

The Possibility of Adopting Blockchain technology in Enhancing Strategic Sustainability: An Exploratory Study on a Sample of Deluxe Hotels in Baghdad

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ABSTRACT

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This research aims to establish a foundation of intellectual work to connect variables, starting with theoretical grounding and reviewing the most important intellectual opinions related to them. It then extends to field testing of the conceptual relationship between blockchain and strategic sustainability in a crucial work environment such as the hotel industry. The research problem lies in the fact that hotel management and those working in the tourism sector in general face a real structural challenge that must be addressed if these entities wish to keep pace with global tourism and hotel organizations, which have reached highly advanced performance standards. This can be observed through advanced tourism experiences at both the regional and global levels. The research sample consisted of (57) observations from members of management teams in hotels classified as premium in Baghdad. The opinions were analyzed using appropriate statistical mechanisms. The results of the statistical analysis showed that the sample members expressed positive opinions about the idea of accepting blockchain and achieving acceptance for using the system within hotel organizations. However, this does not reach the stage of full adoption of the system due to the limited knowledge of employees within the hotel organizations regarding the importance of the system. One of the most important recommendations is the necessity for hotel managements to be open to adopting methodologies. Modern digital technologies, foremost among them blockchain, necessitate the preparation of all the material and human resources required to ensure the success of such experiments, even if implemented gradually. This transformation requires sufficient time, particularly given the complex and challenging environment in Iraq.

Keywords: Blockchain, Strategic Sustainability, Luxury Hotels in Baghdad

Introduction:

Contributed to the development of areas and the extinction of other areas if it imposes changes in the size and strength of performance and the nature of activity and functions. It has contributed to the work environment of organizations through modern means that did not exist previously. These means and technologies have varied in their goals, mechanisms and programs, the most prominent of which is what is known as (Blockchain) technology or what is called (the chain of nodes or blocks), which provides broad digital infrastructure capabilities that open horizons for new ways in which hotel organizations work in a way that ensures their safety. There are several advantages, including the advantage of decentralization, transparency, and traceability, which means a decrease in the number of working hours and wasted time, the absence of cases such as theft and fraud, and the provision of support and protection from cyber-attacks, which raises the level of guests' confidence and develops the principle of data credibility and the volume of information

exchanged. This technique referred to above represents the independent variable in the current research.

On the other hand, the cognitive environment can be looked at, despite the different areas of its work. It constitutes interconnected fields that support each other, and an idea or concept can represent an intellectual and field framework in which paths of systematic scientific work interact. An example of this is the essence of the concept of sustainability, which has become an umbrella of intellectual work under which various paths are organized. In this broad space, the vision of strategic sustainability was born, after which a situation in which the social, economic and environmental dimensions of what sustainability is interacts through its strategic perspective, which constitutes the variable adopted for research. Current.

It must be pointed out that the responsible leaders and departments working in the tourism and hotel sectors are facing a real structural problem that must be confronted if these entities want to catch up with the global tourism and hotel organizations, which have reached very advanced performance standards that can be realized through the expanded volume of tourism experiences at the regional and global levels. This research also aims to build an expanded base of intellectual and administrative work to link the variables, starting with theoretical foundation and reviewing the most important intellectual opinions related to them and extending. To a large area of field testing to find out the nature of the conceptual relationship between (Blockchain and strategic sustainability) in an important work environment such as that of the hotel sector. The sample number was 65 and included each of the general manager, assistant general manager, department head, and division manager. The hotels were the Babylon Rotana Hotel, the Rasheed Hotel, the Hayat Hotel, the World Hotel, and the Olive Hotel, because they are excellent class hotels in the city of Baghdad. The research included four sections, the first being methodology, the second the theoretical aspect, and the third the practical aspect. Finally, conclusions, recommendations and proposals.

Research Methodology

First: The Research Problem

By examining the reality of financial and non-financial indicators related to tourism in general and the hotel sector in particular in Iraq, several structural problems and imbalances emerge. The most prominent and important of these is what can be described as the digital divide that this sector suffers from, which takes more than one form and manifestation. Foremost among these is the reluctance of operating hotels of all classifications to adopt modern digital mechanisms, programs, and formats, especially those related to the current research focus, namely blockchain technology in the various hotel work tasks. In addition to this, there is a decline in the intellectual understanding of the concept of strategic sustainability among the senior teams in these hotels, and a departure from the structure of the set objectives. The general performance is reduced to the operational aspect and focuses on carrying out daily tasks, which take up the largest share of the attention and time of hotel management. Here, it must be pointed out that the responsible authorities and the managements working in the tourism and hotel

sector are facing a real structural problem that must be confronted if these authorities want to catch up with the global tourism and hotel organizations, which have reached very advanced performance standards that can be understood through advanced tourism experiences at the regional and global levels. Questions: The issues mentioned above can be formulated through the following main and sub-questions:

Main Question: To what extent does the hotel sector have the potential to adopt blockchain technology, and to what extent does the adoption of this technology affect the achievement of strategic sustainability in the Iraqi luxury hotel sector?

Sub-questions:

- 1- To what extent do Iraqi hotels possess the general structure that enables them to absorb and adopt blockchain technology in their various operational mechanisms?
- 2- What is the level of awareness among hotel management regarding the nature of blockchain technology and how to adopt it according to modern hotel performance standards?
- 3- To what extent do hotel strategic work teams understand the importance and priority of the concept of strategic sustainability and the necessity of placing it as the central goal in the areas of work of the hotel organization?
- 4- What is the level of correlation and influence between the two research variables?

Second: The Importance of the Research:

The importance of this research can be highlighted through the following:

- 1- The importance of blockchain technology in the hotel industry, as it is a modern and highly advanced technological approach. Furthermore, it offers hotel management various operational advantages, including speed and accuracy in completing different tasks, as well as reliability in performance and results.
- 2- The importance of the strategic sustainability axis, which is a major concern for many interested parties in intellectual and practical fields, not to mention the official attention it has received from countries and official organizations globally.
- 3- The importance of the sector that constitutes the field study of this research, namely luxury hotels in Baghdad. This sector is a significant indicator of the state of tourism development in any country and carries many vital economic and social implications.

Third: Research Objectives

The research objectives revolve around the following:

- 1- Establishing a foundation of intellectual work to link variables, starting with theoretical grounding and reviewing the most important intellectual opinions related to them, and extending to the field testing of the conceptual relationship between blockchain and strategic sustainability in a crucial work environment such as the hotel industry.



2- Assessing the readiness of hotel organizations to adopt the fundamental principles for implementing various digital formats, most notably blockchain technology, which must be adopted if hotel organizations wish to keep pace with global hotel organizations.

3- Determining the level of impact of blockchain on achieving strategic sustainability.

4- Presenting a framework of general steps that hotel management can adopt, expressed as a set of recommendations and proposals.

Fourth: Research framework:

The Research framework includes the main and sub-variable

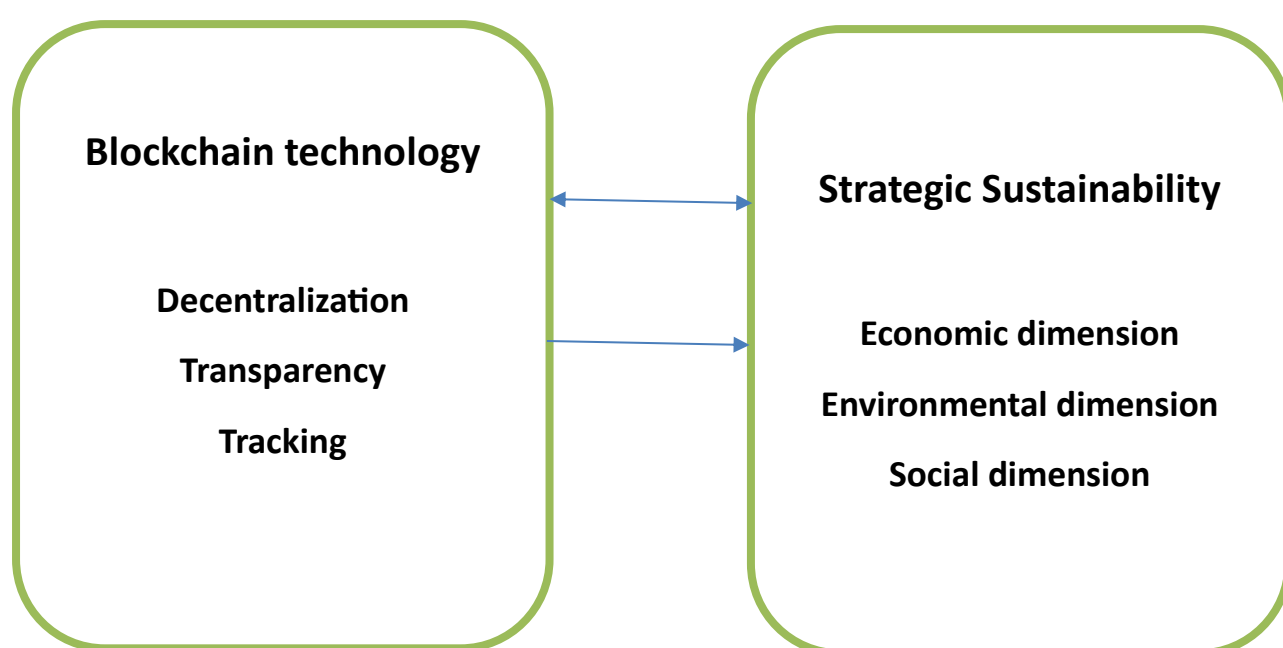


Figure (1) Research framework

Source: By Authors

Fifth: Research Hypotheses

Main Hypothesis:

1- (There is a statistically significant impact of adopting blockchain technology on achieving strategic sustainability.) Three sub-hypotheses stem from this main hypothesis as follows:

1-1- There is a statistically significant impact of the decentralization dimension on achieving strategic sustainability.

2-1- There is a statistically significant impact of the transparency dimension on achieving strategic sustainability.

3-1- There is a statistically significant impact of the traceability dimension on achieving strategic sustainability.

Sixth: Research Population and Sample:

The research population and sample represent the most prominent elements that carry significant and fundamental weight in the scientific research methodology. If the population and sample are selected using a precise scientific and methodological approach, this translates to greater confidence in the level of the results obtained and, consequently, the possibility of generalizing the findings, given that the selected sample is representative of the researched population. In the current research, the researchers conducted several field visits to a group of luxury hotels in Baghdad due to the economic and social importance of this sector. Luxury hotels have become national symbols and important indicators of the economic and urban development of any society. With the period of economic liberalization, the capital, Baghdad, witnessed the opening of more than one modern hotel facility built according to advanced standards, which prompted the researchers to choose this population as the focus of the field study.

As for the sample, the senior management working in the selected hotels was chosen because they are in contact with the research variables and their dimensions, as they need high-level strategic decisions. The teams of managers and board members were chosen, as well as the departments, whether they are in contact with the guest or known as the (Back space) departments. (65) questionnaire forms were distributed, of which (57) questionnaire forms were subjected to statistical analysis, and (8) questionnaires were excluded because they were not suitable for statistical analysis, with a rate of ..(87.69)

Seventh: Research Tools:

The research relied on theoretical and practical aspects, employing a set of tools as listed below:

1. Theoretical Aspects: The researchers consulted a number of authors in the field of theoretical writing, utilizing a range of books, theses, dissertations, research papers, journals, periodicals, and websites (internet), both foreign, Arabic, and local.
2. Practical (Applied) Aspects: In the practical (applied) aspect, the researchers relied on the following tools:
 - a. Records and Documents: The researchers reviewed the organizational structures used in hotels to select the sample based on the distribution of responsibilities, functions, and authorities.
 - b. Field Interviews: To obtain the most accurate answers to the questionnaire questions, numerous members of the sample were interviewed to ensure a comprehensive understanding of all the items and their expressions.
 - c) Questionnaire: The questionnaire is considered the primary tool for applying or collecting information related to the exploratory aspects of the study. The questionnaire design relied on the main and sub-variables of the research, as determined by the number and number of items. The questionnaire was divided into two sections:

d) The first section included the independent variable (blockchain technology), while the second section included the dependent variable (strategic sustainability). The total number of items was eighteen. A five-point Likert scale was used for this section, with response scores ranging from (5) strongly agree to (1) strongly disagree, as shown in Table (1) below.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

Source: By Authors

Eighth: Research Measures:

The researchers relied on a set of scientifically proven measures as dimensions for measuring the variables and sub-dimensions in the field. The independent variable, blockchain, was measured using three sub-dimensions and nine items, while the strategic sustainability variable was measured using three dimensions (economic, social, and environmental) and nine items, as shown in the table below.

Table No. (2) Sources of scales used in the questionnaire

Variable	Dimensions	Items No.	References
Blockchain technology	Decentralization	3	Elommal, Manita, 2022
	Transparency	3	
	Tracking	3	
Strategic Sustainability	Economic dimension	3	Zhang& Chan.,2020
	Environmental dimension	3	
	Social dimension	3	

Section Two

Theoretical Aspect of Research Variables

First: Blockchain Technology

1. **Concept:** Blockchain technology is a modern term in the world of digital creativity and innovation. It refers to the process of storing a massive amount of data and information in a secure and easy way that preserves the privacy of the user and consumer of any service or product. Dunga (2019: 137) defined blockchain technology as "the cornerstone and new method through which data and information are stored more smoothly and transparently." Vadapalli (2020: 13) defined it as "a hierarchical process through which a series of steps are followed to encrypt information within a secure and protected framework." Almahirah (2021: 1845) defined blockchain as "digital records protected from manipulation and forgery in a tamper-proof format that solves the problem of information overlap or similarity." Shakya (2024: 64) also defined it as Shakyawar, as one of the fundamental pillars of artificial intelligence, professionally encounters data and information across the

internet and processes it instantly. The information passes through three stages: input, processing, and output. Tamboli (2024) also presented another concept of blockchain, indicating that it is an important means of accessing digital information with infinite accuracy and speed. In this context, researchers believe that blockchain can be defined as a modern digital system that can be adopted in all aspects of hotel management. It operates on the principle of accuracy and speed in data and information input and secure storage to prevent fraud, theft, and damage.

2. Blockchain Technology Requirements: Blockchain technology depends on several requirements for its correct implementation, summarized as follows: (George, 2024;93)

A. A network of computers: This network can belong to one person or several people who share a specific system, often called a node.

B. Network protocol: The network protocol controls the communication process between the groups.

C. Consensus mechanism: This mechanism is called decentralization and is defined as a set of algorithms and technical tools that make up blockchain. Researchers believe that Iraqi hotel organizations must understand the requirements mentioned above and work genuinely and responsibly towards fulfilling them. This may require building real and effective partnerships with hotel organizations advanced in adopting digital business models and utilizing their available expertise and material and human resources.

3- Blockchain Technology Obstacles: Blockchain faces a number of difficulties and obstacles, including:

A- Transaction Complexity: Blockchain technology faces many complexities in its application and data storage methods. Therefore, specialized programmers are essential for its use (Bawono & Topcu, 2022:95).

B- Transaction Costs: When using blockchain technology for hotel transactions, the technology's cost is high because it falls on the hotel, adding extra financial burdens (Carmona et al.; 2019:19).

C- Data Modification: The methods used in blockchain technology are diverse, making it difficult to coordinate or modify information for several reasons, including the system's operation and cyberattacks (Crosby & End, 2016:21). At the Iraqi level, there are many obstacles related to finances, human resources, the regulatory environment for digital work, and other factors. However, this does not necessarily mean abandoning the idea of adopting blockchain technology. On the contrary, this could be a catalyst and impetus for achieving a genuine hotel renaissance, beginning with initial steps within a long-term strategic plan.

4- Dimensions of Blockchain Technology: Various research attempts offer diverse models to define the most prominent dimensions of blockchain. This multiplicity and diversity stem from the novelty of the scientific term at both the theoretical and applied levels, as well as the variety of field approaches employed by each researcher. This research will identify the most important dimensions of blockchain according to the points below:

A- Decentralization: Decentralization is defined as an integrated system that is difficult for any central entity to control directly, and no individual can access it, as it consists of several interconnected blocks that are characterized by a high capacity to protect information from theft (Jaber, 2020: 38).

B- Transparency: This means that data and information cannot be manipulated through deletion or modification, which gives the characteristic of interconnection. This technology can continue for a longer period due to the volume of data stored securely and its high capacity for cohesion, protecting the organization's strategies from tampering (Elommal, Manita, 2022: 41).

C- Traceability: This is a characteristic feature of blockchain technology, which represents the tracking of information. From the primary source to the guest, it represents a continuous chain in the product lifecycle and is considered a secure method for protecting product information throughout the production stages, from the start of the production process to its storage and release to the market for the consumer or guest (Shrestha, 2019;13). Researchers believe that introducing such a methodology or practical approach in a reality like the Iraqi hotel sector, given its indicators of neglect and digital decline, may seem difficult to some. However, in their diligent pursuit of keeping pace with the tremendous technological and digital development achieved by hotel organizations globally and even regionally in advanced tourism experiences like Dubai, researchers view such models as a duty, responsibility, vision, and goal that requires Iraqi hotel management to work towards achieving it and transforming it from a mere hope or desire into a tangible reality, even if initially or in stages. There are many requirements that must be met in an environment characterized by a high level of uncertainty and economic, legislative, and other problems. Despite this, the Iraqi hotel sector must seriously address these challenges. The responsibility for the digital transformation that must be achieved in the coming timeframes, and therefore the possibility of implementing such modern technologies, depends on the will of the senior management teams of the entities responsible for the tourism and hospitality sector, as well as the management of organizations operating in this important field.

Second: Strategic Sustainability

1- The Concept: The concept of sustainability, in its general framework, has gone through several historical stages. It began with a general trend towards preserving environmental resources, progressing to the dissemination of various cultures and practices, and culminating in the establishment of the principle of sustainability through various international laws and the creation of centers and organizations at the official level, which placed sustainability in a binding position for all organizations. As for sustainability from a strategic perspective, it refers to an organization's ability to maintain its resources and use them optimally (Lindgreen, 2013:5). (Emamisaleh & Rahmani, 2017:4), defined it as "the organization's desire to create a balance between the resources available for the current and future production plan." Arora et al., 2020:712, defined strategic sustainability as "the process of combining the organization's economic, social, and environmental goals, as well as its financial and human resources, to achieve general and specific objectives." Malik et al., 2020:3, indicated that the essence of the strategic sustainability concept lies in the organization's ability to transform from a less

efficient to a more efficient state through Managing resources and balancing internal and external factors.

2- Dimensions of Strategic Sustainability: The dimensions of strategic sustainability, which are widely agreed upon, can be identified through the following points:

A- The Economic Dimension: This dimension is evident in the strategic performance of any organization through the management's commitment to financial policies and methods primarily aimed at creating and sustaining the required financial resources and achieving immediate profit levels without causing economic harm or shortcomings in the future. This is achieved by structuring strategic decision-making processes in a manner commensurate with market size (Zhang & Chan, 2020:10).

B- The Environmental Dimension: The environmental dimension reflects a general culture encompassing all aspects of the organization's performance, from inputs and processes to outputs, all according to standards that are environmentally friendly and do not inherently harm the general environment (Kurnia & Widigdo, 2021:147).

C- The Social Dimension: The social dimension, in its general framework, highlights the role that any organization must play within its surrounding environment, which provides it with the foundations for its existence and grants it the right to continue. Societies that provide an organization with human resources and acquire its outputs at specified prices—these are the very elements that compel the organization to play a positive role and require its management to strive to raise the standard of living in its various aspects to higher levels (Mohamed, 2021:342) / (Fischev et al., 2020:15). Researchers believe that working according to the strategic sustainability approach in the Iraqi hotel industry is a situation that everyone must adopt as a systematic and scientific method, especially given that the concept of sustainability is no longer merely a secondary or supplementary aspect adopted by organizations operating in societies described as advanced, but rather an obligation for all organizations, particularly with its rigorous nature that has become a fundamental characteristic in many global trends of interested countries and organizations. Therefore, working according to this approach presents Iraqi hotel management with a challenge that begins primarily with achieving a genuine understanding and disseminating the culture of strategic sustainability in all aspects of Iraqi hotel performance, especially with the openness that these organizations are witnessing and their desire to engage with Arab and international tourism and hotel organizations and events.

Section Three

Fieldwork Aspect

Preliminary Data Analysis

This section focuses on the preliminary steps for the statistical analysis of the current research.

It will include coding the main variables and sub-dimensions, as well as examining the data

collected from the study sample of (65) individuals to ensure its conformity with the normal distribution. Tests will also be conducted to guarantee the reliability and validity of the measurement instrument used to collect this data, using the software programs (SmartPLS v.4) and (SPSS v.26), as follows:

First: Coding the Scale Items

Coding the main variables and sub-dimensions is one of the fundamental pillars of statistical analysis. This process is essential to facilitate the entry and processing of the study data using specialized statistical software. The following outlines the steps of the coding process:

Table (3) Coding of Main Variables and Sub-Dimensions

The variable- dimension	Symbolic
Independent variable: Blockchain Technology	BLCT
Decentralization	DEC
Transparency	TRAN
Tracking	TRAC
Dependent variable: Strategic Sustainability	SSUT
Economic dimension	ECD
Environmental dimension	END
Social dimension	SOD

Source: By Authors

Second: Validity and Reliability Tests

The researchers will conduct face validity tests for the research scale based on the opinions of expert reviewers. Content validity will be verified by calculating the internal consistency coefficient (Cronbach's alpha) to ensure the scale's reliability. These tests were conducted as follows:

1. Face Validity:

To ensure the face validity of the research instrument, the researchers presented the questionnaire to a group of eight experts (reviewers) to verify the clarity of the questionnaire items and their relevance to the main and sub-variables. Based on the reviewers' comments and recommendations, the researcher made the necessary revisions to finalize the questionnaire, which was then distributed to the study sample.

2. Scale Reliability Test: After verifying the face and construct validity of the research instrument, it was necessary to test the scale's reliability to ensure the consistency of its items with the responses obtained, i.e., to verify the scale's internal consistency. This was achieved by calculating the reliability coefficient using Cronbach's alpha, as shown in Table (4).

Table (4) Cronbach's alpha coefficients for the study scale

The variable- dimension	symbolic	Cronbach's alpha coefficient
Independent variable: Blockchain Technology	BLCT	.8190
Decentralization	DEC	.7400
Transparency	TRAN	.7590
Tracking	TRAC	.7320

Dependent variable: Strategic Sustainability	SSUT	0.857
Economic dimension	ECD	.7450
Environmental dimension	END	.7170
Social dimension	SOD	.7340

Source: Prepared by the researchers using SPSS version 26 statistical software.

Based on the results in Table (4), it is evident that the study scale, with all its main and sub-variables, achieved a suitable level of internal consistency. The reliability coefficient values ranged between (0.717) and (0.857), all exceeding the minimum acceptable value of (0.70), as indicated by Sekaran and Bougie (2016).

Descriptive Analysis of Research Variables

Descriptive analysis is a fundamental tool for understanding the nature of the data and its distribution within the research population. It allows the researcher to observe the extent of the spread of the variables addressed in the research within the target population. This analysis relies primarily on two key indicators: the arithmetic mean, which reflects the general trend of the data and indicates the central values, and the standard deviation, which shows the degree of variance or dispersion around the mean. This helps in identifying the degree of similarity or disparity in the responses among the sample members. Through this analysis, the researcher can identify general trends in the studied variables and derive initial indicators about respondents' behavior and perceptions. This contributes to establishing a solid foundation for subsequent analytical steps, including testing the relationships between variables and evaluating the research hypotheses. The results, specifically the means and standard deviations for each research variable, are then reviewed as follows:

1- Descriptive Analysis of the Blockchain Technology Variable

Using SPSS version 27, the results of the descriptive analysis of the Blockchain Technology variable were obtained, as shown in Table (5) below.

Table (5) Descriptive Analysis of the Blockchain Technology Variable

Variable	dimension	Item code	mean	Standard deviation	Coefficient of variation %CV	Relative importance % e
Blockchain Technology	Decentralization	DEC1	3.5802	0.94066	26.27%	71.60%
	Decentralization	DEC2	3.5275	1.01404	28.74%	70.55%

	Decentralization	DEC3	3.3959	1.02191	30.08%	67.92%
	Transparency	TRAN 1	3.2512	1.03186	31.74%	65.02%
	Transparency	TRAN 2	3.4819	1.00257	28.80%	69.64%
	Transparency	TRAN 3	3.3038	1.05161	31.82%	66.08%
	Tracking	TRAC 1	3.4617	1.00314	28.98%	69.23%
	Tracking	TRAC 2	3.3696	1.02421	30.40%	67.39%
	Tracking	TRAC 3	3.4826	0.98209	28.20%	69.65%
			3.450755	0.994633	29.45%	68.56%

Source: SPSS V.27 output

The statistical results for the blockchain technology variable show that the respondents provided moderately positive evaluations, with arithmetic means ranging from 3.25 to 3.58, a value higher than the theoretical mean (3). This indicates a moderate adoption of blockchain concepts or an acceptable understanding of their importance within the organization. The relative importance, ranging from 65% to 72%, reflects the respondents' perception of blockchain technology as having a moderate to high degree of importance, with limited variation between items.

The coefficients of variation ranged from 26% to 31%, values within the moderate dispersion level. This indicates that while respondents' opinions are not entirely identical, they are sufficiently similar to suggest that the overall trend toward adopting blockchain technology within the organization is clear and relatively consistent.

The results indicate that the item with the highest mean (3.5802) and lowest coefficient of variation (26.27%) represents the most stable and agreed-upon aspect among respondents, demonstrating a strong understanding of blockchain-related practices. Conversely, items with the highest dispersion ($CV \approx 31\%$) may reflect variations in respondents' understanding of blockchain technology's practical applications or differences in their level of exposure to or interaction with it in real-world situations.

Overall, the results indicate that blockchain technology has a reasonable presence within the organization, but it still requires further promotion, whether in terms of disseminating knowledge about its applications, training employees on its use, or clarifying its role in improving organizational processes. The moderate level of dispersion also suggests an opportunity to improve awareness and knowledge consistency regarding the technology among the sample, which will increase its actual adoption in the future.

2- Descriptive Analysis of the Strategic Sustainability Variable

Using SPSS version 27, the results of the descriptive analysis of the strategic sustainability variable were obtained, as shown in Table (6). Table (6) Descriptive Analysis of the Strategic Sustainability Variable

Variable	dimension	Item code	mean	Standard deviation	Coefficient of variation %CV	Relative importance % e
Strategic Sustainability	Economic dimension	3.4977	3.5802	1.15796	33.10%	69.95%
	Economic dimension	3.2872	3.5275	1.20713	36.74%	65.74%
	Economic dimension	3.3135	3.3959	1.30303	39.33%	66.27%
	Environmental dimension	3.6425	3.2512	1.00501	27.59%	72.85%
	Environmental dimension	3.3662	3.4819	1.16197	34.52%	67.32%
	Environmental dimension	3.7609	3.3038	0.98175	26.11%	75.22%
	Social dimension	3.603	3.4617	0.96364	26.74%	72.06%
	Social dimension	3.7477	3.3696	1.07259	28.63%	74.95%
	Social dimension	3.5898	3.4826	0.98921	27.56%	71.80%
			3.450755	1.031684	31.15%	70.68%

Source: SPSS V.27 output

The descriptive statistics table for the strategic sustainability variable reflects a positive evaluation level by the sample, with arithmetic means ranging from 3.2872 to 3.7609, values higher than the theoretical mean (3). This indicates an acceptable to good understanding of the importance of strategic sustainability practices within the organization. The relative importance, ranging from 65.74% to 75.22%, reflects the respondents' awareness of the importance of these practices, which is considered moderate to high.

The coefficients of variation ranged from 26.11% to 39.33%, indicating moderate dispersion in respondents' opinions regarding some items. The highest coefficient of variation (39.33%) indicates an item with greater variability in evaluations, possibly reflecting differences in the level of application or understanding of this item among employees. The lowest coefficient of variation (26.11%) reflects relative agreement among respondents regarding the importance of this item and the stability of their evaluation of it.

Overall, the results show that the strategic sustainability variable is well-received, and most of its dimensions are clearly important in promoting sustainable organizational performance. The results also indicate some gaps in the understanding or application of certain practices, necessitating increased awareness, standardized policies and procedures, and employee training to ensure consistency and integration of strategic sustainability practices within the organization.

Structural Model Evaluation and Hypothesis Testing

This stage involves calculating the path coefficients, which help us understand how variables directly and indirectly influence each other. Additionally, we calculate the coefficient of determination (R^2), which indicates how well the model explains the changes occurring in the dependent variables.

First: Testing the Correlation Hypotheses

The first main hypothesis states:

There is a significant correlation between blockchain technology and strategic sustainability. Regarding the validation of this hypothesis, Table (7), which pertains to the correlation matrix, shows a significant correlation between blockchain technology and strategic sustainability. The correlation coefficient between them reached (0.828) at a significance level of (0.01). This supports the first main hypothesis. Three sub-hypotheses stem from this main hypothesis:

.1 There is a significant correlation between decentralization and strategic sustainability: Table (7), which pertains to the correlation matrix, shows a significant correlation between decentralization and strategic sustainability. The correlation coefficient between them reached (0.762) at a significance level of (0.01). This supports the first sub-hypothesis. 2.

Significant Correlation Between Transparency and Strategic Sustainability:

Table (7), the correlation matrix, shows a significant correlation between transparency and strategic sustainability. The correlation coefficient between them reached (0.711) at a significance level of (0.01), which supports the second sub-hypothesis.

.3 Significant Correlation Between Traceability and Strategic Sustainability:

Table (7), the correlation matrix, shows a significant correlation between traceability and strategic sustainability. The correlation coefficient between them reached (0.738) at a significance level of (0.01), which supports the third sub-hypothesis.

Table (7): Correlation Matrix Between Blockchain Technology and its Dimensions with Strategic Sustainability

		OP
BLCT	Pearson Correlation	.828**
	Sig. (2-tailed)	.000
	N	70
DEC	Pearson Correlation	.762**
	Sig. (2-tailed)	.000
	N	70
TRAN	Pearson Correlation	.711**
	Sig. (2-tailed)	.000
	N	70
TRAC	Pearson Correlation	.738**
	Sig. (2-tailed)	.000
	N	102
**. Correlation is significant at the 0.01 level (2-tailed).		

Source: SPSS v.20 results.

Second: Testing the Second Main Hypothesis

The second main hypothesis (H2) states that there is an impact relationship between blockchain technology and strategic sustainability. To test this hypothesis, the structural model shown in .(8) Figure (2) was constructed, and its results are presented in Table

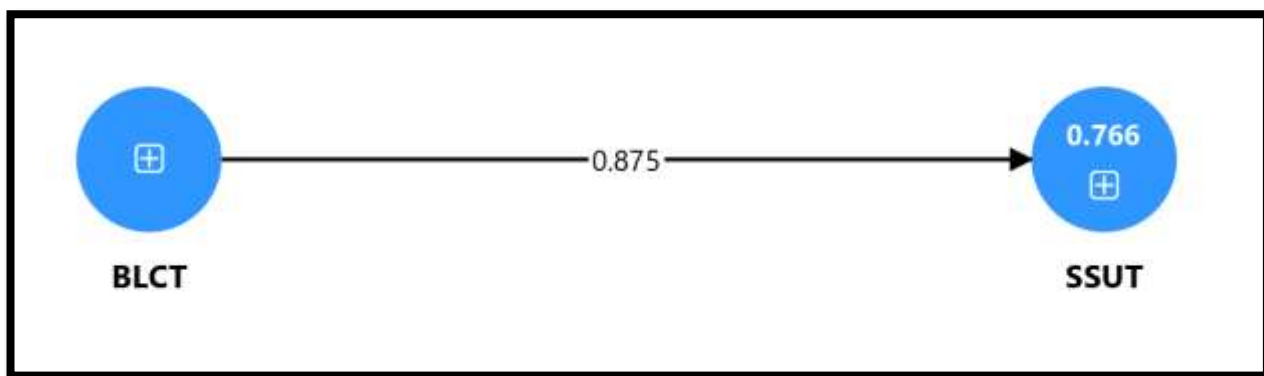


Figure (2) Structural model for testing the second main hypothesis

Source: SmartPLS program outputs

Table (8) Results of evaluating the structural model for the first main hypothesis

SRMR	hypothesis	path	Path coefficient	p Value	t Value	Results	f ²	R ²
0.06	H2	BLCT → SSUT	0.875	0.000	10.009	acceptance	0.72	0.766

Source: SmartPLS Program Outputs

Table (8) shows the results of the structural model evaluation for the second main hypothesis. The SRMR criterion, with a value of (0.041), demonstrated compliance with the required conformity quality standard. The path coefficient was (0.875), and the calculated (T) value from the SmartPLS program results was (10.009), a statistically significant value at the (0.000) level, indicating a confidence level of (99%). Since this level is higher than the confidence level adopted in the study (95%), the hypothesis was accepted. To further confirm this, when comparing the calculated (T) value with the tabulated (T) value of (1.96), it becomes clear that the calculated (T) value is greater than the tabulated value, thus supporting the acceptance of the hypothesis. The results indicate an inverse relationship between blockchain technology and strategic sustainability, meaning that blockchain technology has a significant impact on achieving strategic sustainability. In addition, the coefficient of determination (R^2) was 0.766, meaning that the independent variable explains 76% of the dependent variable, while the remaining percentage represents other factors not considered in the model.

Third: Testing the Sub-Hypotheses of the Second Main Hypothesis

The sub-hypotheses of the second main hypothesis (H2-1, H2-2, H2-3) state the following:

H2-1: There is an effect of decentralization on strategic sustainability.

H2-2: There is an effect of transparency on strategic sustainability.

H2-3: There is an effect of traceability on strategic sustainability. To test these hypotheses, the structural model was constructed, as shown in Figure 3. Table 9 presents the results of the structural model evaluation for these hypotheses.

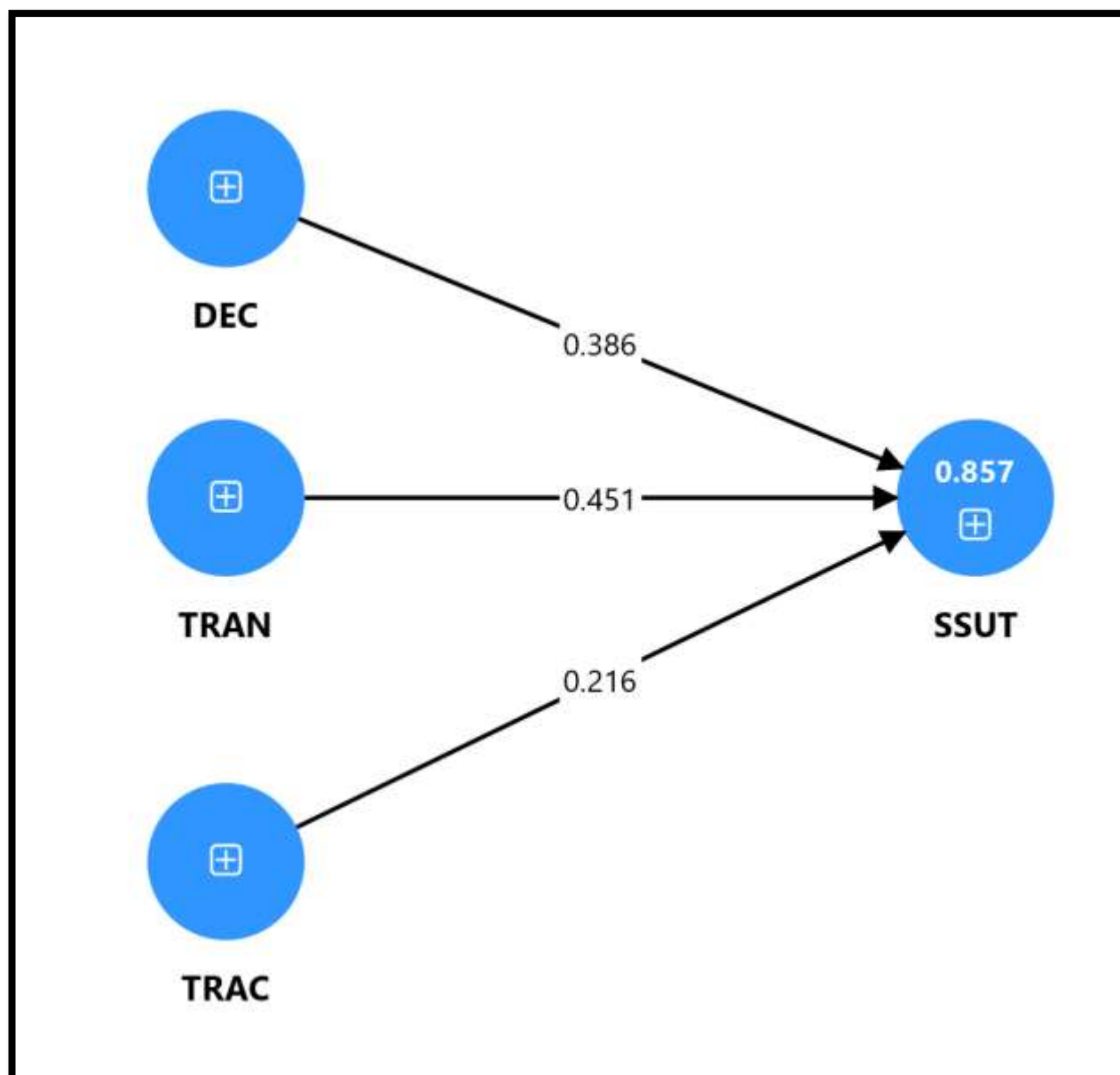


Figure (3) The structural model for testing the sub-hypotheses derived from the second main hypothesis

Table (9) Results of evaluating the structural model for the sub-hypotheses derived from the second main hypothesis

SRMR	hypothesis	path	Path coefficient	p Value	t Value	Results	f ²	R ²
0.047	H2-1	DEC → OP	0.386	0.000	5.031	acceptance	0.79	0.857
	H2-2	TRAN → OP	0.451	0.000	6.485	acceptance	0.85	0.857
	H2-3	TRAC → OP	0.216	0.000	3.972	acceptance	0.89	0.857

Source: SmartPLS Program Outputs

Table (9) shows the results of the structural model evaluation of the sub-hypotheses derived from the first main hypothesis. The SRMR criterion, with a value of (0.047), demonstrated that it met the required standard for fit quality. The path coefficients for the sub-hypotheses (H1-1, H1-2, H1-3) were (0.216, 0.451, 0.386), all of which were statistically significant. The calculated t-value from the SmartPLS program results was (3.002), which is statistically significant at the (0.000) level, indicating a confidence level of (99%). Since this level is higher than the confidence level adopted in the study (95%), the sub-hypotheses derived from the first main hypothesis were accepted. To confirm this, when comparing the calculated t-value with the tabulated t-value of 1.96, it becomes clear that the calculated t-value is greater than the tabulated value, thus supporting the acceptance of the sub-hypotheses. Furthermore, the coefficient of determination (R^2) was 0.857, meaning that the dimensions of the independent variable explain 85% of the dependent variable, while the remaining percentage represents other factors not considered in the model.

Section Four

Conclusions and Recommendations

First: Conclusions

- 1- It was revealed through statistical analysis that there is a reasonable amount of correspondence between the blockchain and the digital values that hotel workers benefit from.
- 2- Statistical work showed the existence of a set of data stored within digital blocks that has a high degree of security and encryption that cannot be stolen.
- 3- The results of the statistical analysis showed that the strategic sustainability variable is well accepted, and that most of its dimensions are clearly important in enhancing sustainable institutional performance. There are some gaps in understanding or applying some practices, which calls for enhancing awareness, standardizing policies and procedures, and training employees to ensure consistency and integration of strategic sustainability practices within the organization.
- 4- The results of the statistical analysis showed that there is a direct influence relationship between Blockchain technology and strategic sustainability, which means that Blockchain technology has a significant impact on achieving strategic sustainability, which means that the use of Blockchain contributes to influencing the level of achieving sustainability, whether by enhancing transparency, improving the efficiency of operations, or reducing waste, which makes the technology one of the possible factors to support the institutional sustainability efforts of hotel organizations.

Second: Recommendations and Proposals

A- Recommendations

- 1- The senior leaders in the hotel sector must adopt a set of modern blockchain technologies to provide the skilled workforce and financial capabilities necessary to develop the hotel business.
- 2- It is necessary in the hotel business to use various media for the purpose of revealing blockchain technology to benefit from it in all aspects of the work within the hotel organization.
- 3- The need to establish organized work methods and clear procedures to be applied to maintain strategic sustainability in all hotel corridors.
- 4- The highest authority in hotel management must develop various programs of goals and objectives that it aims to achieve and according to the announced timings. This will lead to placing the hotel organization in the ranks of competitive power in the tourism market.

B. Recommendations: The most important proposals can be summarized in the points below

A-Using a huge amount of information in order to achieve strategic superiority in the hotel field

B- Relying on modern technology represented by artificial intelligence to achieve strategic compatibility in hotel organizations.

references

First: Arabic references

1- جابر، أشرف (2021) البلوك تشين وحقوق المؤلف نحو حماية رقمية للمصنفات الرقمية، بحث منشور في مجلة كلية القانون الكويتية العالمية، السنة الثامنة، المجلد 2، العدد 9، الكويت.

Second: Foreign references

2- Dunga, N. V. (2019). Blockchain Technology and The Future of Accounting in Businesses. International Conference on Finance, Accounting and Auditing (ICFAA 2019) ,November 8th, 2019Hanoi City, Vietnam.

3-Almahirah, M. S. Z. (2021) The Effect of Smart Blockchain Contracts on the Financial Services Industry in the Banking Sector in Jordan. Ikogretim Online Elementary Education Online.



- 4- Vadapalli, D. R. (2020). Blockchain fundamentals text book .
- 5- Shakyawar, M., Shaakya, K.(2024), Using Artificial Intelligence to Improve Banking Services in India: A Review and Prospects for the Future, International Journal for Research in Applied Science and Engineering Technology (IJRASET), Volume 12 Issue IV Apr .
- 6- Tamboli, F., (2024), Blockchain Technology: A Comprehensive Overview, Applications, and Future Prospects, Volume 4, Issue 2, March, International Journal of Advanced Research in Science, Communication and Technology (IJARSCT).
- 7- George, E., Idemudia, C., Ige, A.,(2024), Blockchain technology in financial services: enhancing security, transparency, and efficiency in transactions and services, Open Access Research Journal of Multidisciplinary Studies, 08(01), 026–035, <https://doi.org/10.53022/oarjms.2024.8.1.0042>.
- 8-Bawono, S. & Topcu, G.,(2022), Banking Sector and Blockchain Technology, In Book: Blockchain in Finance, Marketing and others, Edition: 1, Chapter: 2, Publisher: NOBEL Akademik Yayıncılık, <https://www.researchgate.net/publication/364640266>.
- 9- Carmona, A., Pulido, S., & Orellana, D. (2019). Trading blockchain y criptoconomía: La punta del iceberg. Uno Editorial. Retrieved from: <https://doi.org/10.31819/9783964564405-toc>.
- 10- Crosby, M., Nachiappan, Pattanayak, P., Verma, S., & Kalyanaraman, V. (2016). BLOCKCHAIN TECHNOLOGY: BEYOND BITCOIN. Applied Innovation Institute. <https://www.appliedinnovationinstitute.org/blockchain-technology-beyond-bitcoin/> .
- 11- Elommal, N., & Manita, R. (2022). How Blockchain Innovation could affect the Audit Profession: A Qualitative Study. Journal of Innovation Economics Management, 37(1), 37-63 .
- 12- Shrestha, R., Bajracharya, R., Shrestha, A. P., & Nam, S. Y. (2019). A new type of blockchain for secure message exchange in VANET. Digital Communications and Networks. Retrieved from: <https://doi.org/10.1016/j.dcan.2019.04.003> .
- 13-Lind green, (2013), ‘Corporate Social Responsibility’, International Journal of Management Reviews, DOI: 10.1111/j.1468-2370.2009.00277.x pp. 2-7, Available at.
- 14-Emamisaleh, K., & Rahmani, K., (2017), Sustainable Supply Chain in Food Industries: Drivers and Strategic Sustainability Orientation. Cogent Business & Management, 4(1), 1345296.
- 15-Arora, A., Arora, A. S., Sivakumar, K., & Burke, G. (2020). Strategic sustainable purchasing, environmental collaboration, and organizational sustainability performance: the moderating role of supply base size. Supply Chain Management: An International Journal.

- 16-Malik, S. Y., Cao, Y., Mughal, Y. H., Kundi, G. M., Mughal, M. H., & Ramayah, T. (2020). Pathways towards sustainability in organizations: Empirical evidence on the role of green human resource management practices and green intellectual capital. *Sustainability*, 12(8).
- 17- Zhang, S., & Chan, E. S. (2020). A modernism-based interpretation of sustainable tourism. *International Journal of Tourism Research*, 22(2).
- 18-Fischer, D., Brettel, M., & Mauer, R. (2020). The three dimensions of sustainability: a delicate balancing act for entrepreneurs made more complex by stakeholder expectations. *Journal of Business Ethics*, 163(1).
- 19-Kurnia, C., & Widigdo, A. M. N. (2021). Effect of Work-Life Balance, Job Demand, Job Insecurity on Employee Performance at PT Jaya Lautan Global with Employee Well-Being as a Mediation Variable. *European Journal of Business and Management Research*, 6(5), The Islamic University College Journal ,No. 71 Part: 2.
- 20- Mahmood, Z. K., & Adel–Al-Jader, S. (2021). Organizational Virtuousness and their Impact in Organizational Immune System: Analytical Research. *REVISTA GEINTEC-GESTAO INOVACAO E TECNOLOGIAS*, 11(3),
- 21- Sekaran, U. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.