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# The relationship between accountants' knowledge of blockchain and their expectations of its importance to the accounting profession

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**Abstract**
This study seeks to explore the relationship between accountants' knowledge of blockchain technology and their expectations of its importance and impact on the accounting profession. The study's findings revealed that accountants possess moderate knowledge of blockchain technology and its various uses, with positive expectations about its impact in transforming accounting practices toward greater transparency, accuracy, and security. The study indicated a direct correlation between the level of technical knowledge and their expectations of the potential benefits of blockchain in the field of accounting. It also demonstrated that adopting this technology can contribute to reducing human error, accelerating accounting processes, and reducing the costs associated with manual operations. In light of this, the study recommends strengthening educational and training programs focused on blockchain, as well as encouraging accounting institutions to adopt this technology and address its associated challenges by developing appropriate regulatory frameworks. The research highlights the importance of preparing accountants for the requirements of the digital age by enhancing their efficiency and knowledge of modern technologies to contribute to the development of the accounting profession and ensure its suitability for future requirements.

**Keyword:** Blockchain technology, accounting profession, accountants' knowledge, digital transformation, transparency, Accuracy, Security

## Introduction

Blockchain technology stands as a relatively recent and groundbreaking invention, currently undergoing a rapid and extensive adoption across a wide array of diverse industries, effectively reshaping the way we consider, understand, and implement data safety and security. Among the numerous sectors witnessing this remarkable transformation, the field of accounting emerges as a particularly significant and noteworthy example of this ongoing trend, brilliantly showcasing the immense potential that this cutting-edge technology holds in revolutionizing traditional accounting practices for the better. The unique and powerful capability of blockchain technology to establish a secure, reliable, and tamper-proof framework for the meticulous recording and real-time tracking of all types of transactional flows carries profound implications and far-reaching effects on the entire industry as a whole (Eyo-Udo *et al*. 2025) [7] (Hossain *et al*. 2024) [9]. This remarkable technological influence extends far beyond just the operational procedures and the day-to-day activities within various organizations; it also possesses substantial implications for the essential decision-making processes that are critical to the accounting profession and practice. Furthermore, the manifold benefits provided by blockchain can lead to a considerable improvement in the efficiency and effectiveness of auditing processes as well, ultimately transforming how these vital assessments are conducted. Thus, the transformation brought about by the integration of blockchain into accounting practices is undeniably profound and significant, fundamentally reshaping how financial transactions are documented, accurately verified, and ultimately managed in our increasingly digital age (Jena, 2025) [11]. The potential for enhanced transparency and exceptional accuracy within financial reporting becomes increasingly vital in an era where data integrity is paramount, and stakeholders demand heightened accountability more than ever before. The emergence of this advanced technology presents a golden opportunity for professionals in the accounting field to wholeheartedly embrace and

adopt new methodologies, seamlessly adapt to rapidly changing landscapes, and construct more robust systems that effectively serve the evolving needs of their clients and organizations alike. The significant implications of actively adopting blockchain technology stretch far beyond merely enhancing current practices and systems and highlight the necessity for innovative thinking and strategic planning in the accounting domain, ensuring that practitioners remain relevant and competitive in the future landscape of the industry (Ibrahim, 2023) [10] (Alles & Gray, 2023) [2].

**Research Problem**

The research problem lies in the urgent need to understand accountants' knowledge of modern blockchain technology, its characteristics, and its uses in the field of accounting, as well as to study their expectations and the implications of its application for the accounting profession. With the rapid progress in blockchain applications, it has become necessary to measure accountants' awareness of this technology and its potential impact on the development of accounting practices and the future of the profession. The problem clearly arises from the potential disparities in knowledge levels among accountants based on various factors such as gender, age, educational qualifications, practical experience, and geographic location, which may affect their ability to adopt and effectively utilize this technology.

Furthermore, understanding accountants' expectations of blockchain and its impact on the profession can guide appropriate training and educational strategies to prepare accountants for future tasks that will require advanced technological skills. Consequently, the problem lies in the lack of comprehensive studies that shed light on the relationship between accountants' knowledge of this technology and their expectations of its importance, which hinders proper planning for professional development and addressing future challenges posed by digital technology.

Accordingly, the research problem revolves around determining the extent of accountants' knowledge of blockchain, examining differences in this knowledge based on demographic and professional characteristics, and examining their expectations regarding the implications of this technology for accounting, and determining the extent to which this knowledge shapes those expectations. This represents a fundamental focus for understanding how the accounting profession can evolve and adapt to new technologies to ensure the quality and accuracy of accounting practices and achieve transparency and efficiency in the financial system.

**Research importance**

This research is important because it highlights the extent of accountants' knowledge about blockchain technology, its uses in the accounting field, and studies their expectations regarding the significance and future impacts of this technology on the accounting profession. In the context of rapid advancements in information technology and the entry of modern technologies like blockchain into the financial sector, it is essential to understand how well accountants grasp this technology and their ability to adapt to it, which directly affects the quality and transparency of accounting services.

The research also clarifies the relationship between the level of knowledge about blockchain and accountants' expectations. Studies indicate a positive correlation between accountants' awareness of blockchain and their optimism about its importance in improving accounting practices. This insight helps guide efforts to enhance professional training and education programs to include modern financial technologies, thereby preparing accountants to keep pace with rapidly changing work environments.

Moreover, the study underscores blockchain as a real opportunity to improve the accuracy and efficiency of accounting processes and reduce errors and fraud due to its decentralized and verifiable nature. This supports financial decision-making based on reliable data. Hence, there is a crucial need to focus on integrating this technology within financial, governmental, and banking systems, alongside continuing research into challenges facing its implementation.

Consequently, the research holds practical and academic value by providing a scientific foundation that can assist educational institutions and professional bodies in designing qualification programs to meet accountants' needs for developing digital technology skills. It also enables organizations and companies to optimally benefit from blockchain technology in improving the accounting environment and financial performance.

**Research objectives**

1. To identify the level of accountants' knowledge about blockchain technology, its characteristics, and its applications in the accounting profession.
2. To determine the differences in the level of accountants' knowledge about blockchain technology according to variables such as gender, age, educational qualification, years of experience, geographical location, field of work, and job title.
3. To understand accountants' expectations regarding the implications of using blockchain technology on the accounting profession.
4. To reveal the differences in accountants' expectations about the impacts of blockchain technology according to the same demographic and professional variables.
5. To measure the relationship between the level of accountants' knowledge of blockchain technology and their expectations regarding its effects on accounting.

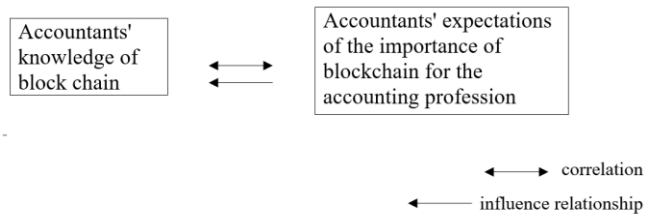
**Research model**

The research model adopted in this study is based on two main interconnected axes to understand the relationship between knowledge of blockchain technology and its expectations in the accounting profession:

Axis of Accountants' Knowledge of Blockchain Technology: This axis involves measuring the level of accountants' understanding of blockchain in terms of its fundamental characteristics such as immutability, transparency, security, and decentralization. It also includes knowledge of blockchain applications in accounting such as triple-entry accounting, smart contracts, continuous auditing, and their impact on improving the accuracy and transparency of accounting records.

Axis of Accountants' Expectations Regarding the Importance and Impact of Blockchain on the Accounting Profession: This axis studies accountants' expectations about

how this technology will contribute to changing accounting practices, including improving processes, reducing errors, and increasing transparency and reliability. It also focuses on the challenges and opportunities accountants perceive related to blockchain implementation and its effect on the future skills required in the profession.




**Research hypothesis**

**Hypothesis One:** Accountants have a high level of knowledge about blockchain technology, its characteristics, and its applications in the accounting profession.

**Hypothesis Two:** Accountants have statistically significant positive expectations regarding the impacts of blockchain technology and its importance in developing the accounting profession.

**Limitations of research**

1. The research is limited to studying accountants' knowledge of blockchain technology and their expectations regarding its importance and implications for the accounting profession, without delving into other technologies or professional fields outside accounting.
2. The research is limited to a sample of accountants from a specific region or country (to be determined according to the study sample), which affects the generalizability of the results based on the geographical context.
3. The study covers accountants' knowledge and expectations within a specific timeframe coinciding with the development of blockchain technology up to the date of the study, considering that technology and market requirements may change over time.
4. The research is limited to a specific category of individuals, namely practicing accountants, and does not include individuals from other specialties.
5. The research relies on research tools such as questionnaires to collect data, applying specific statistical analysis techniques to analyze the relationship between knowledge and expectations among accountants.
6. Methodological limitations: The use of the descriptive-analytical approach, which may not allow direct causal inferences but focuses on describing the relationships between variables.

**Theoretical framework**

**The first section**

**1. Overview of Blockchain Technology**

In recent years, the innovative technology known as blockchain has undeniably gained widespread global attention, captivating minds and reshaping industries for its immense potential to dramatically change and redefine various critical aspects of an accounting firm's financial reporting procedures and practices. This transformative effect is particularly evident when we consider the groundbreaking concept of blockchain and its incredibly diverse range of applications and implications that resonate across the industry at large. Given the considerable magnitude and substantial importance of the accounting sector, paired with the escalating, ongoing use of blockchain technology, it naturally stands to reason that this entire industry should be at the cutting edge of evolving expectations regarding the timely adoption and thoughtful integration of blockchain solutions that foster transparency and efficiency. (López-Sorribes *et al*., 2023) [16] (Tyagi *et al*., 2023) [29] Moreover, it is essential to recognize that individuals' perceptions can significantly influence the successful adoption of innovations across different fields, with finance and accounting being no exception. Specifically, the perceptions held by accountants and financial professionals regarding the importance and relevance of blockchain technology are expected to be greatly shaped and influenced by their overall level of knowledge and understanding related to the technology itself. Since blockchain is a relatively novel and emerging technology, characterized by inherent complexities, nuanced functionalities, and unique features, it can be reasonably assumed that accountants' expectations and views regarding its importance and applicability will vary according to their individual understanding, prior experiences, and exposure to such transformative technologies. (Juma'h and Li 2023) [12] This research aims to thoroughly examine this critical assumption and comprehensively explore, in detail, the intricate relationship between accountants' knowledge of blockchain technology and their perceptions of its significance within their multi-faceted profession. Through rigorous analysis and insightful evaluation, this study seeks to provide valuable insights into how blockchain knowledge consistently influences the decision-making processes and attitudes of accounting professionals toward this innovative technology, ultimately aiming to enhance the strategic incorporation of blockchain solutions in accounting practices. (Brender *et al*., 2018) [4].

**2. The Evolution of Accounting Practices**

The dawn of the digital age elevated the information system as an impetus for fundamental transformation, including the accounting system. While delimited data gathering and manual processing remain commonplace, accounting activities have embraced an increasingly digital framework that enables new ways of collecting and receiving information, independent of traditional paper and deferred information (Leoni & Sangster, 2025) [15]. The use of information technology and digital-based financial systems can shorten the time required for settlement and provide benefits such as efficiency and analyzability of data (Ortman, 2018) [22]. The accounting information system enables the performance of the accounting process, preparation of financial statements, closing of financial statements, and audit process with ease for both individuals and organizations.

The introduction and use of blockchain technology enables a new era for accounting practices and systems. As an innovation built on Information Technology (IT)

infrastructure, blockchain technology offers vital support toward secure, efficient, and automated accounting system activities. The digital transformation poses a fundamental threat to the legitimacy, structure, and future of the accountancy profession. In the digital economy, a new accounting paradigm is needed - it is no longer feasible, or acceptable, to ignore the digital world in which accountancy operates (Sharma 2025) [27]. Consistent with the story of other technologies, fundamental changes are visible in the development and adoption of blockchain. However, in addition to incremental changes and benefits, blockchain has received increased endorsement as a potentially disruptive technology for accounting practices. The technology draws on a growing agenda to open and democratize financial information, offering opportunities for enhanced fraud detection, evidence of tacit collusion, enhanced security against financial reduction, and others. (Sheela *et al*., 2023) [28].

## 3. The Role of Accountants in the Digital Age:

The accounting profession is experiencing fundamental change as digital technologies disrupt well-established practices and behaviors. Regulators continue to approve new rules that automate routine maintenance of financial accounts. Yet, the underpinnings of the profession remain rooted in the knowledge that underlies the work of accountants and auditors (Mujiono 2021) [20]. The increasing adoption of blockchain technology promises to further revolutionize how the profession's work is executed and has the potential to alter established accounting philosophies while also impacting the role of the accountant in the financial economy. This paradigm shift creates uncertainty within the profession as accountants seek to understand the relevance of the emerging technology to their discipline. (Park, 2021) [23].

Accounting occupations continue to confront digital technologies that influence the relevance of traditional practices and impact the role of the accountant in the future. An understanding of digital technologies represents a necessary frame of reference for interpreting their impact. Although accounting curricula incorporate a wide variety of technologies, knowledge of blockchain remains limited for some (Marei *et al*. 2023) [17]. One way to capture the extent of this knowledge is to assess the extent to which digital-native accountants possess an understanding of the terminology that describes blockchain operations and record maintenance. Exposure to relevant terminology is assumed to reflect an awareness of essential components and the emergence of operational comprehension. This paper focuses on a population of young accounting professionals who supply a critical link for the emergence of future practices. These digital natives are conditioned by their education and experience to embrace the new and to question traditional practices. The evaluation examines the extent of blockchain knowledge by assessing the recognition and understanding of terminology that describe blockchain operations, maintenance policies, and record structure. The knowledge measures are subsequently compared to the degree to which accountants regard blockchain as an important component of future practices (Mounis, 2022) [19].

## 4. Accountants' Knowledge of Blockchain

The idea of blockchain emerges through a series of interconnected layers, beginning with foundational education that offers a thorough overview of the subject. This fundamental grasp is subsequently deepened by ongoing professional growth, allowing individuals to expand their understanding as time progresses. At the apex of this educational pathway lies specialized expertise, symbolized by recognized blockchain certifications. The educational aspect prioritizes creating an introductory awareness of blockchain as a groundbreaking technology, highlighting its possible advantages and establishing a fundamental stepping stone for fully leveraging its capabilities. (Ramos & Queiroz, 2022) [25]. Professional development engages practitioners actively, particularly where blockchain efforts are underway, facilitating knowledge transfer and supporting strategic implementation decisions. For example, if a firm is considering the adoption of a private blockchain, informed personnel can better assess its suitability. Certifications represent the highest echelon of blockchain expertise, denoting recognition from establishing bodies to professionals who have demonstrated both theoretical understanding and practical know-how essential for implementation. As Baxter (2020) notes, such credentials assure organisations of a consultant's capability to advise, implement, and innovate using blockchain. (Rafaiani, 2025) [24].

In alignment with the earlier section discussing levels of understanding, individuals possessing only blockbuster education typically expect minor improvements while also expressing worries about security and various other concerns. Active participation in professional development helps to diminish uncertainties and enhances a sense of hope about the practical application and value of the technology. Furthermore, obtaining accredited certificates leads to an even more optimistic perspective on the transformative possibilities that blockchain technology can offer. (Scott *et al*., 2023) [26].

The scope for blockchain across the accounting landscape is fairly wide but more pronounced in auditing, financial accounting, and financial reporting. Beyond these core practices, the maturity of the technology (over a decade in popular implementation) suggests that its provincial adoption in knowledge-intensive industries may be the principal barrier, rather than technological limitations. Nevertheless, cloud computing may here play a decisive role in amplifying blockchain's influence and facilitating widespread deployment (Gietzmann & Grossetti, 2021) [8].

## 5. Educational Background

Numerous studies have evaluated accountants' knowledge of blockchain technology. An accounting-education perspective reveals that the accounting-profession skills-abilities-knowledge-curriculum gap is causing challenges in the shift from traditional accounting to digital accounting, including careers related to blockchain. Despite blockchain's relevance to accounting, it remains omitted from accountancy curriculum development processes. Only the most recent, and often postgraduate, offerings in accounting programmes include references to blockchain. Studies suggest that a lack of understanding of blockchain technology among accounting educators is the primary barrier to including it in the accounting curriculum. (Mohammad & Vargas, 2022) [18].

Understanding the intricate entanglement of cryptography and blockchain is crucially important for the entire accounting profession, as well as the various institutions responsible for education and training within this specialized field. The cryptographic circuitry that underpins blockchain technology not only expounds on its complex mechanisms but also holds significant importance for accountants, auditors, and other financial professionals alike. In today's rapidly changing and increasingly interconnected technological landscape, numerous accountants and auditors unfortunately lack comprehensive knowledge and the necessary skills that are vital in these contemporary technologies. This gap in understanding exists partly because their formal education did not adequately address or incorporate these critical advancements that are now reshaping the industry. As accounting curricula continue to evolve and adapt to address the growing relevance of blockchain in financial practices and audits, it becomes essential that cryptographic knowledge is not only recognized as important but also integrated as an integral component within the broader educational framework. This integration is necessary in order to foster a deeper understanding of this transformative technology. Furthermore, gaining a robust understanding of cryptographic principles will be pivotal in supporting various accounting and audit processes, making it an essential component that should be prioritized in future educational training and professional development programs within the accounting discipline. Achieving this goal will better equip accountants and auditors to navigate the complexities of blockchain technology, ensuring that they remain competitive and effective in their roles as trusted financial advisors in an evolving digital world. (Oladejo, 2023) [21].

**The second section**

**1- Understanding Blockchain: Key Concepts**

A blockchain is essentially a sophisticated series of blocks, where each block is constructed to individually hold essential transaction data that is securely located on a network. These blocks are systematically combined and arranged in precise chronological order, which serves to ensure the validity and legitimacy of the transactions as well as the blocks themselves. The innovative blockchain technology guarantees the authenticity of transactions without the need for a third party or any intermediary by utilizing a robust cryptographic proof mechanism. Furthermore, blockchain adeptly stores data in a distributed manner, with an identical copy of the entire chain present on each node throughout the network. This characteristic means that any updates made to one node will simultaneously affect every other node on the identical blockchain network, which is a defining aspect of its decentralized and distributed technology (Dong *et al*., 2023) [6]. Each individual block effectively stores the vital transaction data, with an appended hash that is generated by a sophisticated algorithm to ensure verification while making certain that no alterations can occur without detection. This intrinsic structure significantly mitigates the risks of cyberattacks and hacking attempts, thanks to the unique consensus mechanism that is inherent within blockchain networks. Notably, Pennsylvania State University has classified blockchain technology as a groundbreaking approach that has the potential to significantly disrupt and transform the traditional roles and responsibilities of the accounting and auditing profession, highlighting its importance in the future financial landscape. (Kumar *et al*. 2023) [13].

**2. Current Trends in Blockchain Adoption**

During the years of 2018 and 2019, the interest exhibited towards blockchain applications appeared to demonstrate considerable volatility, which was characterized by fluctuating levels of enthusiasm and investment. More generally speaking, the adoption rates of blockchain technology within the broader business world remain rather limited, as evidenced by the relatively few known and successful applications in operation that can be pointed to as models of achievement. However, beyond the ongoing difficulty encountered when attempting to accurately assess the total number of companies that are currently adopting blockchain technology and the varying degrees of their engagement, emerging trends appear to be mixed at best (Appelbaum *et al*. 2022) [3]. The combination of a negative trend observed in the growing number of applications coupled with a concurrently positive trend in related cash flows helps sustain a scenario where ongoing blockchain projects exist yet face significant challenges in achieving clear and definitive success. This complex situation leads to an increasing suspicion among industry experts that many initiatives related to blockchain simply serve as pilot projects that have been postponed or stalled, largely due to the persistent difficulties in demonstrating clear and quantifiable value creation to a diverse group of stakeholders. Despite the results of recent studies suggesting that there are potentially great benefits to be gleaned from the effective use of blockchain, the underlying uncertainty surrounding its strategic rationale, as well as the varied potential applications and the multitude of use cases, seem to effectively restrain the enthusiasm and euphoria that was once widespread within tech circles. On the accounting side of things, professionals working in management and finance must nevertheless remain well-informed of the potential risks that are implicated by inappropriate or misguided accounting treatments of cryptocurrencies and related assets. The limited knowledge base regarding this new area of financial innovation, combined with its newfound presence in the overall financial landscape, presents a substantial source of risk that could significantly influence the expectations held by accounting professionals and organizations (Chen *et al*. 2023) [5]. This insistence on the development of an informed knowledge base in the study of expectations sheds light on a distinctive focus on the theoretical aspects rather than the applied side of blockchain technology and its methodologies. This emphasis on theory emerges under the general questioning of the pivotal role that knowledge plays in shaping and influencing expectations within the ongoing discourse and debate surrounding blockchain, its future, and its integration into existing frameworks (Abu *et al*. 2023) [1].

**The third section**
**The analytical framework**
**Firstly. Analysis of the characteristics of the research community**
Questionnaire Distribution and Response Analysis:
We distributed an online Questionnaire to 107 people, and surprisingly, we returned 106.
The research sample consisted of accountants and auditors working in Iraqi universities, and the sample size was estimated based on this.
Ultimately, we had 107 Questionnaire ready for analysis, meaning a very high response rate of 99%

**1. (Gender):** table 1 shows the distribution of sample members by gender We observe from Table (1) that the sample consisted of (70) males, while the sample consisted of (36) females out of the total number of the sample, which was (106) individuals.

**Table 1:** Distribution of sample members by gender

| Gender | Frequency | Percent | Valid percent | Cumulative Percent |
|---|---|---|---|---|
| Male | 70 | 66.4% | 66.4% | 66.4% |
| Female | 36 | 33.6% | 33.6% | 100% |
| Total | 106 | 100% | | |

**Source:** Prepared by researcher.

**2. Academic qualification:** Table 2 shows the contribution to correlation research sample.

**Table 2:** Distribution of sample members according to academic qualification

| Academic achievement | Frequency | Percent | Valid percent | Cumulative Percent |
|---|---|---|---|---|
| Higher diploma | 18 | 16.98% | 16.98% | 16.98% |
| Master | 55 | 51.88% | 51.88% | 68.86% |
| Ph.D. | 33 | 31.14% | 31.14% | 100% |
| The total | 106 | 100% | | |

**Source:** Prepared by researcher.

**3. Years of experience:** we notice from table 3 that the employes of Iraqi universities experience and range between 11-15 years with 33 individuals equivalent to (31.14%) and this contributes Positively by enhancing the soundness of research.

**Table 3:** Distribution of sample members according to years of experience

| Years of experience | Frequency | Percent | Valid percent | Cumulative Percent |
|---|---|---|---|---|
| Less than 5 years | 12 | 11.32% | 11.32% | 11.32% |
| From 6-10 years | 15 | 14.15% | 14.15% | 25.47% |
| From 11-15 years | 33 | 31.14% | 31.14% | 56.61% |
| From 16-20 years | 27 | 25.47% | 25.47% | 82.08% |
| More than 20 years | 19 | 17.92% | 17.92% | 100% |
| The total | 106 | 100% | | |

**Source:** Prepared by researcher.

**4. Age in years:** we note from table 4 that most of the employees in Iraqi universities are aged between (31 years and less than 40 years) with 41 individuals equivalent to 38.68% of the age of the group which means that the employees of Iraqi universities have youthful energies and capable to performing challenges and complex tasks that required double efforts.

**Table 4:** Distribution of sample members according to age

| Age group | Frequency | Percent | Valid percent | Cumulative Percent |
|---|---|---|---|---|
| Less than 30 years old | 9 | 8.49% | 8.49% | 8.49% |
| 31 to 40 years old | 41 | 38.68% | 38.68% | 47.17% |
| 41 to 50 years old | 33 | 31.14% | 31.14% | 78.13% |
| More than 50 years old | 23 | 21.69% | 21.69% | 100% |
| The total | 106 | 100% | | |

**Source:** Prepared by researcher.

**5. Job description**: table 5 shows the distribution of individual in the research sample according to job description most of the employees in Iraqi universities are titled lecturer with 39-member equivalent to 36.79%. this contributes to improving the research capabilities to explain the aspects of the determines.

**Table 5:** Distribution of sample members according to job description

| Job description group | Frequency | Percent | Valid percent | Cumulative Percent |
|---|---|---|---|---|
| Assistant Lecturer | 14 | 13.20% | 13.20% | 13.20% |
| Lecturer | 39 | 36.79% | 36.79% | 49.99% |
| Assistant Professor | 32 | 30.19% | 30.19% | 80.18% |
| Professor | 21 | 19.82% | 19.82% | 100% |
| The total | 106 | 100% | | |

**Source:** Prepared by researcher.

**Secondly: describe and diagnoses of research variables**

1-Independent variable the impact of accountants' knowledge of blockchain on their expectations of its importance: table 6 display the general mean, standard division and the relative importance of the employees of Iraqi universities. through the response of the sample members, we note that the general mean was 4.33613 the standard division was 0.679818 and the relative response was 88.3%.

**Table 6:** Description of the impact of accountants' knowledge of blockchain on their expectations of its importance

| Seq | impact of accountants' knowledge of blockchain on their expectations of its importance | General mean | Standard division | Relative importance |
|---|---|---|---|---|
| 1 | Do you believe that your knowledge of blockchain technology increases your expectations of improved transparency in accounting? | 4.632 | 0.6743 | 1 |
| 2 | To what extent does your knowledge of blockchain technology affect your optimism about its role in reducing financial fraud? | 4.5963 | 0.5535 | 2 |
| 3 | Do you believe that increasing your knowledge of the technology will lead to positive expectations about improving accounting accuracy ? | 3.9358 | 0.79488 | 10 |
| 4 | How does your knowledge of the practical applications of blockchain affect your willingness to accept changes in the accounting profession ? | 4.4862 | 0.5535 | 4 |
| 5 | Does your knowledge of blockchain enhance your expectations about the speed of accounting processes and cost reduction ? | 4.4587 | 0.6445 | 5 |
| 6 | Does about having extensive knowledge of blockchain raise your expectations the future of the profession for accountants ? | 4.1282 | 0.7929 | 8 |
| 7 | How does your knowledge of the technical risks associated with blockchain affect your expectations about the challenges of the profession ? | 4.4908 | 0.6873 | 3 |
| 8 | Do your knowledge of smart contracts within blockchain increase your expectations about simplifying accounting procedures ? | 4.1697 | 0.6537 | 7 |
| 9 | To what extent does your knowledge of distributed ledger technology affect your perception of the potential for improved auditing? | 4.1422 | 0.7139 | 9 |
| 10 | Does your knowledge of cryptography and security in blockchain strengthen your expectations about the potential for enhanced financial confidence? | 4.3214 | 0.7297 | 6 |
| **For all dimension** | | 4.33613 | 0.679818 | |

**Source:** Prepared by researcher based on the output of ( spss.v.27)

**2. The dependent variable**: Is The impact of accountants' expectations on their knowledge of blockchain table 7 display the General mean Standard division, Relative importance of the variable Professional Ethics in Accounting through the response of the research sample members, we noted that the general mean 3.98387, the standard division 0.834443 and the relative importance 78%.

**Table 7:** Description The impact of accountants' expectations on their knowledge of blockchain

| Seq | The impact of accountants' expectations on their knowledge of blockchain | General mean | Standard division | Relative importance |
|---|---|---|---|---|
| 1 | Do your positive expectations regarding blockchain technology increase your desire to expand your knowledge of it ? | 3.8624 | 0.9002 | 7 |
| 2 | How do your expectations regarding the importance of blockchain in enhancing the role of the accountant affect your commitment to continuous learning ? | 3.6651 | 0.7932 | 9 |
| 3 | Do your expectations that blockchain will transform the accounting profession motivate you to research and learn about this technology ? | 3.5672 | 1.2141 | 10 |
| 4 | To what extent do your expectations about improving transparency using blockchain affect your willingness to acquire new skills ? | 4.0872 | 0.73536 | 5 |
| 5 | Do your expectations that blockchain will reduce accounting errors increase your motivation to learn its technical advantages ? | 4.2890 | 0.7336 | 2 |
| 6 | How does your belief that blockchain will help advance auditing tasks affect your desire to deepen your knowledge of it ? | 4.1147 | 0.9211 | 4 |
| 7 | Do your expectations about blockchain's role in expediting procedures enhance your interest in understanding its mechanisms? | 4.0596 | 0.82088 | 6 |
| 8 | To what extent do your expectations that blockchain will modernize accounting systems influence your desire to explore it ? | 3.7477 | 0.84549 | 8 |
| 9 | Do your expectations that the professional future of accountants is linked to new technologies increase your desire to master blockchain ? | 4.1193 | 0.66130 | 3 |
| 10 | How do your expectations about the career development opportunities offered by blockchain influence your desire to pursue knowledge in this field ? | 4.3265 | 0.7192 | 1 |
| For all dimension | | 3.98387 | 0.834443 | |

**Source:** Prepared by researcher based on the output of ( spss.v.27)

**Third testing research hypothesis:** Analyzing correlations between research variables: This axis focuses on testing first hypothesis that aims to determine strength of the correlations between the research variables, represented the positive correlation between the adoption of artificial intelligence in the accounting profession and increased awareness of professional ethics Table 8 shows the following:

**Table 8:** Regression equation: Accountants have a high level of knowledge about blockchain technology, its characteristics, and its applications in the accounting profession

| Variable accountants' knowledge of block-chain | Regression equation | T value | Sig. | F value | Sig. | Coefficient of determination R2 | M.T debugger R2 |
|---|---|---|---|---|---|---|---|
| | .799 | 21.334 | 0.000 | 455.015 | 0.000 | .813 | .809 |

*Source*: prepared by researcher based on the output of (spss.v.27).

By observing the values of correlation coefficient and testing significant of association between those two variable we can analyze the following:

**The first hypothesis:** To verify the first loan test to find correlation between the research variable in Table 8, there is There is a positive correlation between impact of accountants' knowledge of blockchain on their expectations of its importance by 0.799, and this came as a result of the increase in the comparison value (T) by 21.334 and (F) by 455.011, which means rejecting the null hypothesis and accepting the alternative hypothesis.

**Conclusions**

1. The study revealed that accountants have moderate knowledge of blockchain technology. This knowledge can positively impact their expectations of the technology's importance in improving accounting practices, particularly in the areas of transparency, security, and accuracy in transaction recording.
2. 2-Blockchain technology is transforming the accounting profession by enabling accountants to independently verify transactions using a distributed ledger system, reducing the chances of fraud and manipulation and enhancing trust in financial statements.
3. The adoption of blockchain in accounting reduces human error and increases the speed and efficiency of accounting processes. This positively impacts the quality of financial reports and reduces the costs associated with traditional procedures.
4. Accountants with a good knowledge of blockchain technology expect this technology to have a significant future impact on the development of the accounting profession, particularly in the areas of self-audit and continuous accounting. This requires preparing accountants with the necessary digital skills.
5. Challenges associated with the adoption of blockchain technology in the accounting profession include the need to update regulations and systems, provide the necessary training for accountants, and address technical challenges to ensure maximum benefit from this emerging technology.

These findings underscore the importance of focusing on enhancing blockchain technical knowledge among accountants and directing efforts toward promoting its systematic adoption to enhance the quality and reliability of accounting services.

**Recommendations**

1. Updating educational and training programs and plans for accountants to include in-depth blockchain concepts and technologies, with a focus on practical applications that impact accountants' tasks and enhance their professional competence.
2. Raising awareness among accountants of the importance of blockchain to increase their positive engagement with this technology through workshops, seminars, and specialized courses that explain its benefits and challenges.
3. Encouraging professional institutions and accounting associations to adopt policies and strategies that support the integration of blockchain technology into internal accounting systems, while providing the necessary infrastructure for its efficient implementation.
4. Conducting further applied research that evaluates the impact of blockchain on the quality of accounting performance and explores practical implementation challenges and how to overcome them in different contexts.
5. Developing regulatory and legal frameworks surrounding the use of blockchain in accounting to ensure transparency, data protection, and financial interests of institutions and stakeholders, while providing the necessary safeguards for accountants and stakeholders.

These recommendations are based on the importance of enhancing accountants' competence in modern technology to ensure full use of the benefits of blockchain in developing the accounting profession and improving its quality. Here are five recommendations related to examining accountants' knowledge of blockchain technology and their expectations regarding its importance to the accounting profession:

1. Update professional education and training plans and programs for accountants to include blockchain skills and technologies, with a focus on practical applications to strengthen accountants' capabilities and improve their proficiency in dealing with this technology.
2. Raise awareness and educate about the benefits and risks of blockchain technology through specialized workshops and seminars to raise accountants' knowledge and encourage positive adoption of the technology.
3. Encourage professional bodies and accounting institutions to develop policies that support the adoption of blockchain technology in accounting systems, within a clear regulatory framework that ensures optimal use and effective oversight.

4. Promote applied research and studies that evaluate the impact of blockchain implementation on the quality of accounting services and bridge gaps in understanding and application among accountants.
5. Develop appropriate regulatory and legislative frameworks for the use of blockchain technology in the accounting environment, ensuring data protection, financial security, and transparency in accounting processes.

These recommendations aim to accelerate the integration of blockchain technology into accounting, enhance the efficiency of accountants, and achieve the highest levels of quality and credibility in the profession.

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