Studying the Impact of Internet of Things Technology on Organizational Performance, Taking into Account the Role of Knowledge Creation Intermediaries (Case Study: Bank of Yemen and Kuwait)

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***Abstract*—** The study aimed to study the impact of the Internet of Things on organizational performance, taking into account its role in knowledge creation. The research method was applied in terms of purpose and the descriptive correlation approach. The banking statistical population includes the statistical population of the Bank of Yemen and Kuwait in the capital, Sana'a, consisting of 1,050 individuals. The sample size of 284 individuals was selected using a simple random sampling method and measured using a questionnaire. Regarding the results of this study, the questionnaire results were evaluated using Cronbach's alpha coefficient and the validity coefficient, and their reliability and validity were confirmed. The structural equation model data also indicated a good fit for the model. The results showed that the Bank of Yemen and Kuwait succeeded in increasing its performance through the use of the Internet of Things. Furthermore, knowledge creation has a positive and significant impact on the relationship between the Internet of Things and performance.

Keywords— Internet of Things, Knowledge Creation, Organizational Performance, Bank of Yemen and Kuwait, Economy, Sana'a

الملخص

هدفت الدراسة إلى دراسة تأثير إنترنت الأشياء على الأداء التنظيمي، مع الأخذ في الاعتبار دوره في توليد المعرفة. وطبق منهج البحث من حيث الغرض والمنهج الارتباطي الوصفي. وشمل المجتمع الإحصائي المصرفي المجتمع الإحصائي لبنك اليمن والكويت في العاصمة صنعاء، والبالغ 1050 فردًا. واختيرت عينة الدراسة، والبالغة 284 فردًا، بطريقة العينة العشوائية البسيطة، وتم قياسها باستخدام استبيان. وفيما يتعلق بنتائج هذه الدراسة، فقد تم تقييم نتائج الاستبيان باستخدام معامل ألفا كرونباخ ومعامل الصدق، وتم التأكد من موثوقيتها وصلاحيتها. كما أشارت بيانات نموذج المعادلة الهيكلية إلى توافق جيد مع النموذج. وأظهرت النتائج أن بنك اليمن والكويت نجح في تحسين أدائه من خلال استخدام إنترنت الأشياء. علاوة على ذلك، فإن توليد المعرفة له تأثير إيجابي وهام على العلاقة بين إنترنت الأشياء والأداء.

الكلمات المفتاحية: إنترنت الأشياء، توليد المعرفة، الأداء التنظيمي، بنك اليمن والكويت، الاقتصاد، صنعاء

I. INTRODUCTION

With the rapid and continuous development of the internet and its various uses, it has become indispensable in many fields, including communications and information technology. Through it, the world has become a global village. Recently, remote work has played a major role in developing businesses and activities within companies and institutions. In the recent past, the Internet of Things (IoT) has emerged (Gibsonn, 2023). It consists of a network of smart devices that connect to each other and exchange data and information with other devices via the internet. This has made controlling the operation of these devices possible via smart, remote-operating technical programs. The Internet of Things (IoT) is a rapid communication process between the user (human element) and objects (devices) via specialized digital programs and technologies connected to the internet. This aims to facilitate the operation of these devices, thus simplifying daily work (Suplabb et al.., 2024).

The Internet of Things can be applied to intelligently control the operation of various household appliances, as well as security and surveillance devices, various means of transportation, and machinery and equipment in factories.

This results in efficient data exchange without direct contact between these devices, equipment, and humans. The Internet of Things is expected to develop rapidly in the coming years, adding more areas of use in more active and effective ways (Andreasrr & Christian, 2023). The use of the Internet of Things may support managers in companies, commercial, and industrial institutions, helping them make various administrative decisions more quickly and accurately. It also helps improve the level of service provided to customers hile increasing productivity, reducing operating expenses, reducing work times, and reducing waiting times between various production processes. This also improves the work environment and develops the ability to manage it without direct contact with these objects (Losoo et al.., 2024).

Knowledge is one of the most important resources sought by today's organizations, including information institutions, which have begun to realize the importance of adopting the concept of knowledge management. This is achieved through the role played by the human element working in these institutions in activating this knowledge through the processes associated with its production, organization, and sharing, which contributes to improving their activities and services. Information and communications technologies (ICTs), along with various Internet applications, play a vital role in knowledge management. Therefore, information organizations must keep pace with these changes and respond to the changing and evolving conditions witnessed in the ICT and Internet sectors. Knowledge management benefits from computer applications, thus leveraging communication services and communication with other devices t a time when various types of devices are becoming interconnected (Chengqiann, 2024).

This has become increasingly important in information organizations with the emergence of Internet of Things (IoT) applications, as these applications offer numerous benefits. They are concerned with the evolution of technology, as the number of devices connected to their operations has increased. It is worth noting that information organizations, including libraries, have been impacted by technological advancements and the diverse uses of the Internet over the past two decades. This has created a platform for leveraging the Internet of Things, including knowledge management activities. These aspects inspire optimism regarding the importance of envisioning the future of various information organizations and how they will look in the coming years (Seemaa et al.., 2022). There is no doubt that new and advanced technologies will impact the way knowledge is managed within organizations in the context of the Internet of Things, enhancing knowledge-related activities. From this perspective, this study discusses the intellectual output published in the Arab world and internationally on the areas of benefiting from Internet of Things applications in supporting knowledge management activities in information institutions (YANN et al., 2023).

The banking industry is one of the largest and most diverse in the world. The use of the Internet of Things (IoT) in this industry has enabled the provision of a wide range of banking products and services to customers. New digital innovations, including the Internet of Things (IoT), have created a competitive market for banks, and banks need to adapt their practices accordingly. The increase in online activities is attributed to behaviors such as increased product understanding, product pricing, internet familiarity, time, the rapid pace of technological change, and purchase value (Chengqian, 2024). Banks and startups are analyzing information gathered from the Internet of Things (IoT) to make decisions, given the growing desire of employees and customers to use new innovations (IoT-enabled devices). In fact, banks are working to create innovative products and services, and innovative uses of the IoT to transform their business models will ultimately lead to increased revenues. In this regard, Cisco estimated in 2013 that IoT technology revenues would reach $3.7 billion by 2020 (Loso et al.., 2024).

The Bank of Yemen and Kuwait uses various tools such as wireless networks, magnetic cards, mobile banking, websites, email banking, and customer relationship management systems. But how much of the data generated by the Internet of Things (IoT) leads to knowledge creation, and how much of it leads to increased revenue, reduced costs, increased communications, improved customer experience, reduced risk, smart resource allocation or efficient processes, assisted decision-making, market segmentation, information transparency, and the provision of new services and products? The current research seeks to shed light on, analyze, and analyze issues related to the use of IoT to achieve competitive advantage. The main research question is how to leverage IoT to improve performance. To what extent can knowledge creation affect this relationship?

THE FOLLOWING RESEARCH SUGGESTS THAT THE RELATIONSHIP BETWEEN IOT AND PERFORMANCE, TAKING INTO ACCOUNT KNOWLEDGE CREATION, HAS NOT BEEN STUDIED AND EXAMINED IN YEMENI BANKS:

Reem et al.. (2024),, in their study's objective,, aimm to analyze the supply chain integration antecedents required to enable supply chain performance, competitive advantages, and organizationalal performance. Although prior research

indicates that the Internet of Things (IoT), as one of the enabling technologies, plays an instrumental role in enhancing organizationalal performance through supply chain integration, no empirical tests have been performed before. Therefore, this study examines the direct and indirect effects of the IoT's impact on organizational performance through different mediating variables—supply chain integration, supply chain performance, and competitive advantages. This study uses survey data from Saudi Arabian companies that adopted IoT-based applications in their supply chains. The results from partial least squares structural equation modeling indicate that the benefits and challenges of IoT adoption significantly affect supply chain integration.

Vermesan and Friess (2024) addressed the Internet of Things and innovation in a single strategy. Their findings showed that the IoT has been recognized as a strategic innovation.

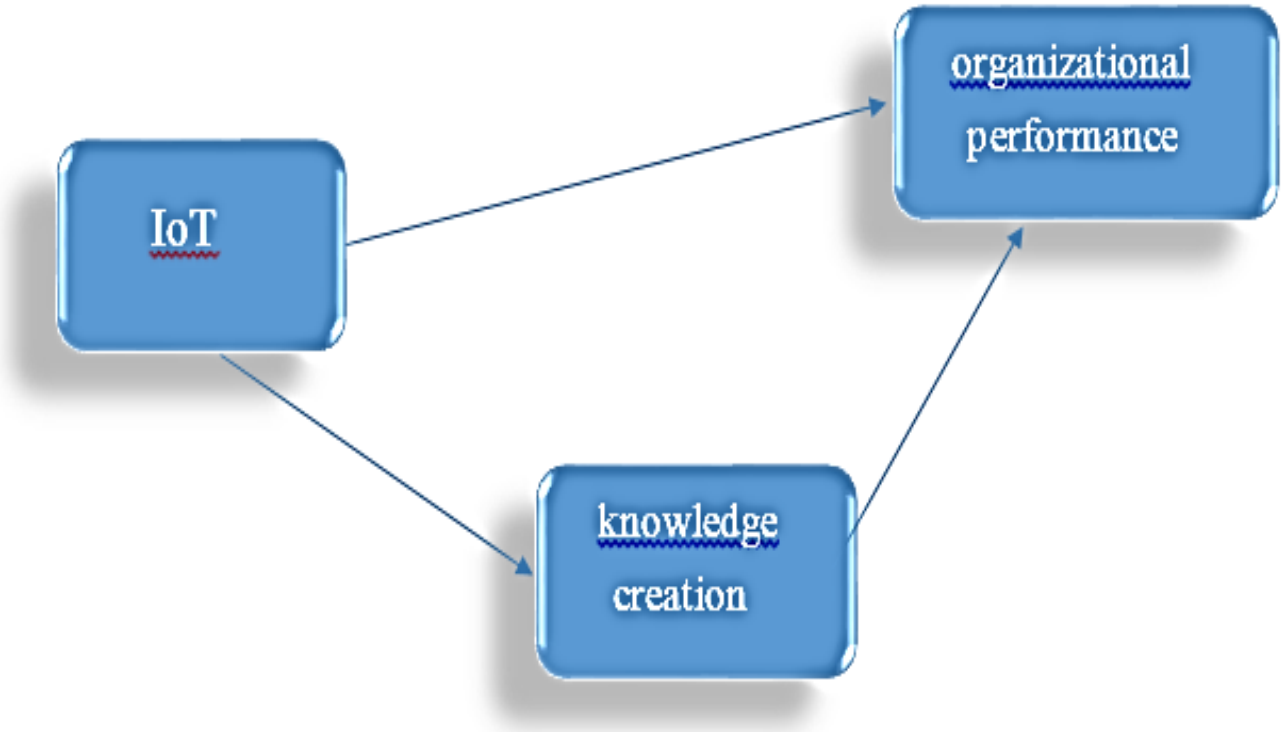
Gibson (2023) The object of his research is the implementation of the Internetrnet of Things (IoT) and its effect on organizational performance for small and medium enterprises (SMEs) in emerging economies. SMEs in emerging economies are faced with low levelss of performance due to technological constraintss, inadequate skilled human resourcess, lower entrepreneurial capabilities and management systems, the deficiency of available information, inadequate use of information technology, poor-quality products,, and a lackck of strategic long-term plans..

Benson (2023(2023): The study was carried out to assess the role of the Internetrnet of Things in improving organizational efficiency at Arusha Urban Water Supply and Sanitation Authority.The researcher used a case study design, where Arusha Urban Water Supply and Sanitation Authority was chosen because it it is a familiarar place to the researcher,, hence the easeease of getting required information. The researcher collected two types of data: the primary data and the secondary data. Primary data were collected through questionnairess, while secondary data were collected through documentary review. All data were analyzed and presented in tables and figures with the help of descriptive analysis under SPSS version 25. Study findings unveiled that the term "internet of things" is not well known in AUWSA, but the users are dependent on IoT and would prefer using advanced forms of IoT in the future. The study findings found that IoT has improved revenue collection, increased effectiveness, and reduced the managing costs.

Loso et al. (2024): This study investigates the impact of Internet of Things (IoT) adoption on operational efficiency and competitive advantage within the information technology (IT) industry in Indonesia. A quantitative research approach was employed, utilizing a cross-sectional survey design to collect primary data from 170 IT companies operating in Indonesia. Structural Equation Modeling (SEM) with the Partial Least Squares (PLS) algorithm was utilized to analyze the data and test the research hypotheses. The findings reveal that IoT adoption positively influences both operational efficiency and competitive advantage within the Indonesian IT industry. These results underscore the transformative potential of IoT technologies in enhancing organizational performance and strategic positioning in the digital era. The study contributes to the existing literature by providing empirical evidence on the benefits of IoT adoption in the context of the Indonesian IT industry, offering insights for policymakers, practitioners, and researchers seeking to harness the potential of IoT technologies for sustainable growth and innovation.

To formulate our current research model, we used the twelve questions of the IoT from the perspective of Atzuri, Lera, and Marabito (2020). Researchers such as Leonardo et al. (2022) and Al-Ghazali et al. (2022) have also emphasized the relationship between knowledge management and performance. On the other hand, Leonardo et al. (2022) and Al-Ghazali et al. (2022) have also emphasized the relationship between knowledge management and performance. On the other hand, Leonardo et al. (2022) and Vermessen and Freese (2024) demonstrated that the Internet of Things has an impact on organizational performance. This is despite the fact that the relationship between these three concepts was not studied simultaneously.

Consequently, the research model is depicted in Figure (1).



MAIN AND SUB-RESEARCH HYPOTHESES ACCORDING TO THE RESEARCH MODEL:

A. There is a statistically significant relationship between the Internet of Things (IoT) and organizational performance, with regard to knowledge creation, at the Bank of Yemen and Kuwait.
B. There is a relationship between the Internet of Things (IoT) and the performance of the Bank of Yemen and Kuwait.
C. There is a relationship between the Internet of Things (IoT) in data creation and knowledge creation at the Bank of Yemen and Kuwait.
D. There is a relationship between acquired knowledge and organizational performance at the Bank of Yemen and Kuwait.

II. RESEARCH METHODOLOGY

The current study is applied in its purpose and descriptive in its type. It was conducted in Sana'a Governorate over a cross-sectional period using quantitative data. Data were obtained through a questionnaire. To verify the validity of the questionnaire, the opinions of university professors were used, and the reliability of the questionnaire was obtained questionnaires and employee opinion polls. To assess the reliability of the questionnaire, Cronbach's alpha test was conducted, and the results of this test showed that the questionnaire had adequate reliability, with the overall reliability of the questionnaire reaching 0.91. The content validity and face validity of the questionnaire were confirmed using Cronbach's alpha. The statistical population for this study consists of all employees of the Bank of Yemen and Kuwait in Sana'a Governorate, totaling 1,050 individuals. Considering the statistical population, based on Cochran's formula, 281 individuals were selected for the sample using a simple random method. Data were collected through

by experts, and the construct validity was determined using the confirmatory factor analysis model. In confirmatory factor analysis, the researcher seeks to determine whether the research questions are able to measure the variables of interest. In Table 1, the reliability of the current study is divided according to the dimensions.

Table 1. Reliability and validity coefficients of the questionnaire

Alpha test cronbach,s	Bar Factorial	Factors	Dimensions
0,71	0,61	Establishing connections between branches via ADSL or wireless internet access	**Internet of things**
	0,65	Providing customer account books or cards with barcodes	
	0,65	Equipping ATMs with barcode readers to receive receipts	
	0,58	Customers can access an internet-based mobile wallet	
	0,58	Banking transactions through CORE BANK's mobile portals	
	0,64	Online notifications when using online banking services	
	0,51	Communications via the bank's website	
	0,57	Speeding up installment payments and quick money transfers based on mobile applications	
	0,56	Mobile banking, websites, and web kiosks by customers	
	0,60	Alerts related to environmental conditions (temperature, pressure, movement, etc.) for devices	
	0,56	Available at the branch in a timely manner (online). The central area will be notified. Improving heating, cooling, and lighting systems in branches and buildings to achieve greater control.	
	0,53	Customers locate branches using GPS devices.	
0,74	0,59	.Social media activity	**Performance from a Financial Perspective**
	0,62	Increasing average return on investment compared to other major competitors.	
	0,59	Increasing average productivity compared to other major competitors.	
0,80	0,86	Reducing unnecessary costs (e.g., operating cost savings, etc.) and lowering waste rates compared to other major competitors. Improving the quantity and quality of services compared to other competitors	**Operation from an Internal Perspective**
	0,68	Increasing research and development compared to other competitors	
	0,78	Increasing social responsibility compared to other competitors	
0,85	0,76	Increasing customer satisfaction compared to other competitors	**Performance from a Customer Perspective**
	0,82	Increasing customer loyalty compared to other competitors	
	0,81	Dealing with customer complaints compared to other competitors	
	0,59	Responding to customer requirements compared to other competitors	
0,74	0,62	Focusing on improving employee skills and knowledge	**Performance from a Growth and Learning Perspective**
	0,59	Focusing on increasing employee satisfaction	
	0,63	Focusing on the need to advance within the organization	
0,70	0,56	Gathering information via the intranet and website	**Creating Social Connections**
	0,87	Monitoring competitors and holding brainstorming sessions with them	
	0,77	Providing opportunities for employees to perform specialized and professional tasks	
0,70	0,46	Using examples to explain concepts in meetings and sessions	**External Accreditation**
	0,84	Holding meetings, discussions, and brainstorming	
	0,87	Importance of opinions and ideas that have not yet been implemented	
0,86	0,55	Focusing on project documentation and documentation	**composition**
	0,56	Planning projects and banking services based on management accounts and technical information	
	0,85	Discussing new concepts for expansion in banking services	
0,70	0,60	Share management visions and values and understand these visions through communication with others	**Internal acceditation**
	0,88	Focusing on improvement (identifying and modeling successful organizations) and testing them	
	0,89	Seeking and sharing experiences and ideas	

III. Results

To analyze the data and test the hypotheses, descriptive statistics (to analyze data collected from general questions or demographic (cognitive) characteristics) and inferential statistics (at the structural equation modeling level) were used in SPSS and Lisrel. The results of the analysis are then discussed. The first section is devoted to information about the statistical characteristics of the sample, as shown. Table 2 shows the status of the respondents according to the information obtained in the questionnaire. The results show that the highest participation rate was among men aged 31–35, with a bachelor's degree, 11–15 years of work experience, and in the job category of delivery worker. Regression analysis and structural equation modeling were also used in this study to statistically analyze the data obtained from the questionnaire and to evaluate and confirm the research hypotheses.

Table 2: Characteristics of the research sample

Demographic Variable	Branches	percentage
Gender	Men	95,8
	Women	4,2
Age Group	years 30-26	8,5
	years 35-31	37,3
	years 40-36	35,9
	Over 40 years	18,3
Education	Postgraduate Diploma	2,1
	Bachelor's Degree	56,7
	Master's Degree	38,9
	Doctorate	1,4
Employment History	years 5-1	3,2
	years 10-6	35,9
	years 15-11	39,4
	years 20-16	18
	years 25-21	2,5
	years and above 25	1,1
Job Category	Cashier	10.6
	Accountant	3,2
	Credits	3,9
	Branch Manager	7,4
		75

In the second section, inferential statistics is the branch of statistics that deals with estimating and testing hypotheses about population parameters from a sample. However, this cannot be certain, and these conclusions are probabilistic, so we must apply the principles of probability theory to express them. In fact, the ultimate goal of inferential statistics is to estimate population characteristics. In this section, various analyses were used to analyze the research data and draw statistical inferences. After describing the variables and responses obtained from the statistical survey, this section discusses the proposed hypotheses and the statistical tests used in the research.

From Table (3), it is clear that there is a statistically significant relationship between the research hypotheses. The relationship between the Internet of Things and performance (0.634), knowledge creation with the Internet of Things (0.661), and knowledge creation with performance (0.737) was positive and statistically significant, indicating that with the increase in the Internet of Things, we witness an improvement in knowledge creation and performance.

Table 3: Regression of the research variable

meaningful	R2	Result T	Non-consolidated transactions Consolidated transactions .			model	
			Beta	Standard Error	B		
000.		8,92		0,12	1,09	(Fixed) 1	Performance
000.	0,63	22,09	0,79	0,32	0,69	Things Internet of	
000.		12.042		1.09	1.313	(Fixed) 1	Knowledge Creation
000.	0,66	23,24	0,81	0,28	0,65	Internet of Things	
000.		1,61		0,12	0,20	(Fixed) 1	Knowledge Creation
000.	0,73	28,08	0,85	0,03	0,92	Performance	

In this study, path analysis was used to statistically analyze the data obtained from the questionnaire, and to evaluate and prove the research hypotheses. Path analysis is used to test causal models and requires developing a model in the form of a causal diagram that actually demonstrates causality. Path analysis, on the other hand, is a form of applied regression analysis that uses path diagrams to guide the problem by testing complex hypotheses. Path analysis is one of several statistical tests known as structural equation modeling. This method allows testing causal relationships between two or more variables, which may be independent or dependent, discrete or continuous, latent or explicit, and is used in a linear equation. Indices were also introduced to measure the model's fit, such as chi-square (an index of the difference between the model and the data), degrees of freedom, mean square error index, goodness-of-fit index, corrected goodness-of-fit index, normality index, and non-normality index.

Table 4: Research Model Fit Indices

Root Mean Square Error of Approximation (RMSEA)	Probability Value	df	Chi-Square	Factor
0,038	0.08213	154	251.19	Internet of Things
0,029	0.05367	81	153.64	Performance
0,031	0,0657	78	143.20	Knowledge Creation

Table 4 shows that the questions related to the Internet of Things, with a significant coefficient (0.08213), performance (0.05367), and knowledge creation (0.06571), which are greater than 0.05, were appropriate for measuring the research variables.

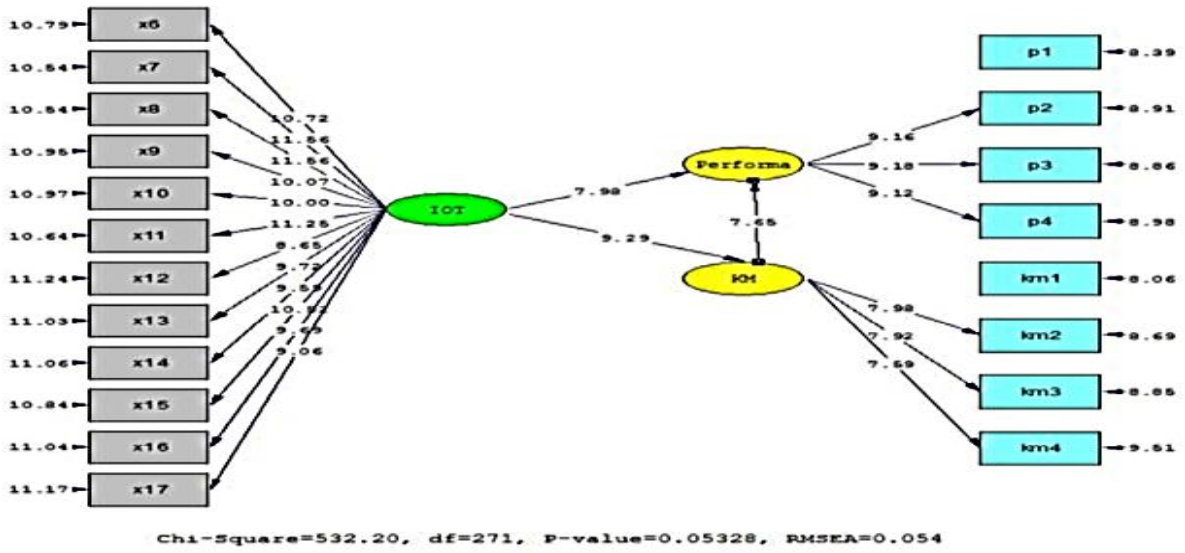


Figure 2: Structural Model with a Significant Coefficient

Figure 2 shows that the appropriate structural model is suitable for hypothesis testing, as 3 < (df/2x), so the χ^2 value is appropriate and low. The RMSEA value of 0.054 also indicates that the structural model is appropriate. In other words, the impact of the Internet of Things on performance was significant (7.98) and standardized (0.69). The Internet of Things also had an impact on knowledge creation with a significant coefficient (9.29) and standardized (0.73). Finally, the effect of knowledge creation on performance was found to have a significance coefficient of 7.65, and in the standard case, 0.64. This indicates a positive relationship between performance and knowledge creation. Therefore, knowledge creation is an influential variable that mediates the relationship between the Internet of Things and performance. Finally, the chi-square test of the model indicates a good fit to the conceptual model of the research. The quality-of-fit index (QFI) of 0.94, the adjusted QFI of 0.93, and the normalized QFI of 0.93 confirm the model's suitability.

Conclusions and Discussion

Today banks have many opportunities to increase their business due to the expansion of the Internet of Things, and they have the ability to develop and positively direct their performance through knowledge management.

This research attempts to clarify the relationship between the Internet of Things and performance, taking into account the mediators of knowledge creation.

The results show that the Internet of Things has led to the provision of mobile banking services for customers, resulting in increased customer convenience and satisfaction, reduced customer attendance at branches, and lowered bank operating costs. The results showed a relationship between the Internet of Things (IoT) and performance at the Bank of Yemen and Kuwait, with a correlation coefficient of 0.796. It can be argued that the use of IoT increases organizational performance. This is because the IoT offers numerous opportunities for banks. To increase performance resulting from the IoT, it is suggested to implement risk management and resource management due to the targeted applications. This should be taken into account in marketing and financial activities, as without a plan, the bank could incur significant costs. It is also suggested that before using IoT, issues related to providing better customer service should be considered. There is a statistically significant relationship between the IoT in data creation and knowledge creation at the Bank of Yemen and Kuwait, with a correlation coefficient of 0.813. It can be argued that the IoT drives knowledge creation. IoT data is used in banks to analyze customer behavior, products, and advertisements, leading to the formation of innovative behaviors. These findings are consistent with those of Vermesan & Fries (2022). It is suggested that the IoT Big Data strategy be used to cluster customers, launch rating networks, and recommender systems based on time (monthly, daily, weekly) and space (geographic location and GPS) to improve organizational performance and knowledge management inputs. Data from devices such as augmented reality and virtual screens for wearable devices (e.g., smartwatches) should also be used in future research, given the emergence of devices such as augmented reality and virtual screens for wearable devices (e.g., smartwatches).

There is a statistically significant relationship between knowledge creation and performance at the Bank of Yemen and Kuwait, with a correlation coefficient of 0.858. It can be argued that increased knowledge creation increases organizational performance. Higher employee education, coupled with the significant influence of the internet, has enabled employees to access and share various topics, ultimately leading to knowledge creation and improved employee performance.

The results of this study demonstrate that the IoT can be used to facilitate the delivery of better and more efficient customer services. We currently face challenges such as security and regulatory standards in the use of the Internet of Things, which should be considered in future research. It is also recommended that steps be taken to establish NFC as a payment gateway in banks. Furthermore, given the expansion of social media networks, it is recommended that this fundamental concept be considered in future research.

REFERENCES

Aishwarya Dash, Pushpesh Pant, S. P. Sarmah & M. K. Tiwari, (2024) : The impact of IoT on manufacturing firm performance: the moderating role of firm-level IoT commitment and expertise

Andreas Eigner and Christian Stary, (2023): The Role of Internet-of-Things for Service Transformation. Business & Information Systems Engineering, 6(4), 239-242. https://doi.org/10.1177/2158244023115928

Arora, S., Singha, K., & Sahney, S. (2017). Understanding consumer's showrooming behaviour: Extending the theory of planned behaviour. Asia Pacific Journal of Marketing and Logistics, 29(2), 409-431.

Benson James Lyimo, (2023): ROLE OF INTERNET OF THINGS IN IMPROVING ORGANIZATIONAL EFFICIENCY: A CASE OF ARUSHA URBAN WATER SUPPLY AND SANITATION AUTHORITY

Chengqian Jia1, (2024): The Role of AI, IoT, and MIS in Facilitating the Digital Transformation of Supply Chains. Proceedings of ICFTBA 2024 Workshop: Finance's Role in the Just Transition DOI: 10.54254/2754-1169/143/2024.GA18962

GibsonMtridzi,(2023):IMPLICATION OF INTERNET OF THINGS (IoT) ON ORGANIZATIONAL PERFORMANCE FOR SMEs IN EMERGING ECONOMIES - A SYSTEMATIC REVIEW.UDC 681.518:658 (045) JEL Classification: M15, M21 DOI: 10.15587/2706-5448.2023.292183

Jayavardhana,G. Rajkumar, B., Slaven,M. Marimuthu, P. (2023). Internet of Things (IoT): A vision, architectural elements, and future directions. Future Generation Computer Systems,Volum 29, Pages 1645-1660

Leandro Y,.Mano, L. Y., Faiçal, B. S., Nakamura, L. H., Gomes, P. H., (2022). Investigating the Role of Internet of Things (IoT) Sensors in Enhancing Construction Site Safety and Efficiency. Journal of business research, 68(7), 1426-1428

Loso Judijanto, Aris Triwiyatno & Sofyan Sofyan, (2024): The Influence of Internet of Things (IoT) on Operational Efficiency and Competitive Advantage in the Information Technology Industry in Indonesia. Vol. 1 No. 03 (2024): The Eastasouth Journal of Information System and Computer Science (ESISCS)

Loso Judijanto, Etika Purnamasari, Ade Suhara, Nanny Mayasari, Khamalud, (2024): The Role of IoT in Improving the Efficiency and Quality of Automated Production in Industry 4.0: A Bibliometric Review. West Science Interdisciplinary Studies Vol. 02, No. 10, October and 2024: pp. 1975-1984

Reem M. Mashat, Safinaz H. Abourokbah and Mohammad Asif Salam,)2024): Impact of Internet of Things Adoption on Organizational Performance: A Mediating Analysis of Supply Chain Integration, Performance, and Competitive Advantage. Department of Business Administration, King Abdulaziz University, Jeddah 21589, Saudi Arabiahttps://doi.org/10.3390/su16062250

Seema Sahai, Richa Goel, Parul Bajaj, Gurinder Singh, (2022): IoT and Its Role in Performance Enhancement in Business Organizations. Book Editor(s):Monika Mangla, Suneeta Satpathy, Bhagirathi Nayak, Sachi Nandan Mohanty First published: 19 March 2022 https://doi.org/10.1002/9781119769323.ch11

Suplab Kanti Podder, Debabrata Samanta, Blerta Prevalla Etemi, (2024): Impact of Internet of Things (IoT) applications on HR analytics and sustainable business practices in smart city. https://doi.org/10.1016/j.measen.2024.101296

Vermesan, O., & Friess, P. (Eds.). (2024). Internet of things-from research and innovation to market deployment (Vol. 29). Aalborg: River Publishers.

YAN M. LOPES, ROBERTO G. & MOORI. (2023) THE ROLE OF IoT iN THE RELATIONSHIP BETWEEN STRATEGIC LOGISTICS MANAGEMENT AND OPERATIONAL PERFORMANCE. RAM. Revista de Administração Mackenzie, vol. 22, no. 3, eRAMR210032, 2023 Editora Mackenzie; Universidade Presbiteriana Mackenzie