



INVESTIGATING THE EFFECT OF BALANCED SCORECARD ACCEPTANCE ON THE EFFECTIVENESS OF ACCOUNTING INFORMATION SYSTEM AND SUSTAINABLE PERFORMANCE (COMPANIES LISTED ON THE IRAQI STOCK EXCHANGE)

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Article history:	Abstract:
Received: June 20 th 2022 Accepted: July 20 th 2022 Published: August 30 th 2022	The purpose of this study was to investigate the effect of accepting a balanced scorecard on the effectiveness of the accounting information system and the sustainable performance of companies listed on the Iraqi Stock Exchange. Descriptive-correlation method was used to conduct this research. The statistical population of the present study included 325 accountants and internal auditors and financial managers of companies listed on the Iraqi Stock Exchange, which according to the Cochran's formula, a total sample size of 176 people was determined. Field method and questionnaire to examine the research variables, a questionnaire tool with 48 questions was used. The reliability of the questionnaires was confirmed by Cronbach's alpha coefficient, the content validity of the questionnaires was confirmed by a group of university professors and their construct validity was confirmed by confirmatory factor analysis. Parametric inferential statistical methods, such as Kolmogorov-Smirnov test, were used to ensure the normality of the variables and structural equation modeling and path analysis using LISREL software to test the hypotheses. The most important research findings showed that Acceptance of Balanced Scorecard had a positive and significant effect on the effectiveness components of the accounting information system and the effectiveness components of the accounting information system also had a positive and significant effect on sustainable performance

Keywords: Balanced Scorecard, Accounting Information System, Sustainable Performance, Iraqi Stock Exchange

1. INTRODUCTION

In general, accounting is introduced as an information system which main purpose is to provide useful information for decision making. Proper design and implementation and appropriate adaptation of information systems to the organization's needs; while providing the necessary platform for providing timely and useful information; It will also increase the value of the organization. The effectiveness of the accounting information system in organizations is well known, which plays an important role in achieving sustainable performance (Huy & Phuc, 2020). Nevertheless, the effectiveness of the accounting information system cannot achieve sustainable performance alone due to the rapid change in the global economic world (Zayed & Sinha,

2019). Accounting information system is used as an effective tool to deal with external and internal changes through data and transaction processing to produce useful information for planning, controlling and operationalizing organizational activities as well as facilitating and obtaining optimal performance. This issue has focused researchers' attention on the effectiveness of the accounting information system Because such useful accounting information helps to improve organizational efficiency, sustainable performance and achieve accountability (Zakiah et al., 2022).

The vision in the organization is realized by the strategies and these strategies can be explained by the balanced scorecard . Balanced scorecard is a management technique that is based on measurement



and is a prerequisite for strategic management. Also, the strategies used to achieve the goals in the organization always need to be reviewed and evaluated, so that they perform in accordance with what is expected from their formulation and implementation. One of the new methods and expressions is the balanced scorecard (Chengizi and Jafari, 2018). The purpose of the balanced scorecard is to prepare the key factors of successful business for the managers and to create alignment between the performance and the overall strategy of the organization. This idea has developed and evolved a lot over time, until a tool for measuring and sustainable performance has now become a strategic management system (Karimzadeh and Moghadisi, 2021). It is obvious that the effectiveness of the accounting information system plays an important role in achieving sustainable performance. Of course, due to rapid changes in the global economy, the effectiveness of the accounting information system alone cannot lead to sustainable performance (Tabli, 2021). Based on this, there is an increasing demand in the evaluation framework, which seems to be proportional to the characteristics of organizations in order to position, manage and evaluate the functions of the accounting information system in order to achieve sustainable performance (Mohrami, 2021).

Accounting information system is very important in making managers' decisions. For this purpose, various frameworks and models have been proposed to measure sustainable performance, of which the balanced scorecard is one of them. Balanced scorecard is a method by which, in addition to financial metrics, non-financial metrics are also evaluated (Akhter, 2022).

The comprehensive sustainable performance evaluation system is a new management system that enables organizations to clarify their vision and strategy and turn it into action. In fact, successful companies do not rely only on financial indicators to evaluate their performance, but also evaluate their performance from three other perspectives of the balanced score method, i.e., customer, internal processes, and learning and growth (Siregar et al., 2020). Companies with strategic planning and implementation of balanced scorecard have been able to improve the effectiveness of their accounting information system, and according to the strategy plan, they can improve the features of their products and put the creation of value for customers at the top of their agenda. Also, the accounting literature shows that strategic success should consider the result of designing the effectiveness of the accounting information system (Huy & Phuc, 2020). In other words, without strategic management, planning and control of accounting information system operations,

the application of accounting information system cannot meet the demand of providing support to the organizational operation process.

Therefore, the main problem of the research is as follows: Does the acceptance of the balanced scorecard affect the effectiveness of the accounting information system and the stability of the performance?

2. THEORETICAL LITERATURE AND RESEARCH BACKGROUND

1.2. Theoretical literature of balanced scorecard

In the early 1990s, the Nolan Norton Institute undertook a study entitled "Measuring the Performance of Future Organizations". David Norton, executive director of this institute, was the leader and Robert Kaplan was the academic advisor of this research. According to Kaplan and Norton, the result of the research was a set of criteria that gives managers a comprehensive and quick insight into the business. They realized the fact that companies will not be able to maintain their competitive advantage only by creating and developing tangible assets (Yazdani, 2021). In other words, "intangible assets" or "mental capital" will be a critical success factor in creating and maintaining a competitive advantage. Balanced scorecard criteria in organizational performance consists of four perspectives: financial, customer, internal processes, and growth and learning, which are related to the four tasks of accounting and finance, marketing, value chain, and human resources (ABDELRAHEEM and Hossein, 2022).

The balanced scorecard helps managers to improve the performance of the relevant unit by showing the performance level of organizations. The BSC approach in determining the position of the organization makes it possible to use this tool to diagnose the problems of organizations. In this regard, one should only try to define and use appropriate criteria for measuring performance. Kaplan and Norton believe that the balanced scorecard should be used as a learning, information and communication system, not as a control system. Therefore, BSC causes the organization to move forward (Seblani et al., 2021). This approach is compatible with many management initiatives and combines many management principles in one document. Examples of these principles are: Customer-oriented organization, personnel empowerment, just-in-time production, lean management, learning organization, re-engineering, risk management, stakeholder management, innovation, time management, comprehensive quality management and value management (Melki and Vaezi, 2022).

A balanced scorecard avoids problems in one area by ignoring other areas. A balanced scorecard makes the



expectations of customers more specific. Understanding and responding to customers' needs is a vital factor in quality management systems and it is necessary to improve processes and products (Mohrami, 2021). In addition, managers who use the balanced scorecard gain insight into the experiences of their employees. Growth and learning metrics provide managers with the necessary information about employee satisfaction and their lack of turnover from the organization, both of which lead to greater productivity and profit (Rezai Kahraman and Hosseini, 2011).

Among the most important place of using this card are banks, which are considered as the beating heart of the country's economy, and increasing their productivity directly affects the efficiency of the country's financial market. On the other hand, due to the fact that the newest method of banking has appeared in electronic banking and the newest type of using a balanced scorecard is through the Internet, so in order to create a leap along with increasing productivity in the bank, it is suggested to use a balanced scorecard in electronic banking. (Huy & Phuc, 2020).

But due to the lack of basic infrastructure for the development of electronic banking, we should make the best use of this card for the benefit of the existing conditions in order to provide the ground for the development of electronic banking. Due to the fact that the balanced scorecard has a direct connection with the customers in order to increase their satisfaction, therefore, the main place in the bank that requires the existence of such a factor is the queue section in general and in the headquarters of the positions that have a direct connection with the customers (Safdari, 2017).

The salient feature of Balanced scorecard is that it links traditional indicators of financial performance with other company indicators and examines them in the form of four perspectives. As a result, these indicators will be comprehensive enough to be able to guide the companies of today's era, i.e., the information age, which are suitable for the complex issues of customers, suppliers, employees, processes, technologies and innovations, and help to increase profitability as much as possible (Coffey et al., 2022).

2.2. Theoretical literature on the effectiveness of the accounting information system

A system is a group of elements that combine together for the common desire to reach a goal (Mloed, 2018).

In any system, there are five elements: input, output, transformation, control mechanism and finally goals. So that the movement of the system is such that the input becomes the output. Meanwhile, the control mechanism monitors the conversion process to ensure

that the system's goals are achieved. The control mechanism is connected to the source flow by its open loop. So that the feedback loop gets the information from the output of the system and makes it accessible to the control mechanism. The control mechanism adapts the feedback signals to the goals and leads to signals to the input element until the system changes its operation (Pratama & Widhiyani, 2021). When our system is an information centre such as a library, the inputs are books, magazines, electronic resources, etc. and the process of technical services turns the said library resources into outputs, which are accessible materials to provide better and more efficient services to patrons and users. The control mechanism here is the head or the person who is in charge of the connection between these technical and collection service centres and public services, and the feedback loop here is the communication and relationships that connect the head person with the different parts of the said library (Al-Okaily, 2021).

In general, every institution needs a system view to continue its work flow, a system view that monitors all input and output parts and the conversion process through the control mechanism and feedback loop, and a type of integration in decision-making, which is necessary for the success of a company. It is an institution, it makes it consider the effects of every decision in other apparently unrelated sectors (Gilani Nia et al., 2021). Skilled people in solving problems are those who know their environment and create effective information collection systems. They have recognized the need for performance criteria and good communication networks with their employees. All these are components of adopting a system thinking. The term system concept is used to show this point of view (McLeod, 2014).

In order to solve the problems related to the institutions, managers need a kind of system approach which is known as a system method. In this method, the first step of the manager is to form the institution as a system. In the second step, since every system is related to its environment, the institution's environment should be understood. In the third stage, the sub-systems and sub-systems of the institution should be identified. After these stages or phases, we will analyse the problem. It means that in the previous stages, the general knowledge and required data have been obtained and they should be processed anyway. The first stage of this transitional phase is from the system to the subsystem level (Ismaili et al., 2019). The second phase is the sequential analysis of system components, and now we reach the third phase, i.e., design and composition. The first step of this phase is to identify various solutions, the second step is to evaluate known solutions, the third step is to choose the best solution, the next step is to implement the



solution, and the last step is to follow up to ensure the effectiveness of the solution, which is the control mechanism in the system method. Management experts often believe that if a manager considers his organization as a system, their problem-solving mechanism will be easier and more efficient (McLeod, 2014).

3.2. Theoretical literature of sustainable performance

One of the biggest challenges facing investors and companies in using information related to sustainable performance is the lack of relevant and comprehensive standards. Another challenge is that in the long term and in a comprehensive and integrated disclosure, which of these dimensions is more important for a company in order to create value for shareholders and stakeholders (Razi and Fukardi, 2021), and sustainability issues should be classified according to their importance, so that companies that have higher ratings on important sustainability issues and at the same time have poor ratings on unimportant sustainability issues will have the best future performance (Chengizi and Eskandari, 2018).

On the other hand, the concept of sustainable performance shows that the company should focus on maximizing shareholder profits in the short term, considering the impact of performance on the interests of all stakeholders, including society and the environment.

The concept of sustainable performance shows that the company should focus on maximizing shareholder profits in the short term, considering the impact of performance on the interests of all stakeholders. Jensen (2001) states that if the interests of stakeholders are ignored, the company cannot maximize value. The concept of sustainable company performance states that the objective function for any business organization is to create the value of shareholders and other stakeholders in accordance with the theory of shareholders and the theory of stakeholders (Huy & Phuc, 2020).

Sustainable reporting forces companies to evaluate competition, conflicts, or providing short-term and long-term benefits to shareholders, society, creditors, employees, and the environment (Karami et al., 2019). The dimensions of sustainable economic performance and sustainable environmental, social and corporate governance are not mutually exclusive. They can complement each other and conflict can occur between them. Companies with effective corporate governance and social and environmental responsibility are expected to perform better financially, create value for shareholders, and gain public and investor trust. On the other hand, companies that are economically

more profitable and sustainable are in better conditions and have more resources to create employment and wealth and perform social and environmental responsibility better. Although the main objective of many companies is to continue to increase shareholder value through sustainable economic performance, companies must also effectively deal with environmental, social and corporate governance performance in order to provide this assurance and value to other stakeholders. They also pay attention. However, the relationship between sustainable environmental, social and corporate governance performance and company value may not be honest and straightforward (Pislaru et al., 2019).

4.2. Research background

Maleki and Vaezi (2022) investigated the evaluation of multidimensional performance of organizations using the combined approach of hierarchical analysis method and balanced scorecard (case study: Gilan Province's Road and Urban Development Department). The results showed that according to a poll of 25 experts, Rasht city ranked first with a score of (0.350), Anzali ranked second with a score of (0.233), Astara ranked third with a score of (0.215), and Rudbar ranked third with a score of (0.215). The score (0.102) was in the fourth place and Talash was in the fifth place with the score (0.100).

Karimzadeh and Moghdisi (2021) investigated the application of the balanced scorecard technique in evaluating the performance of organizations. The results showed that the purpose of the balanced scorecard is to provide the key factors of successful business for the managers and to create alignment between the performance and the overall strategy of the organization. The balanced scorecard also provides a means of guiding the organization for competitiveness. This idea has developed and evolved a lot over time, until a performance measurement and evaluation tool has now become a strategic management system. Balanced score has six perspectives, financial, customer, growth and learning, internal processes, employee satisfaction and legal and social processes.

Sablani et al. (2021), investigated the combined approach of developmental analysis and balanced scorecard and its role in managers' performance. The results showed that the balanced scorecard model is a method that shows the performance of different departments of the organization in addition to having the above characteristics.

Yazdani (2021), investigated the feasibility of implementing a balanced scorecard in the Ports and Maritime Organization. The results showed that it is possible to implement a balanced assessment in the



General Administration of Ports and Maritime Affairs of Khuzestan province.

Amrai and Akbarnejad (2021), investigated the performance evaluation of Pars Hayan company using Balanced Scorecard (BSC) approach. The results showed that Pars Hayan Company has achieved its desired goals and had a good performance in line with the four aspects of the balanced scorecard.

Coffey et al. (2022), designed the performance measurement framework of the balanced scorecard . The results showed that this framework has four aspects of "promotion", "stakeholders", "processes" and "human resources", which cover 56 critical success factors.

Hoi and Fook (2020), investigated the impact of using a scorecard on the effectiveness of the accounting information system in the sustainable performance of the public sector. The results showed that the implementation of PSS has a significant effect on the effectiveness of the accounting information system. Also, the evidence indicates a valid basis for the relationship between the effectiveness of the accounting information system and sustainable performance. Although this research topic is still at the beginning of its path, but it is expected that the findings of this research can act as a solution for researchers, stakeholders and policy makers due to the benefits it has shown in the performance of public sector organizations.

Pislaru et al. (2019), evaluated the sustainable performance of companies based on fuzzy logic. The results showed that the fuzzy model is a suitable tool to provide a comprehensive analysis of the sustainable performance of companies based on environmental and financial components. The link between corporate environmental performance and corporate financial

performance is an innovative approach that uses linguistically dependent variables and rules to provide quantitative measures of corporate sustainability performance.

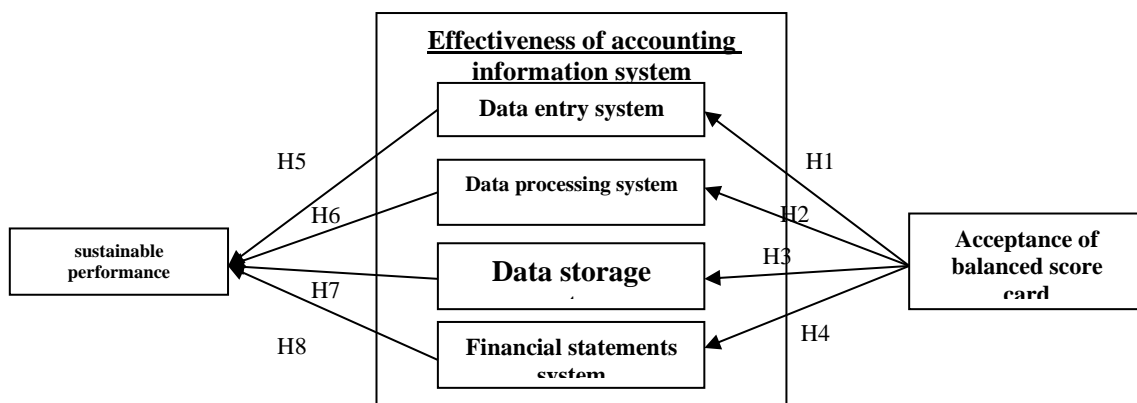
Zayed and Sinha (2019), investigated the effectiveness of the accounting information system in the production of small and medium enterprises in Jordan - a literature review. The results showed that many companies use accounting information systems without knowledge and few of them use them professionally according to the literature review.

Hussain (2018), investigated the use of Balanced Scorecard (BSC) in order to improve the quality and performance of Askari Bank: a case study in Pakistan. The results showed that this case study should investigate the following by using the hypotheses: 1: Is there a deep basis in terms of strategic policies or not 2: A formalized approach should be adopted by the management for better relations, internal communication relations, performance management, development of approaches/policies is warranted or not 3: It is also necessary to formalize working relationships or not 4: Finding the need of human resources through formal training.

According to the research literature and conducted research, it can be concluded that the acceptance of balanced evaluation card had a positive and significant effect on the effectiveness of the accounting information system, and the effectiveness of the accounting information system also had a positive and significant effect on sustainable performance.

3. Research model and hypotheses

According to the stated contents, the conceptual model of the current research can be drawn in the form of graph 1:



Graph 1- Conceptual model taken from the research of Huy and Fook(2020)



Therefore, the research hypotheses are presented as follows:

- H1 :Acceptance of balanced scorecard has a positive and significant effect on the data entry system
- H2: Acceptance of balanced scorecard has a positive and significant effect on the data processing system.
- H3: Acceptance of the balanced scorecard has a positive and significant effect on the data storage system.
- H4: Acceptance of the balanced scorecard has a positive and significant effect on the financial statement system.
- H5: The effectiveness of the data entry system has a positive and significant effect on sustainable performance.
- H6: The effectiveness of the data processing system has a positive and significant effect on sustainable performance.
- H7: The effectiveness of the data storage system has a positive and significant effect on sustainable performance.
- H8: The effectiveness of the financial statement system has a positive and significant effect on sustainable performance.

4. RESEARCH METHODOLOGY

In terms of its purpose, the current research is an applied research, and in terms of the method of data collection, it is a descriptive (non-experimental) and a field study. And since in this research, the researcher seeks to investigate the effect of accepting the balanced scorecard on the effectiveness of the accounting information system and sustainable performance (Iraq stock exchange companies), Therefore, this research is based on the field research method and the method of conducting is survey. The most important thing is that this research is based on the research method of correlational research and the method of conducting it is a survey, the most important advantage of which is the ability to generalize the obtained results.

1.4. Society and statistical sample

The statistical population of this research includes accountants and internal auditors and financial managers of Iraq stock exchange companies, which number is 325. To determine the minimum required sample size, the second formula of Kekran was used for the limited population, so the minimum required sample size was 176 people. It is worth mentioning that non-random sampling method is available due to the lack of access to all the people of the studied society. The demographic characteristics of the respondents are as follows:

Table 1- Characteristics of the respondents

Characteristics of the respondents		Frequency	Frequency rate
gender	Male	149	0/85
	Female	27	0/15
Age	Less than 30 years	36	0/20
	31-40 years	123	0/70
	41-50 years	17	0/10
education	Bachelor's degree	32	0/18
	Master's degree	130	0/74
	P.H.D	14	0/8
Organizational position	manager	25	0/14
	deputy	97	0/55
	expert	54	0/31
Field of Study	Accounting management	122	0/69
	Economy	42	0/24
	other fields	12	0/7

2.4. Data collection

Data was collected through a questionnaire. 200 questionnaires were distributed and collected in person in the research community during 2 weeks. The respondents were assured that their name and their organization will be completely confidential and will not

be disclosed in any way. Out of 200 distributed questionnaires, 190 questionnaires were returned, of which 176 completed questionnaires were used in the analysis. The average return rate of the questionnaire was 92%. Considering the research culture in the country, the rate is satisfactory.



3.4. Measurement scale and validity and reliability

The present research questionnaire consists of three parts. The first part is related to how to complete the questionnaire; The second part is related to the demographic characteristics of the respondents and finally the third part is related to the research variables. Therefore, this questionnaire contains 48 questions depending on the description of table (2).

, I have no opinion, I agree and I completely agree) so that the respondent can choose one of them.

The reliability of the questionnaires was confirmed by Cronbach's alpha coefficient, the content validity of the questionnaires was confirmed by a group of university professors and their construct validity was confirmed by confirmatory factor analysis, which was more than 0.7 for both variables, which indicates the reliability of the questionnaire.

Each question of the questionnaire includes five options (including I completely disagree, I disagree

Table 2- The structure of the questionnaire

Variable	Dimensions	QTY of questions	Number of questions	Sources
Acceptance of balanced scorecard	Key performance	8	8-1	Huy & Phuc (2020)
	Financial	2	9-10	
	Service user/beneficiary	3	11-13	
	Service delivery	3	14-16	
	People, contributions and interests	3	17-19	
	leadership	3	22-20	
	Innovation and learning	3	25-23	
Effectiveness of accounting information system	Data entry system	3	28-26	
	Data processing system	3	29-31	
	Storage system	3	34-32	
	Financial statements system	3	37-35	
Sustainable performance	Economic performance	4	41-38	
	Social Performance	4	45-42	
	Environmental performance	3	48-46	

5. FINDINGS AND ANALYSIS

Findings related to descriptive statistics:

According to the SPSS output listed in table number (3), since the average of all variables is higher than

the theoretical average (3), which shows the appropriate state of the research variables.

Table 3- Descriptive statistics of research variables

Variable	Number	Average	standard deviation
Acceptance of balanced scorecard	176	4/10	0/69
Effectiveness of accounting information system	176	4/52	0/49
Sustainable performance	176	4/24	0/77

FINDINGS RELATED TO THE DATA SIGNIFICANCE ANALYSIS:

According to the output of Lisrel software listed in table number (4), since all the variables have a

significance level greater than 5%, therefore, the significance level of the assumption of normality of the research variables was confirmed



Table 4- The results of the Kolmogorov-Smirnov test to determine the normal distribution of research data

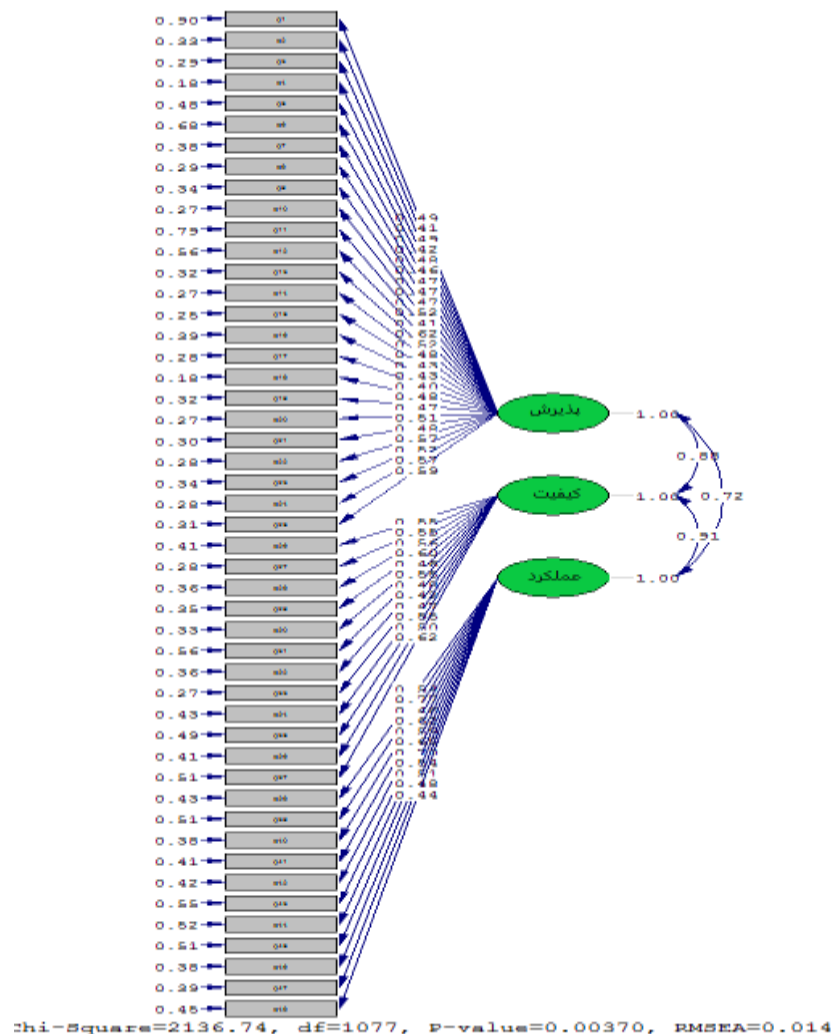
Variable	Acceptance of balanced scorecard	Effectiveness of accounting information system	Sustainable performance
Z	1/02	1/33	0/98
Sig	0/08	0/21	0/17
N	176	176	176

Findings related to confirmatory factor analysis of questionnaire constructs

In this study, the variables (acceptance of balanced scorecard , effectiveness of accounting information system, sustainable performance) which include 48 questions in total were used.

Findings related to standard coefficients of research structures:

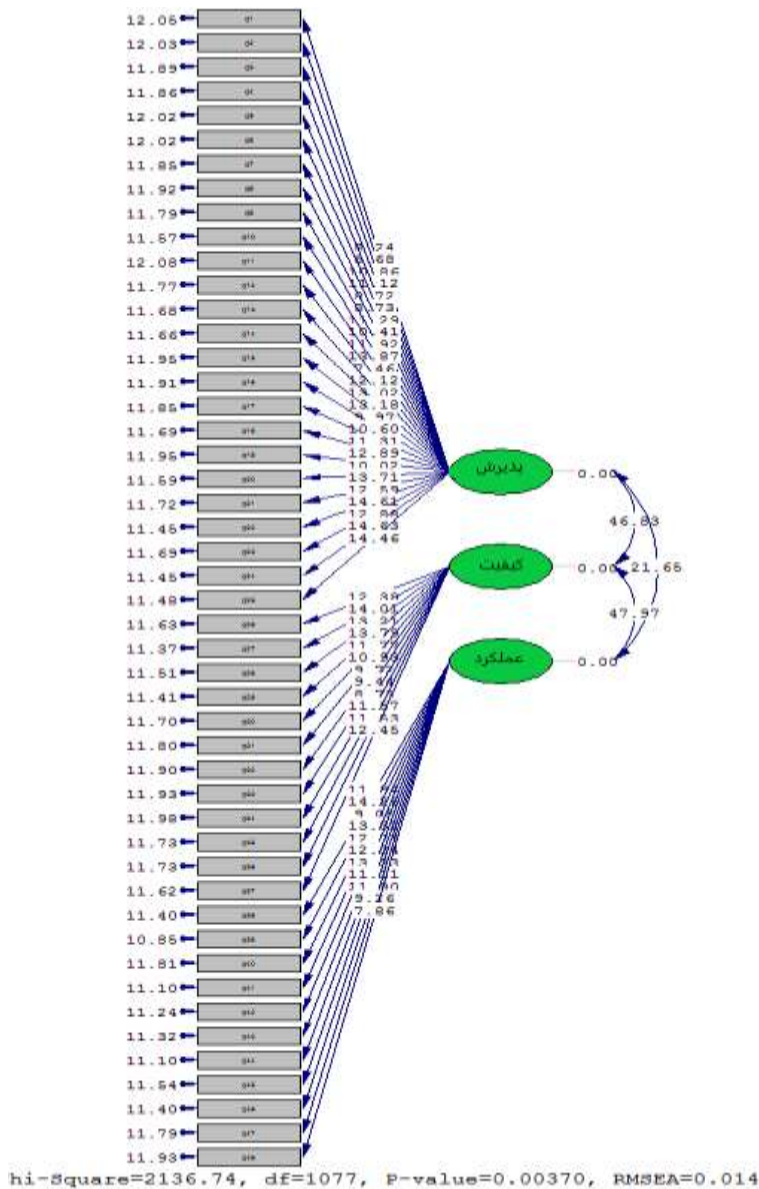
According to the output of the Lisrel software shown in the graph (2), the standard path coefficient of the relationships is higher than 0.4, so it can be said that the questions in question have good explanatory power



Graph 2- Analysis of the confirmatory factor of the questionnaire in the standard mode

Findings related to the significant coefficients of research structures:
 According to the output of the Lisrel software shown in the graph (3), the significance of the standardized

path coefficient of the relationships is higher than 1.96, so it can be said that all the factor loadings and path coefficients of the model are significant.



Graph 3- Analysis of the confirmatory factor of the questionnaire in the significance mode

Findings related to fit indices of factor analysis of structures:

According to the output of Lisrel software listed in table (5), all the general fit criteria of the confirmatory

factor analysis indicate the general fit of the proposed model with the data and indicate the appropriate fit of the variable measurement model.



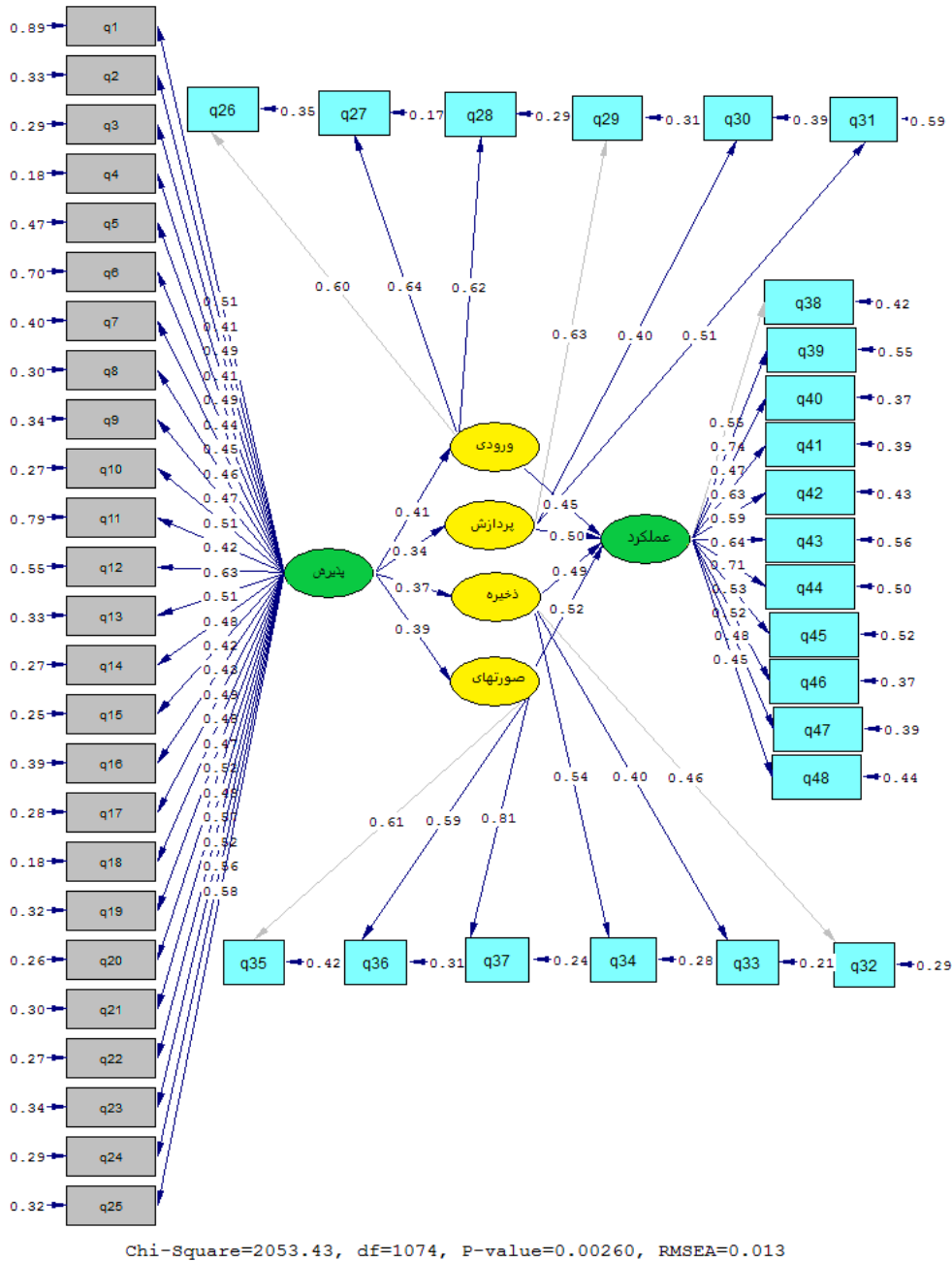
Table 5- Analyzing of fit indices

Fit indices		proper values	High values	Research values	Fit result
χ^2/df	Chi-square division by degree of freedom	≤ 3	≤ 2	1/98	proper fit
Root Mean Squared Error of Approximation (RMSEA)	The root mean square of the estimation error	$\leq 0/1$	$\leq 0/08$	0/014	proper fit
Normed Fit Index (NFI)	Soft fit index	$\geq 0/9$	$\geq 0/95$	0/93	proper fit
Non-Normed Fit Index (NNFI)	Non-smooth fit index	$\geq 0/9$	$\geq 0/95$	0/94	proper fit
Comparative Fit Index (CFI)	Comparative fit index	$\geq 0/9$	$\geq 0/95$	0/94	proper fit
Incremental Fit Index (IFI)	Incremental fit index	$\geq 0/9$	$\geq 0/95$	0/92	proper fit
Goodness of Fit Index (GFI)	goodness of fit index	$\geq 0/9$	$\geq 0/95$	0/93	proper fit
Adjusted Goodness of Fit Index (AGFI)	Adjusted goodness of fit index	$\geq 0/8$	$\geq 0/9$	0/90	proper fit

Analyzing research hypotheses

The findings of the investigation of the standard path coefficients related to the research hypotheses:

According to the output of the Lisrel software shown in the graph (4), the coefficient of the standard path of the relationships is higher than 0.3, so it can be said that all factor loadings are confirmed.



Graph 4- Structural model of research hypotheses in standard mode

The findings of the significance analysis of the standard path coefficients related to the research hypotheses:

According to the output of Lisrel software listed in the graph (5), the significance of the standardized path

coefficient of the relationships is higher than 1.96, so it can be said that all factor loadings and path coefficients of the model are significant.

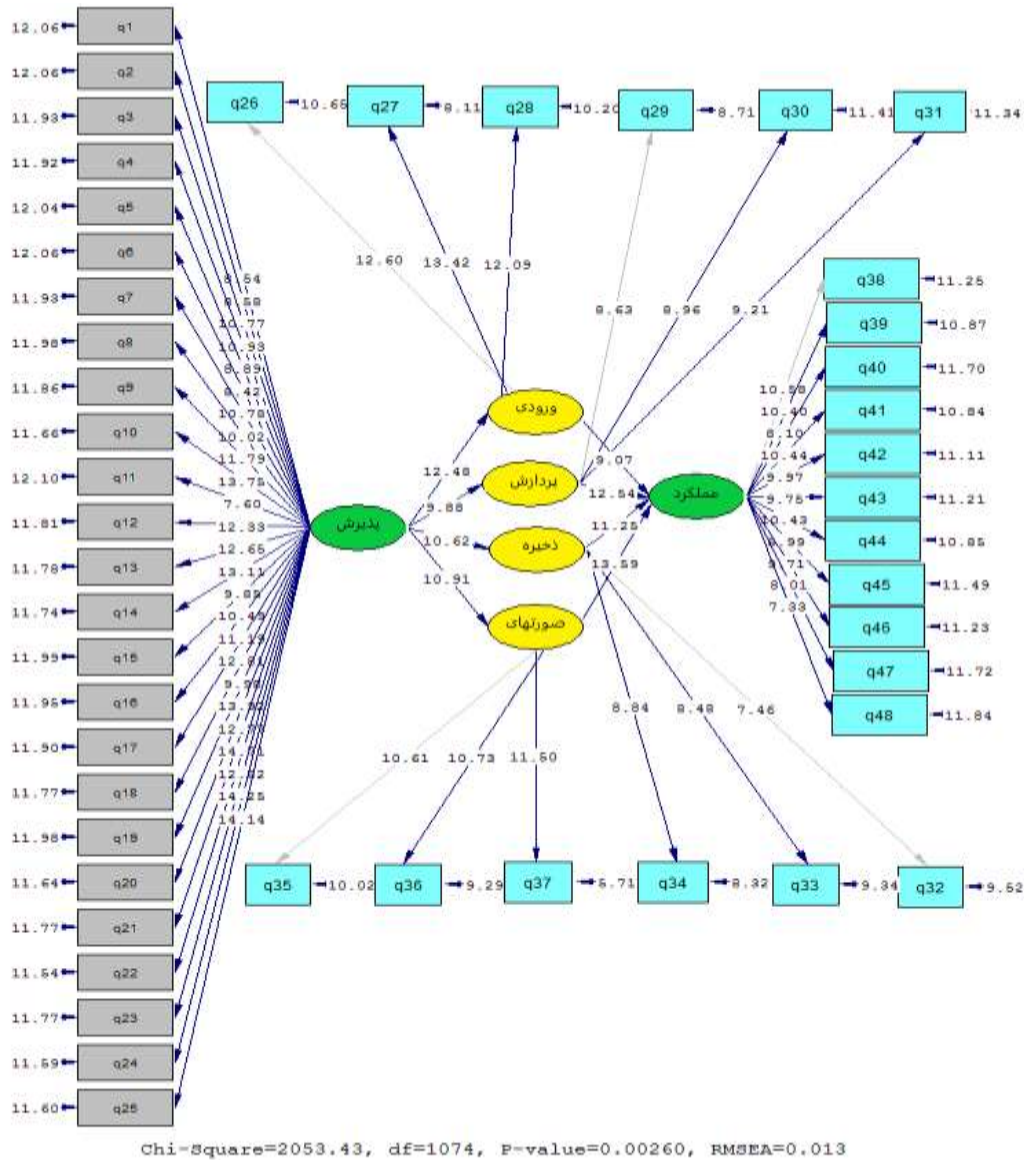


Diagram 5- The structural model of the research hypotheses in the meaningful state

Findings related to the fit indices of the conceptual model:

According to the output of Lisrel software listed in table (6), all the general fit criteria of the confirmatory

factor analysis indicate the general fit of the proposed model with the data and indicate the proper fit of the desired model.

Table 6- Examination of fit indices

Fit result	Research values	High values	proper values	Fit indices
proper fit	1/91	≤2	≤3	χ^2/df
proper fit	0/013	≤0/08	≤0/1	RMSEA
proper fit	0/94	≥0/95	≥0/9	NFI
proper fit	0/90	≥0/95	≥0/9	NNFI
proper fit	0/90	≥0/95	≥0/9	CFI
proper fit	0/93	≥0/95	≥0/9	IFI



proper fit	0/91	≥0/95	≥0/9	GFI
proper fit	0/92	≥0/9	≥0/8	AGFI

Analyzing research hypotheses

The final result of the hypothesis analyzing of this research is reported in table (7).

Table (7): The result of analyzing research hypotheses

Hypotheses	direct coefficient (significant)	Result
Acceptance of the balanced scorecard has a positive and significant effect on the data entry system.	0/41 (12/48)	confirm
Acceptance of the balanced scorecard has a positive and significant effect on the data processing system.	0/34 (9/88)	confirm
Acceptance of the balanced scorecard has a positive and significant effect on the data storage system.	0/37 (10/82)	confirm
Accepting the balanced scorecard has a positive and significant impact on the financial statement system.	0/39 (10/91)	confirm
The effectiveness of the data entry system has a positive and significant effect on sustainable performance.	0/45 (9/07)	confirm
The effectiveness of the data processing system has a positive and significant effect on sustainable performance.	0/50 (12/54)	confirm
The effectiveness of the data storage system has a positive and significant effect on the sustainable performance.	0/49 (11/24)	confirm
The effectiveness of the financial statement system has a positive and significant effect on sustainable performance.	0/52 (13/59)	confirm

According to Table 6, the acceptance of the balanced scorecard has a positive and significant effect of 0.41 on the data entry system. Acceptance of the balanced scorecard has a positive and significant effect of 0.34 on the data processing system.

Acceptance of the balanced scorecard has a positive and significant effect of 0.37 on the data storage system. Acceptance of the balanced scorecard has a positive and significant effect of 0.39 on the financial statement system. The effectiveness of the data entry system has a positive and significant effect of 0.45 on sustainable performance. The effectiveness of the data processing system has a positive and significant effect of 0.50 on sustainable performance. The effectiveness of the data storage system has a positive and significant effect of 0.49 on sustainable performance. The effectiveness of the financial statements system has a positive and significant effect of 0.52 on sustainable performance.

6. DISCUSSION, CONCLUSIONS AND SUGGESTIONS

The first hypothesis: accepting the balanced scorecard has a positive and significant effect on the data entry system.

Based on the results of the research, the coefficient of influence between the variable of acceptance of the balanced scorecard and the data entry system are

equal to 0.41. Adopting a balanced scorecard by providing a suitable platform for knowing the laws and cause and effect relationships governing the business world and also extracting action plans to implement the organization's strategy has a significant impact on the data entry system, so it can be concluded that the acceptance of the balanced scorecard has a positive and significant relationship with the data entry system. As a result, accepting the balanced scorecard has a positive effect on the data entry system in the Iraq stock exchange companies.

Second hypothesis: acceptance of balanced scorecard has a positive and significant effect on the data processing system.

Based on the results of the research, the coefficient of influence between the acceptance variable of the balanced scorecard and the data processing system is equal to 0.34. So, it can be concluded that the acceptance of the balanced scorecard has a positive and significant relationship with the data processing system. It can be said that the acceptance of the balanced scorecard is not only for more and faster processing of data, but also as a management philosophy that can manage the evaluation of an organization and Allow feedback and facilitate communication between all levels of management. As a result, the adoption of the balanced scorecard has a



positive effect on the data processing system in the Iraq stock exchange companies.

The third hypothesis: acceptance of the balanced scorecard has a positive and significant effect on the data storage system.

Based on the results of the research, the coefficient of influence between the variable of accepting the balanced scorecard and the data storage system is equal to 0.37. So, it can be concluded that the acceptance of the balanced scorecard has a positive and significant relationship with the data storage system. By accepting the balanced scorecard and its impact on the data storage system, it is possible to ensure the consistency of planned activities and actions with organizational priorities and strategic goals. As a result, the acceptance of the balanced scorecard on the data storage system in accepted companies has a positive effect on the Iraqi stock exchange.

The fourth hypothesis: Acceptance of the balanced scorecard has a positive and significant effect on the financial statement system.

Based on the results of the research, the coefficient of influence between the variable of acceptance of the balanced scorecard and the system of financial statements is equal to 0.39. So, it can be concluded that the acceptance of balanced scorecard has a positive and significant relationship with the financial statement system. Acceptance of the balanced scorecard is necessary for monitoring, evaluation and continuous improvement of the financial statement system, and if these evaluations are based on the strategic planning of the organization, it is on the right track. As a result, the acceptance of the balanced scorecard has a positive effect on the system of financial statements in Iraq stock exchange companies.

Fifth hypothesis: The effectiveness of the data entry system has a positive and significant effect on sustainable performance.

Based on the results of the research, the coefficient of influence between the effectiveness variable of the data input system with sustainable performance is equal to 0.45. So, it can be concluded that the effectiveness of the data entry system has a positive and significant relationship with sustainable performance. Proper diagnosis of the distribution for the input data is considered a very important factor in terms of time and work resources. Because incorrect opportunities in the inputs cause deviation and

inefficiency in the outputs. As a result, the effectiveness of the data entry system has a positive effect on the sustainable performance of Iraq stock exchange companies.

Sixth hypothesis: The effectiveness of the data processing system has a positive and significant effect on sustainable performance.

Based on the results of the research, the coefficient of influence between the effectiveness variable of the data processing system with sustainable performance is equal to 0.50. So, it can be concluded that the effectiveness of the data processing system has a positive and significant relationship with sustainable performance. Since the effectiveness of data processing to transform raw and meaningless data into meaningful information is very important for the organization, but as the data becomes more complex, the tools, approaches and procedures necessary to process them also become complicated in the same way, so for further analysis, it is important that these data have the necessary effectiveness so that the organization achieves a sustainable performance. As a result, the effectiveness of the data processing system has a positive effect on the sustainable performance of Iraq stock exchange companies.

The seventh hypothesis: the effectiveness of the data storage system has a positive and significant effect on sustainable performance.

Based on the results of the research, the coefficient of influence between the effectiveness variable of the data storage system with sustainable performance is equal to 0.49. So, it can be concluded that the effectiveness of the data storage system has a positive and significant relationship with sustainable performance. Since the most important capital for any person or organization is information, therefore, storing data in order to achieve the permanence of objects leads to sustainable performance. As a result, the effectiveness of the data storage system has a positive effect on the sustainable performance of companies listed on the Iraqi Stock Exchange.

The eighth hypothesis: the effectiveness of the financial statement system has a positive and significant effect on sustainable performance.

Based on the results of the research, the coefficient of influence between the effectiveness variable of the financial statement system with sustainable performance is equal to 0.52. So, it can be concluded that the effectiveness of the financial statement system has a positive and significant relationship with



sustainable performance. The effectiveness of the financial statement system reflects the information that can provide a clear picture of the business unit in question, which leads to sustainable performance. As a result, the effectiveness of the financial statements system has a positive effect on the sustainable performance of companies listed on the Iraqi Stock Exchange.

7. CONCLUSION

In general, in this research, the impact of accepting the balanced scorecard on the effectiveness of the accounting information system and sustainable performance (Iraq stock exchange companies) was investigated, and based on the results of the research, there was a positive and significant relationship between these variables. Acceptance of the balanced scorecard had a positive and significant effect on the effectiveness of the accounting information system, including: data entry system, processing, storage, financial statements, and the effectiveness of the accounting information system also had a positive and significant effect on sustainable performance. Therefore, managers of Iraq stock exchange companies can pay attention to the topic of the balanced scorecard as well as their components and improve the effectiveness of the accounting information system by knowing the importance of each of the above variables. Therefore, they can take more effective steps in order to improve the performance and create the conditions for improving and increasing the sustainable performance accepted in the Iraqi Stock Exchange in a favorable way.

Accounting systems provide information management necessary for planning and control. The activities of this system include collecting, classifying, summarizing, processing, analyzing and reporting information to management. Management accounting reports, unlike financial accounting information, should be used in making internal decisions. The essence of management is decision-making inherently deals with future events, for this reason, management accounting, unlike financial accounting, which basically focuses on past information, mainly provides information of current and future nature. In addition, management accounting information should be presented in detail in order to help managers at different levels of the organization in making decisions and evaluations. Finally, management accounting information is useful when it is relevant, correct, reliable, and if it is an estimate, it is based on correct estimation procedures. Management accounting systems can affect business in the following ways: The

management accounting system affects the performance of managers, the concentration of managers and the expansion of business activities. It is obvious that the effectiveness of the accounting information system in public sector organizations plays an important role in achieving sustainable performance. Of course, due to the rapid changes in the global economy, the effectiveness of the accounting information system cannot lead to sustainable performance. Based on this, there is an increasing demand in the evaluation framework, which seems to be proportional to the characteristics of public sector organizations in order to take a position, manage and evaluate the functions of the accounting information system in order to achieve sustainable performance. One of the important factors of economic development is attracting capital and directing them towards investment in production and commercial activities. Meanwhile, one of the important infrastructures of this development is providing reliable and useful financial information to attract investments. The use of accounting systems is one of the most important sources of providing financial information. The use of these systems at the same time as the use of the information disclosed by the reliable and trustworthy financial statements based on the audit opinion is a positive step in the economic development of these companies.

According to the results of the analysis of the hypotheses, the following suggestion can be made: The findings show that the adoption of a balanced scorecard (data entry system, data processing system, data storage system and financial statement system) has a positive effect on the sustainable performance of Iraq stock exchange companies. The findings show that the adoption of a balanced scorecard (data entry system, data processing system, data storage system and financial statement system) has a positive effect on the sustainable performance of Iraq stock exchange companies.

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