# PERCEPTION OF STUDENTS OF THE FACULTY OF ECONOMICS AND BUSINESS ON THE IMPACT OF THE APPLICATION OF BLOCKCHAIN TECHNOLOGY ON THE ACCOUNTING PROFESSION

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**Abstract**
The development of digital technology, especially blockchain technology, has brought significant changes to the practice and role of the accounting profession, thus demanding adequate human resource readiness. This study aims to analyze the perception of students of the Faculty of Economics and Business, majoring in accounting and management on the impact of the application of blockchain technology on the accounting profession by reviewing the influence of knowledge and skills on student awareness. This study uses a quantitative approach with a survey method through the distribution of questionnaires to 205 students of the Faculty of Economics and Business, majoring in accounting and management at the University of Science Indonesia who were selected using purposive sampling techniques. The data were analyzed using multiple linear regression with the help of SPSS software, accompanied by validity, reliability, and classical assumption tests. The results of the study show that students' knowledge and skills have a positive and significant effect on awareness about the application of blockchain technology in the accounting profession, both partially and simultaneously. These findings indicate that improving students' understanding and technical skills plays an important role in shaping readiness and awareness to face digital transformation in the field of accounting. This research provides theoretical contributions in the development of digital accounting studies as well as practical implications for educational institutions in designing curricula and learning that are relevant to the needs of the accounting profession in the technological era.
**Keywords:** blockchain, knowledge, skills, awareness, accounting profession

## INTRODUCTION

The development of digital technology in the era of the Industrial Revolution 4.0 has brought major changes in various sectors, including the accounting sector (Inghirami, 2020). This transformation requires the accounting profession to adapt to increasingly complex and digital-based technologies. One of the technological innovations that has the potential to change the financial recording and reporting system is blockchain (Hartoyo et al., 2021) . Blockchain is a distributed *ledger* system that secures transaction data through cryptographic technology so that it is transparent and cannot be changed (Almadadha, 2024).

In the context of accounting, blockchain is known through the concept *of triple-entry accounting*, which is a recording system that involves debit, credit, and third entries that are digitally verified by the blockchain network (Marselita, 2024). This system allows transactions to be validated automatically without intermediaries, thereby improving data reliability and reducing the risk of fraud. In addition, blockchain supports the implementation of *smart contracts* that allow for automatic execution of transactions according to agreements (Nurhalizah et al., 2024).

The application of blockchain in accounting provides various benefits, such as increasing the efficiency of accounting information systems, recording transactions in real-time, and accelerating the audit process (Jaya et al., 2023). The data recorded in the blockchain is permanent and easy to verify,

thus increasing the transparency and accuracy of financial statements (Marselita, 2024). This technology also has the potential to support more reliable financial reporting, auditing, and tax accounting (Wira & Suryawijaya, 2023) .

Along with these developments, the application of blockchain in the field of accounting is increasing. Global accounting firms such as Deloitte, PwC, and KPMG have adopted blockchain to improve the quality of audits and reporting (Setianingsih et al., 2024). In addition, higher education institutions have begun to include the concept of blockchain accounting in the curriculum to prepare students for digital transformation in the field of accounting.

Despite its many benefits, the application of blockchain still faces challenges, especially in the world of accounting education. Students' understanding of this technology is still limited and is often only associated with cryptocurrencies (Adi Saputra, 2023) . Therefore, it is important to examine students' perceptions of the impact of blockchain implementation as an indicator of their readiness to face the accounting profession in the digital era (Nanda Sari & Gelar, 2024) .

Based on this background, this study aims to analyze the perception of students of the Faculty of Economics and Business, Universitas sains Indonesia on the impact of the application of blockchain technology on the accounting profession. The results of the research are expected to make a theoretical contribution to the development of digital accounting and become the basis for educational institutions in developing a curriculum that is relevant to the needs of the future accounting industry.

## LITERATURE REVIEW

### Knowledge

Knowledge is the foundation that allows individuals to understand, recognize, and interpret information related to the object of research (Hafizh Fahriza & Muhammad Irwan Padli Nasution, 2024) . In the context of applying blockchain technology to accounting, this knowledge includes an understanding of the basic definition of blockchain, how the mechanism of the distributed ledger works, the transaction verification process, as well as features such as smart contracts, immutability, and data transparency. (Garanina et al., 2022) An in-depth understanding of these technical aspects allows accounting students to evaluate the potential and implications of the application of blockchain in modern accounting systems, for example in digital audits, distributed ledgers, and automated financial reporting (Septiani et al., 2024) .

### Skills

Skills refer to practical and technical abilities that allow a person to apply knowledge in a concrete way not just to understand theory, but to be able to use and operate technology. (Putritama et al., 2024) In blockchain scenarios, these skills include the ability to read and analyze blockchain

**Feby Diwanni, Yuli Novitasari, Ali Muhammad**
*Perception of Students of the Faculty of Economics and Business on the Impact of the Application of Blockchain Technology*
*on the Accounting Profession*
1077

structures, understand network consensus mechanisms, utilize smart contracts, manage encryption and cryptography, and perform digital audits or automated verification (Prajapati, 2024). These technical skills are needed so that students can adapt to blockchain-based accounting systems and be able to evaluate the advantages and disadvantages of its implementation objectively (Dzaky Muhammad & Amalia Junianti, 2023).

### *Awareness*

Awareness in this context means the level of perception, understanding, and attention of students towards the existence of blockchain including the potential benefits, risks, challenges, as well as the relevance of technology to the accounting profession in the future (Argani & Taraka, 2020). Awareness includes an open attitude to innovation, a desire to learn about technological developments, and a critical awareness of the ethical, regulatory, and data security implications. (Zayed & Othman, 2023) Students with high Awareness tend to be more proactive in delving into the literature, following academic or practitioner discussions, and considering how blockchain can be effectively integrated into modern accounting practices.

### METHOD

This study uses a quantitative approach with a survey method to analyze the influence of students' knowledge and skills on awareness of the impact of the application of blockchain technology on the accounting profession. The data used in this study is primary data obtained through the distribution of questionnaires to students of the Faculty of Economics and Business, University of Sciences Indonesia, especially the Accounting and Management Study Program. Data collection will be carried out online using Google Form in 2025 The population in this study is all active students of the Faculty of Economics and Business, University of Science Indonesia, which totals 912 students. The determination of the number of samples was carried out using the Slovin formula, so that a minimum sample number of 204.7 was obtained which was then rounded to 205 respondents. The sampling technique used is purposive sampling with the criteria of active students who have acquired basic knowledge of accounting and information technology, so that they are considered able to provide relevant assessments of the research object.

The independent variables in this study consisted of Knowledge (X1) and Skills (X2), while the dependent variable was students' awareness (Y) of the application of blockchain technology in the accounting profession. Variable measurements were carried out using a questionnaire instrument with a five-point Likert scale, ranging from strongly disagree to strongly agree. The total statements in the questionnaire are 15 items, each of which is represented by 5 statements. Data analysis was carried out using the Statistical Package for the Social Sciences (SPSS) software. The analysis stages include descriptive statistical tests to describe the characteristics of the data, tests for the validity and

reliability of research instruments, and classical assumption tests consisting of normality, multicollinearity, and heteroscedasticity tests. Furthermore, hypothesis testing was carried out using multiple linear regression analysis to determine the influence of knowledge and skill variables on student awareness. The multiple linear regression model used in this study is formulated as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

where Y is the student's consciousness, $\alpha$ is the constant, $\beta_1$ and $\beta_2$ are the regression coefficients of each independent variable, $X_1$ is knowledge, $X_2$ is skill, and $\varepsilon$ is the error term. Hypothesis testing was carried out with a significance level of 5% ($\alpha = 0.05$). This research model is used to ensure the validity and reliability of the analysis results in explaining the relationship between students' knowledge, skills, and awareness of the impact of blockchain technology application on the accounting profession.

**RESULTS AND DISCUSSION**

**Descriptive Analysis of Research Data (Multicollinearity and Heteroscedasticity).**

This study uses primary data obtained from the results of the distribution of questionnaires to 205 students of the Faculty of Economics and Business, University of Sciences Indonesia, Accounting and Management Study Program, in 2025. Data is collected online using Google Forms and processed using SPSS software. The characteristics of the respondents show that the majority of students have had exposure to digital technology, especially blockchain technology, both through lectures, digital media, and academic discussions. (Sheril et al., 2024) This reflects the increasing attention of students to technological developments that have the potential to affect the accounting profession in the future.

In terms of knowledge and skills, the results of descriptive statistics show that students have a relatively good level of understanding of the basic concepts of blockchain, as well as the initial ability to understand the application of this technology in the context of accounting. The mean value of each variable is greater than the standard deviation, which indicates that the data distribution is relatively evenly distributed and there are no significant data deviations (Merdekawati et al., 2024) .

Table 1. Multicollinearity Test

| Coefficients[a] | | | |
|---|---|---|---|
| | Model | Collinearity Statistics | |
| | | Tolerance | VIF |
| 1 | (Constant) | | |
| | X1 | .972 | 1.028 |
| | X2 | .972 | 1.028 |
| a.Dependent Variable: Y | | | |

Classical assumption testing is performed before multiple linear regression analysis. The multicollinearity test was carried out to determine the existence of a high correlation between

**Feby Diwanni, Yuli Novitasari, Ali Muhammad**
*Perception of Students of the Faculty of Economics and Business on the Impact of the Application of Blockchain Technology*
*on the Accounting Profession*
1079

independent variables, namely Knowledge ($X_1$) and Skills ($X_2$). The results of the multicollinearity test showed that the tolerance value of each variable was greater than 0.10 and the Variance Inflation Factor (VIF) value was less than 10. This indicates that there are no symptoms of multicollinearity in the research model, so that each independent variable can explain the dependent variable independently without a strong linear relationship with each other.

Table 2. Heteroscedasticity Test

**Coefficients<sup>a</sup>**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 2.470 | .855 | | 2.889 | .004 |
| | X1 | -.018 | .033 | -.039 | -.548 | .585 |
| | X2 | -.004 | .031 | -.009 | -.128 | .899 |

a. Dependent Variable: ABS_RES

The heteroscedasticity test was carried out using the Glejser method by looking at the significance value of each independent variable to the residual absolute value. The test results showed that the significance value of the Knowledge ($X_1$) and Skills ($X_2$) variables was greater than 0.05. In addition, the residual point distribution pattern does not form a specific pattern and spreads randomly around the zero line. This shows that the regression model does not experience heteroscedasticity, so the residual variance is constant (homoscedasticity). With the fulfillment of these classical assumptions, the multiple linear regression model was declared feasible for use in further hypothesis testing.

The results of multiple linear regression analysis showed that the variables Knowledge ($X_1$) and Skills ($X_2$) had a positive effect on student awareness (Y) regarding the application of blockchain technology in the accounting profession. The regression equations obtained in this study are as follows:

$$Y = 2.650 + 0.333X_1 + 0.515X_2 + e$$

A constant value of 2,650 indicates that if the variables of knowledge and skills are considered constant or have a value of zero, then the level of student awareness is at a value of 2,650. The Knowledge regression coefficient ($X_1$) of 0.333 indicates that every increase in one unit of student knowledge will increase consciousness by 0.333 units, assuming other variables are constant. This shows that knowledge has a positive influence on student awareness.

Meanwhile, a Skill regression coefficient ($X_2$) of 0.515 shows that every increase in one unit of student skill will increase awareness by 0.515 units. The value of this coefficient is greater than the knowledge coefficient, which indicates that skills have a more dominant influence in shaping students' awareness of the application of blockchain technology in the accounting profession. These findings

confirm that students' practical and technical abilities play an important role in increasing understanding and readiness to face digital transformation in the field of accounting.

**Hypothesis Test Results (T Test, F Test, Determination Coefficient Test)**

Table 3. t-Test Results

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 2.650 | 1.410 | | 1.879 | .062 |
| | X1 | .333 | .055 | .322 | 6.052 | .000 |
| | X2 | .515 | .051 | .533 | 10.027 | .000 |

a. Dependent Variable: Y

Based on the results of the partial t-test, the Knowledge variable ($X_1$) has a t-count value of 6.052 which is greater than the t-table value of 1.985 with a significance level of $0.000 < 0.05$. This shows that Knowledge has a positive and significant effect on student consciousness, so the first hypothesis ($H_1$) is accepted.

The Skill variable ($X_2$) also showed a t-calculated value of 10.027 which was greater than the t-table value of 1.985 with a significance value of $0.000 < 0.05$. Thus, Skills have a positive and significant effect on student awareness, so the second hypothesis ($H_2$) is accepted. These results show that students with better skills in understanding and using blockchain technology tend to have a higher level of awareness of the impact of its application in the accounting profession.

Table 4. Results of the f-test

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 1055.926 | 2 | 527.963 | 80.902 | .000[b] |
| | Residual | 1318.250 | 202 | 6.526 | | |
| | Total | 2374.176 | 204 | | | |

a. Dependent Variable: Y
b. Predictors: (Constant), X2, X1

The results of the F test showed that the F-calculated value of 80.902 was greater than the F-table value of 3.04 with a significance level of $0.000 < 0.05$. This indicates that simultaneously the variables of Knowledge ($X_1$) and Skills ($X_2$) have a significant effect on student awareness (Y). Thus, the third hypothesis ($H_3$) which states that knowledge and skills together affect student consciousness is acceptable.

**Relationship between variables**

The results of this study reveal that Knowledge ($X_1$) has a positive and significant influence on student awareness (Y) regarding the application of blockchain technology in the accounting profession. A regression coefficient of 0.333 indicates that every one unit increase in the student's level of knowledge will increase consciousness by 0.333 units, assuming the other variables remain constant. These findings are in line with cognitive theory and the Theory of Planned Behavior, which states that knowledge is the main foundation in shaping an individual's attitude and awareness towards a new phenomenon or technology (Ningsi et al., 2024) . Students who understand the concepts, benefits, and implications of blockchain tend to have a higher awareness of its impact on the accounting profession in the future. These results are also consistent with previous research that states that increasing digital literacy and technological understanding play a significant role in shaping individual readiness to face the transformation of the accounting profession (Abelia Nur H, 2024) .

Furthermore, Skill ($X_2$) was proven to have a positive and significant influence on student Awareness (Y) with a regression coefficient of 0.515, which is greater than the knowledge coefficient. This shows that skills have a more dominant role in increasing student awareness of the application of blockchain technology. These findings can be explained through the perspective of human capital, which emphasizes that individuals' practical abilities and technical skills will strengthen conceptual understanding as well as increase readiness to face technological changes. Students who have skills in understanding digital systems, data analysis, or blockchain-based technologies tend to be better able to relate these technologies to accounting practices, so their awareness of the implications of the profession is higher. These results are in line with previous research that states that technological skills play an important role in shaping the readiness and adaptation of prospective accountants to the development of digital technology.

Simultaneously, the results of the analysis showed that Knowledge ($X_1$) and Skills ($X_2$) together had a significant influence on student Consciousness (Y). This shows that students' consciousness is not formed only from theoretical understanding, but is also strengthened by practical skills. Knowledge provides a conceptual basis, while skills act as a means of actualizing that knowledge in a real context. Thus, the combination of knowledge and skills is a key factor in building student awareness of the impact of the application of blockchain technology on the accounting profession (Elan Maulani et al., 2023) .

Overall, the results of this study confirm that knowledge and skills are the main determinants in increasing students' awareness of digital transformation in the field of accounting. Theoretically, these findings enrich the accounting and educational literature by emphasizing the importance of integrating cognitive aspects and skills in shaping the readiness of aspiring accountants to face the development

of blockchain technology (Iswanto et al., 2022) . Practically, the implications of this research for educational institutions are the need to strengthen a curriculum that not only emphasizes the conceptual understanding of blockchain technology, but also the development of students' practical skills through technology-based learning, case studies, and digital training. With this approach, students are expected to have a higher level of awareness and readiness in facing changes in the accounting profession in the digital era (Pratiwi & Ermaya, 2024) .

## CONCLUSION

Based on the results of data analysis of 205 students of the Faculty of Economics and Business, University of Science Indonesia, it can be concluded that Knowledge and Skills have a positive and significant effect on student awareness regarding the application of blockchain technology in the accounting profession. Skills show a more dominant influence than knowledge, which indicates that students' practical abilities have an important role in shaping awareness of the development of accounting technology. Simultaneously, these two variables had a significant effect on student awareness with a determination coefficient value of 43.9%, while the rest were influenced by other factors outside the research model. Thus, increasing knowledge and developing digital technology skills is the main factor in preparing students to face the transformation of the accounting profession in the blockchain era.

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**Feby Diwanni, Yuli Novitasari, Ali Muhammad**
*Perception of Students of the Faculty of Economics and Business on the Impact of the Application of Blockchain Technology
on the Accounting Profession*
1083

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