there are still topics that need to be explored which could constitute future research studies. For example, the role of the strategic audit in decision-making activation, the role of the strategic audit in risk management, the role of the strategic audit in the development of a company's strategy, and the impact of the strategic audit in the detection and reduction of administrative and financial corruption.



REFERENCES

- Abdallah, A. B., Phan, A. C., & Matsui, Y. (2016). Investigating the effects of managerial and technological innovations on operational performance and customer satisfaction of manufacturing companies. *International Journal of Business Innovation and Research*, 10(2-3), 153-183.
- Agarwal, N., & Somaini, P. (2018). Demand Analysis using Strategic Reports: An application to a school choice mechanism. *Econometrica*, 86(2), 391-444.
- Agevall, L., Broberg, P., & Umans, T. (2018). The new generation of auditors meeting praxis: Dual learning's role in audit students' professional development. *Scandinavian Journal of Educational Research*, 62(2), 307-324.
- Aguolu, O., Igwe, A., Okoyeuzu, C., & Ukpere, W. I. (2018). Strategies and constraints for effective communication in internal auditing quality assurance delivery in the university system. *International Journal of Education Economics and Development*, 9(3), 248-267.
- Akumu, L., & Nzulwa, J. (2018). The relationship between restructuring strategies and performance: a case of Kenya National Audit Office. *International Academic Journal of Human Resource and Business Administration*, 3(3), 289-310.
- Alasseri, R., Tripathi, A., Rao, T. J., & Sreekanth, K. J. (2017). A review on implementation strategies for demand side management (DSM) in Kuwait through incentive-based demand response programs. *Renewable and Sustainable Energy Reviews*, 77, 617-635.
- Alnadi, L. T. (2019). Strategic Audit Of Human Resource Management And Its Effect On The Efficiency Of Employees In The Jordanian Customs Department. *International Journal Of Academic Research In Business And Social Sciences*, 9(3).
- Alsaegh, B. A. M. (2018). Strategic Audit in the Public Sector in Iraq. *Tikrit Journal For Administration & Economics Sciences*, 3(43), 18-28.
- Ansoff, H. I., Kipley, D., Lewis, A. O., Helm-Stevens, R., & Ansoff, R. (2018). *Implanting strategic management*. Springer.
- Arda, O. A., Bayraktar, E., & Tatoglu, E. (2019). How do integrated quality and environmental management practices affect firm performance? Mediating roles of quality performance and environmental proactivity. *Business Strategy and the Environment*, 28(1), 64-78.



- Attaran, M., & Gunasekaran, A. (2019). Blockchain-enabled technology: the emerging technology set to reshape and decentralise many industries. *Int. J. Applied Decision Sciences*, 12(4).
- Axelsen, M., Green, P., & Ridley, G. (2017). Explaining the information systems auditor role in the public sector financial audit. *International Journal of Accounting Information Systems*, 24, 15-31.
- Bain, N., & Band, D. (2016). *Winning ways through corporate governance*. Springer.
- Baltos, G., Doni, L., & Balodis, J. (2018). The international public procurement evolution: new strategic challenges met in collaboration with internal audit advisory services. *Academic journal of interdisciplinary studies*, 7(1), 193-205.
- Bergquist, A. K., & Söderholm, K. (2018). The Greening of the Pulp and Paper Industry: Sweden in Comparative. *Technological Transformation in the Global Pulp and Paper Industry 1800-2018: Comparative Perspectives*, 23, 65.
- Boon, C., Eckardt, R., Lepak, D. P., & Boselie, P. (2018). Integrating strategic human capital and strategic human resource management. *The International Journal of Human Resource Management*, 29(1), 34-67.
- Brierley, J. A., & Gwilliam, D. (2017). *Human Resource Management Issues in Accounting and Auditing Firms: A Research Perspective: A Research Perspective*. Routledge.
- Bushuyev, S., Kozyr, B., & Zaprivoda, A. (2019). Strategic audit of infrastructure projects and programs. *Technology audit and production reserves*, 2(2 (46)).
- Bushuyev, S., Kozyr, B., & Zaprivoda, A. (2019). Strategic audit of infrastructure projects and programs. *Technology audit and production reserves*, 2(2 (46)).
- Bushuyev, S., Kozyr, B., & Zaprivoda, A. (2019). Strategic audit of infrastructure projects and programs. *Technology audit and production reserves*, 2(2 (46)).
- Byron, R., & Hutson, J. (Eds.). (2018). *Local Enterprise on the North Atlantic Margin: Selected Contributions to the Fourteenth International Seminar on Marginal Regions*. Routledge.
- Camilleri, M. A. (2018). Strategic planning and the marketing effectiveness audit. In *Travel Marketing, Tourism Economics and the Airline Product* (pp. 117-135). Springer, Cham.



- Caputo, A., & Tron, A. (2016). The attestation of corporate turnaround plans in Italy: operating problems and possible solutions. *International Journal of Critical Accounting*, 8(1).
- Carcello, J. V., Eulerich, M., Masli, A., & Wood, D. A. (2018). The value to management of using the internal audit function as a management training ground. *Accounting Horizons*, 32(2), 121-140.
- Castro, L. A. D. C. M. (2018). The role of information systems in achieving the sustainable development goals: an overview of established and emerging technologies for development (Doctoral dissertation).
- Chiu, H., Fischer, D., & Friedman, H. (2019). Board Diversity in Audit and Finance Committees: A Case Study of Coca-Cola. In *Diversity within Diversity Management: Types of Diversity in Organizations* (pp. 95-113). Emerald Publishing Limited.
- Concha, F., Segovia, J. P., Vergara, S., Pereira, A., Elorza, E., Leonelli, P., & Betancourt, F. (2017). Audit industrial thickeners with new on-line instrumentation. *Powder technology*, 314, 680-689.
- Daddi, T., De Giacomo, M. R., Frey, M., & Iraldo, F. (2018). Analysing the causes of environmental management and audit scheme (EMAS) decrease in Europe. *Journal of environmental planning and management*, 61(13), 2358-2377.
- Dagilienė, L., & Klovienė, L. (2019). Motivation to use big data and big data analytics in external auditing. *Managerial Auditing Journal*.
- Derindag, O. F., & Canakci, M. (2019). Strategic Human Resources Management in Innovative Firms. *Anadolu Akademi Sosyal Bilimler Dergisi*, 1(1), 52-77.
- Etchings, J. A. (2017). *Strategies in biomedical data science: driving force for innovation*. John Wiley & Sons.
- Fernandez, M. E., Gill, A., van Lieshout, S., Rodriguez, S. A., Beidas, R. S., Parcel, G.,... & Kok, G. (2019). Implementation Mapping: Using Intervention Mapping to Develop Implementation Strategies. *Frontiers in Public Health*, 7.
- Festa, G., Ciasullo, M. V., Vrontis, D., & Thrassou, A. (2017). Cooperating for competing—a small Italian wineries' internationalisation strategy case study. *Global Business and Economics Review*, 19(5), 648-670.
- Fleming, M., Patrick, A., Gryskiewicz, M., Masroor, N., Hassmer, L., Shimp, K.,... & Bearman, G. (2018). Deployment of a touchless ultraviolet light robot for terminal room



disinfection: the importance of audit and feedback. *American journal of infection control*, 46(2), 241-243.

Fonrouge, C., & Bolzani, D. (2019). Motivations and barriers to crowdlending as a tool for diasporic entrepreneurial finance. *International Journal of Entrepreneurship and Innovation Management*.

Forman-Hoffman, V. L., Middleton, J. C., McKeeman, J. L., Stambaugh, L. F., Christian, R. B., Gaynes, B. N.,... & Viswanathan, M. (2017). Quality improvement, implementation, and dissemination strategies to improve mental health care for children and adolescents: a systematic review. *Implementation Science*, 12(1), 93.

Fuzi, N. M., Habidin, N. F., Janudin, S. E., & Ong, S. Y. Y. (2019). Environmental management accounting practices, environmental management system and environmental performance for the Malaysian manufacturing industry. *International Journal of Business Excellence*, 18(1), 120-136.

Gamayuni, R. R. (2018). Factors affecting internal audit function effectivity (internal auditor competence and objectivity, management support and organisation culture) at local government. *International Journal of Monetary Economics and Finance*, 11(3), 179-191.

García, L. M., Deserti, A., & Teixeira, C. (2017). Entrepreneurial design: the role of design as driver of entrepreneurial opportunity generation and assessment. *International Journal of Entrepreneurship and Innovation Management*, 21(1-2), 64-85.

Garza-Reyes, J. A., Kumar, V., Martinez-Covarrubias, J. L., & Lim, M. K. (2017). *Managing Innovation and Operations in the 21st Century*. Productivity Press.

Ghauri, E. (2018). Performance evaluation of sales employees: a comparative investigation in the pharmaceutical industry. *International Journal of Business Performance Management*, 19(3), 253-279.

Giannakis, M., Spanaki, K., & Dubey, R. (2019). A cloud-based supply chain management system: effects on supply chain responsiveness. *Journal of Enterprise Information Management*.

Gilmour, P. (1999). A strategic audit framework to improve supply chain performance. *Journal of business & industrial marketing*, 14(5/6), 355-366.

Goosen, R., & van Dyk, H. O. (2017). Developing an internal audit planning framework at a strategic level by integrating continuous auditing procedures related to automated controls (part I). *Southern African Journal of Accountability and Auditing Research*, 19(1), 59-70.



- Govindan, K., Mangla, S. K., & Luthra, S. (2017). Prioritising indicators in improving supply chain performance using fuzzy AHP: insights from the case example of four Indian manufacturing companies. *Production Planning & Control*, 28(6-8), 552-573.
- Grant, M. C., Galante, D. J., Hobson, D. B., Lavezza, A., Friedman, M., Wu, C. L., & Wick, E. C. (2017). Optimizing an enhanced recovery pathway program: development of a postimplementation audit strategy. *The Joint Commission Journal on Quality and Patient Safety*, 43(10), 524-533.
- Gupta, A., Anpalagan, A., Carvalho, G. H., Guan, L., & Woungang, I. (2019). Prevailing and emerging cyber threats and security practices in iot-enabled smart grids: A survey. *Journal of Network and Computer Applications*.
- Sharaf, H. K., Ishak, M. R., Sapuan, S. M., Yidris, N., & Fattahi, A. (2020). Experimental and numerical investigation of the mechanical behaviour of full-scale wooden cross arm in the transmission towers in terms of load-deflection test. *Journal of Materials Research and Technology*, 9(4), 7937-7946.
- Sharaf, H. K., Ishak, M. R., Sapuan, S. M., & Yidris, N. (2020). Conceptual design of the cross-arm for the application in the transmission towers by using TRIZ–morphological chart–ANP methods. *Journal of Materials Research and Technology*, 9(4), 9182-9188.