



Analysis of the Effectiveness of the Pakars Validation Application in Assessing Graduate Students' Financial Eligibility and Awareness as a Strategy to Reduce Outstanding Receivables

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Article Info

Article history:

Article history:

Received 25 August 2025

Received in revised form 10

September 2025

Accepted 27 September 2025

Keywords:

Strategy

Accounts Receivable

Validation

Communication

Abstract

This study investigates the effectiveness of the Pakars Validation application in enhancing student eligibility identification and financial awareness as part of a strategic approach to reducing receivables in the Postgraduate Program at UQY University. The persistent problem of student receivables is often driven by the suboptimal utilization of flexible payment schemes and the limited dissemination of accurate information regarding students' financial obligations. In response to these issues, the Pakars Validation application was developed to streamline administrative and financial validation processes, while automating email-based communications containing billing details and payment reminders. Employing a quantitative approach, the research utilized a survey method involving 100 active postgraduate students selected through purposive sampling. Data were analyzed using Structural Equation Modeling–Partial Least Square (SEM-PLS). The findings indicate that the Pakars Validation application plays a significant mediating role between student eligibility identification and financial awareness with receivables reduction strategies. Direct effects of the independent variables on receivables reduction were not statistically significant, but became significant when mediated by the application. The study underscores the importance of integrated digital validation systems combined with technology-driven communication tools in improving receivables management. Practically, it recommends strengthening such applications as a core strategy to enhance financial stability and ensure the long-term sustainability of higher education institutions

Introduction

Higher education plays a crucial role in driving economic and social development in a country (Foong et al., 2024; Aithal et al., 2024; Li et al., 2024). In addition to serving as centers of learning and innovation, educational institutions also function as providers of services that support student well-being, particularly in the financial aspect, which often poses a major challenge for them. To address these challenges, universities need to offer flexible financing solutions to ensure that all students can access quality education without being burdened by financial issues. This affordable financing system can provide broader opportunities for students to obtain higher education without having to worry about large financial burdens (Putranto et al., 2025; Russell et al., 2025; Nayga et al., 2024).

Several universities in Jakarta, especially postgraduate programs, have adopted more flexible installment methods, collaborating with digital payment platforms to provide installment options with no down payment and tenors that can be adjusted between 3 and 24 months. This gives students the opportunity to choose the payment method that best suits their financial

capabilities. Universities have also revised their previously rigid installment ratios to make them more accessible, thereby reducing the number of students facing difficulties in paying their tuition fees (Silaen et al., 2025; Wang et al., 2025).

Additionally, many graduate programs offer various incentives to support students' continued education. Scholarships, both full and partial, are often awarded to high-achieving students or alumni continuing their education as a form of financial support. Digital payment platforms play an important role in supporting payment flexibility. These platforms allow students to choose various payment schemes that suit their needs and offer fast and secure processes, while also making it easier for universities to manage payments automatically (Murti et al., 2025; Hariyanto et al., 2025; Mwale & Phiri, 2024).

Various policies implemented by postgraduate programs in Jakarta demonstrate a commitment not only to improving the quality of higher education but also to expanding access to education for all segments of society (Putra et al., 2025; Yudhoyono et al., 2024; Sulistiyono et al., 2025). Policies such as flexible payment schemes, scholarship grants, and tuition fee waivers for alumni are implemented to reduce financial barriers that often hinder the continuation of studies. The implementation of these policies is expected to have a positive impact on students' ability to complete their education on time, as well as increase their participation in economic and social development. Therefore, it is important to investigate the extent to which these accessibility policies influence the academic success and socio-economic contributions of postgraduate graduates (Darmawi, 2016; Saidi, 2024; Gunter, 2025).

However, despite the availability of various payment schemes, students often fail to utilize these options optimally due to a lack of clear information. This leads to an increase in educational debt, which can have serious implications for the financial sustainability of universities. Research indicates that suboptimal debt management can affect institutional financial stability. For example, according to Djatmika et al. (2022), the LP3I Jakarta Polytechnic Campus in Cilodong Raya faced issues with students failing to make payments by the agreed due dates. This resulted in uncollectible debts that impacted the institution's cash flow. Student receivables, especially those not paid on time, can disrupt the cash flow of higher education institutions and threaten the operational sustainability of campuses. Many students do not utilize available payment options optimally, due to a lack of clear information about the payment scheme. This leads to an increase in educational receivables, which has the potential to negatively impact the financial stability of higher education institutions. A real-world example of this issue is the case at LP3I Jakarta Polytechnic Campus Cilodong Raya, which experienced delays in student payments, ultimately resulting in uncollectible receivables that disrupted the institution's cash flow (Abbas et al., 2024; Yulianti et al., 2024).

According to Putranto et al. (2025), the development of Information and Communication Technology (ICT) has brought significant changes in the practice of new media communication, including in the higher education sector. ICT is defined as technology used to access, distribute, and manage information through digital devices and computer networks. In the context of higher education, the use of ICT enables transformations in the delivery of learning materials, enhances the effectiveness of communication between faculty and students, and facilitates more efficient management of academic and financial administration. The implementation of ICT-based learning systems also supports the provision of more flexible and inclusive educational services, addressing the diverse needs of students for accessible and adaptive education in response to changing times.

One form of communication that has emerged alongside the development of ICT is Computer-Mediated Communication (CMC), which is communication that occurs through computers or

other digital systems. CMC enables people to interact with one another despite being separated by space and time. In higher education, CMC serves as a crucial communication channel, facilitating interaction between students, faculty, and university administrative staff without being constrained by physical location or specific time frames. Through CMC platforms such as email, online discussion forums, and video conferencing, academic information, important announcements, and payment reminders can be easily and efficiently communicated (Putranto et al., 2025; Sackett, 2024; Wilke et al., 2024).

To address this issue, effective communication becomes crucial. In this digital age, information and communication technology (ICT) plays a significant role in facilitating interaction between universities and students. ICT enables more efficient information management and allows universities to deliver information promptly and accurately to students. One form of communication that has emerged with the development of ICT is Computer-Mediated Communication (CMC), which enables interaction between students, lecturers, and university administrative staff through computers or other digital platforms, such as email, online discussion forums, and video conferencing. CMC enables universities to send payment reminders, scholarship information, and instructions related to students' financial obligations automatically and more transparently (Andrianto, 2020; Fitrah et al., 2025; Bakhti et al., 2024).

The use of email in the context of higher education facilitates universities in managing financial administration and ensuring clear communication regarding payment policies, scholarships, and other incentives. With the help of CMC, relevant information regarding students' financial obligations can be communicated efficiently, helping students to be more aware of payments that need to be made, and reducing the potential for uncollectible receivables (Jaena & Syamsudin, 2025). Digital communication systems, such as email, also support the creation of more systematic and efficient receivables management. Therefore, the implementation of credit risk management becomes very important to ensure that educational receivables are managed in a structured manner and prevent the accumulation of uncollectible receivables. Credit risk management involves clear policies regarding receivables, as well as thorough planning and strict monitoring of the university's cash flow (Pratiwi et al., 2024).

One approach to credit risk management that can be applied is the 5C method (Character, Capacity, Capital, Condition, Collateral). In the context of higher education, the 5C analysis helps universities evaluate the ability of students or their parents to pay tuition fees (Anggraeni & Handayani, 2022; Manongga, 2025). The Character factor refers to the integrity and reputation of students in fulfilling their payment obligations, while Capacity reflects the financial ability of students to pay, and Capital describes the strength of the capital they possess (Hamizar, 2025).

The Pakars Validation application is designed to support universities in assessing student credit risk, focusing on two main aspects: eligibility identification and student financial awareness. Eligibility identification serves to validate students' status regarding their ability and the necessary administrative criteria, while students' financial awareness focuses on efforts to remind and build students' commitment to fulfilling their payment obligations. These two aspects are important factors in determining the potential for bad debts in higher education institutions.

The digital era is marked by the significant role of Information and Communication Technology (ICT) and Computer-Mediated Communication (CMC), such as email, in supporting financial administration management at higher education institutions. Email-based communication media enable quick and efficient information exchange between institutions and students, particularly regarding payment obligations, scholarship disbursements, and other

incentives (Vigim et al., 2021). To enhance the effectiveness of such communication, the integration of the Pakars Validation application as an information mediation tool is viewed as a strategic solution that can accelerate communication processes while supporting more systematic debt management. This application also features mediation capabilities that enable risk assessment to be conducted more quickly and accurately (Pratiwi et al., 2024; Rashid et al., 2024).

In addition, an automated email communication system is integrated as a mediating variable that bridges the gap in conveying information about bills, payment deadlines, and rescheduling options to students (Wulandari et al., 2025). The role of the faculty in validating student status is a crucial component in the risk validation process, as the administrative and academic information verified by the faculty serves as the primary basis for the system to determine students' financial eligibility. Thus, the combination of risk validation and the mediating role of the application is expected to improve student compliance in making payments while reducing the level of problematic receivables (Epriliyana et al., 2024; Ombui et al., 2025).

The problem of student debt management in higher education institutions includes low utilization of flexible payment schemes due to a lack of clear information, late payments that disrupt financial stability, and suboptimal debt management, which negatively impacts the institution's cash flow. Additionally, communication between higher education institutions and students regarding obligations, due dates, and credit restructuring policies remains ineffective, as does the utilization of supporting applications to monitor student credit risks. This study is limited to two main variables, namely the identification of eligibility and financial awareness of students, with a focus on credit risk in the form of outstanding tuition fees of active graduate students in the 2024/2025 academic year (Rachmawati & Akharruddin, 2024). The Pakars Validation application is analyzed for its role as a technology-based system mediating the relationship between the two variables and credit risk, particularly in validation and debt reduction strategies. The objectives of this study are to analyze the influence of eligibility identification and financial awareness on credit risk, the utilization of the Pakars Validation application, and its contribution through email communication in accelerating debt reduction strategies. Theoretically, this study enriches the literature on credit risk management among students and the effectiveness of email-based communication. Practically, it provides guidance for higher education institutions in implementing technological systems for credit risk evaluation, adaptive payment strategies, and more effective financial communication.

Methods

The research design in this study is a quantitative research design which was chosen due to its ability to test empirically relationships among variables through data collected on a systematic basis and through adequate statistical analysis. The quantitative framework provides a systematic paradigm of exploring the mediating role of digital systems on financial behavior, producing descriptive and explanatory pieces of evidence. It is in this context that the research focuses on the effect the Pakars Validation application has on effectiveness of student debt reduction policies by connecting the process of eligibility identification with financial awareness. Based on this, the design is developed in such a way that it does not just focus on the surface, but rather allows the capture of the more stressed mechanisms in which the technological mediation promotes institutional financial stability.

The population of study is the entire population of active post graduate students in UQY University. Out of this population, only 100 students were identified and purposively sampled in the research to make sure that the respondents had firsthand experience with both financial administrative processes and utilisation of Pakars Validation application, thus making them the

most relevant group to answer the research questions. The sampling strategy will ensure that the information is not just sufficient statistically but also contextually valid, by ensuring that the samples included are students who are still in debt management systems and who have been exposed to digital forms of validation.

The structured questionnaire that was employed in data collection listed items that were developed to assess the key constructs of the investigation, namely, the identification of the eligibility, financial awareness, utilisation of the Pakars Validation application, and student debt reduction strategies. The items were based on the known theoretical frameworks and previous research in the field of financial management in higher education, which were followed by the contextualisation to the unique conditions of the UQY University. The instrument was tested on a small group of students before it was disseminated. This step was critical in ensuring that clarity of the questions, reliability and confirmation of construct validity were done and thus making sure that the questionnaire was able to measure accurately the desired dimensions of each variable without ambiguity.

To analyze data, Structural Equation Modelling together with Partial Least Squares (SEM-PLS) was used. This method was considered to be especially appropriate due to a number of reasons. To begin with, SEM-PLS can successfully test the complex research model, where direct and mediated relationships are present, which is the key to the focus of the given research on the mediating role of Pakars Validation application. Second, it can fit rather small sample sizes and provide strong parameter estimates, which makes it the right choice of a study with 100 respondents. Lastly, SEM-PLS allows to gain a subtle perception of both noteworthy direct effects as well as the causal relationships that the mediators enhance the impact of those effects, thereby providing information beyond the scope of simplistic cause-and-effect analyses.

Overall, the methodological design is characterized by a careful correspondence of research goals and the used methods. Since the selection of the respondents to the development of the instruments, and the procedure of the analysis, every stage was carefully designed with the purpose of having methodological rigour and relevance to the context. Through this strategy, the research will not only add to the theoretical arguments of student debt management and digital validation systems but will also provide effective suggestions that can guide higher education institutions that want to enhance their financial viability by interfering with technology.

Results and Discussion

Partial Least Square Structural Equation Modeling (PLS-SEM) Analysis

Based on the analysis results, all indicators within each variable exhibit strong correlations with one another, particularly those within the same construct. For example, indicators IKM1 to IKM4 (Student Eligibility Identification) show high correlations, with correlation values ranging from 0.563 to 0.687. Similarly, indicators KFM1–KFM3 (Student Financial Awareness), APP1–APP10 (Expert Validation Application), and Y1–Y5 (Debt Reduction Strategies) also exhibit consistent positive correlations above 0.5 among indicators within the same variable.

The VIF values for all indicators are below the threshold of 5, indicating no issues of multicollinearity among the indicators. The lowest VIF value was recorded in APP3 (1.179), while the highest values were found in KFM1 (3.512) and IKM4 (3.015), but both are still within reasonable limits. This condition indicates that all indicators are independent of each other, so they can be optimally used in forming latent constructs.

The implications of these results are that the measurement model has met the criteria for convergent and discriminant validity, as well as reliability, and can therefore proceed to the next stage of structural model testing (Inner Model). These findings also confirm that the research instruments used to measure Student Eligibility Identification, Student Financial Awareness, Expert Validation Application, and Debt Reduction Strategies have good accuracy and consistency.

One of the important stages in measurement model analysis (outer model) using PLS-SEM is the evaluation of the outer loading value of each indicator on the latent construct being measured. A good outer loading value is generally above 0.70, indicating that the indicator consistently reflects the variable it represents.

Based on the data analysis results, all indicators in each construct have outer loading values above 0.70, indicating that the instruments used in this study meet the criteria for convergent validity. In detail, the outer loading values for each construct are as follows:

Expert Validation Application (Z)

Indicators APP1 to APP10 have outer loading values ranging from 0.709 to 0.851. This indicates that all indicators in construct Z are highly representative and valid in measuring the expert application aspect developed.

Financial Awareness of Students (X2)

Three indicators, namely KFM1, KFM2, and KFM3, have outer loading values of 0.751, 0.821, and 0.828, respectively. These values confirm that the three indicators are very strong in representing the construct of students' financial awareness.

Student Eligibility Identification (X1)

Four indicators (IKM1, IKM2, IKM3, IKM4) show outer loading values ranging from 0.714 to 0.830, indicating consistency and relevance of the indicators to the measured construct.

Debt Reduction Strategy (Y)

Indicators Y1 to Y5 have outer loading values ranging from 0.763 to 0.861, meaning that all indicators are effective in representing the accounts receivable reduction strategy variable.

Overall, the high outer loading values for all indicators prove that each indicator has a significant contribution in measuring the latent construct that is the focus of this study. Based on the analysis results, several important findings were obtained:

First, student eligibility (X1) does not significantly influence accounts receivable reduction strategy (Y), with an influence coefficient of 0.085, t-statistic of 0.948, and p-value of 0.343 (> 0.05). A similar result was found for student financial awareness (X2), which does not significantly influence debt reduction strategies (Y), with a coefficient of 0.168, a t-statistic of 1.771, and a p-value of 0.077 (> 0.05). These findings indicate that the two independent variables do not directly influence debt reduction strategies.

This indicates that different results were found in the relationship between X1 and X2 and the mediating variable, Expert Validation Application (Z). Student eligibility identification (X1) has a significant effect on Pakars Validation Application (Z), with a coefficient of 0.301, a t-statistic of 2.181, and a p-value of 0.029 ($p < 0.05$). Similarly, students' financial awareness (X2) also has a significant influence on the Pakars Validation Application (Z), with a coefficient of

0.344, a t-statistic of 2.345, and a p-value of 0.019 (< 0.05). This indicates that both student eligibility identification and financial awareness tend to play a more significant role in

promoting the use of the Pakars Validation Application compared to directly influencing the accounts receivable reduction strategy.

The Pakars Validation Application (Z) has been proven to significantly and strongly influence debt reduction strategies (Y), with a path coefficient of 0.662, a t-statistic of 9.217, and a p-value of 0.000 (<0.01). This finding reinforces the strategic role of the Pakars Validation Application as a mediator in the research model.

Overall, the results of this hypothesis test clarify that strengthening the application-based validation system (Z) is a key factor in the success of debt reduction strategies. Both the identification of eligibility and financial awareness of students are more effective in influencing the reduction of receivables when intervened through the use of the Pakars Validation application, rather than directly targeting the receivables reduction strategy (Aswirah et al., 2024; Rolando, 2024).

In addition to testing direct effects, this study also analyzed the mediating effect of the Pakars Validation Application (Z) in the relationship between Student Feasibility Identification (X1) and Student Financial Awareness (X2) on the Debt Reduction Strategy (Y).

A more detailed explanation of the research findings will be presented in the following section, including a discussion of the interrelationships among the variables tested through the research hypotheses.

Hypothesis 1: Student eligibility identification (X1) has a significant effect on debt reduction strategies (Y)

Based on the analysis results, Student Eligibility Identification (X1) has a direct influence on Debt Reduction Strategies (Y) with a coefficient value of 0.085 or equivalent to 8.5%. However, this influence is not statistically significant (t-statistic = 0.948; p-value = 0.343), so it can be concluded that student eligibility identification does not directly reduce accounts receivable significantly.

Hypothesis 2: Student financial awareness (X2) significantly influences the debt reduction strategy (Y).

For Student Financial Awareness (X2), the direct effect on Debt Reduction Strategies (Y) has a coefficient of 0.168 or 16.8%. Although this value indicates a contribution, the effect is also not statistically significant (t-statistic = 1.771; p-value = 0.077).

Hypothesis 3: The application of Pakars Validation (Y) significantly influences the application of Pakars Validation (Z).

The influence of Pakars Validation Application (Z) on Debt Reduction Strategy (Y) is very prominent with a coefficient value of 0.662 or 66.2%. This result is highly significant (t-statistic = 9.217; p-value = 0.000), indicating that Pakars Validation Application is the main factor in reducing student debt.

Hypothesis 4: The Pakars Validation Application (Z) mediates the influence of student eligibility identification (X1) on student credit risk (Y).

The indirect effect of Student Eligibility Identification (X1) on Debt Reduction Strategy (Y) through the Pakars Validation Application (Z) has a coefficient of 0.199 or 19.9%. This mediating effect is statistically significant (t-statistic

= 2.114; p-value = 0.035), indicating that when the eligibility identification process is mediated by the application, its impact on debt reduction becomes more meaningful.

Hypothesis 5: The Pakars Validation Application (Z) mediates the influence of students' financial awareness (X2) on student credit risk (Y).

Similarly, Student Financial Awareness (X2) has an indirect influence through the Pakars Validation Application (Z) on the Accounts Receivable Reduction Strategy (Y) with a coefficient value of 0.228 or 22.8%. This mediating effect is significant (t-statistic = 2.271; p-value = 0.023), indicating a positive and significant relationship () that reinforces the role of the application in strengthening the relationship between students' financial awareness and debt reduction.

Hypothesis 6: Student eligibility (X1) and student financial awareness (X2) simultaneously have a significant effect on the Pakars Validation Application (Z) and debt reduction strategy (Y).

When examined simultaneously, the R-square value for the Y variable (Debt Reduction Strategy) is 0.673, meaning that 67.3% of the variation in debt reduction strategies is explained by the combination of X1, X2, and Z. Meanwhile, for variable Z (Pakars Validation Application), the R-square value is 0.347, or 34.7% of the variation in application usage is explained by X1 and X2 together.

Conclusion

This study concludes that the identification of feasibility and financial awareness of students does not have a direct significant effect on the accounts receivable reduction strategy; however, both become significant through the mediation of the Pakars Validation application. This application has proven effective in strengthening the relationship between the two variables and the accounts receivable reduction strategy, while also improving students' payment compliance. Simultaneously, the combination of eligibility identification, financial awareness, and digital system support contributes moderately but meaningfully to receivables management. These findings emphasize the importance of integrating technology into financial validation and monitoring as a sustainable receivables management strategy. Theoretically, this study enriches the literature on the role of technology as a catalyst for efficiency in higher education financial management, while practically recommending the implementation of digital validation systems to support data-driven decision-making. The limitations of this study include a limited scope, limited variables, and a quantitative approach, necessitating further research with a broader scope and more diverse methods.

References

- Abbas, F. I., Mulyani, I. D., Dumadi, & Syaifulloh, M. (2024). Pengaruh Digital Marketing, Literasi Keuangan, dan Inklusi Keuangan terhadap Peningkatan Kinerja UMKM (Studi Kasus pada UMKM Mitra Mandiri Brebes). *JECMER: Journal of Economic, Management and Entrepreneurship Research*, 2(3), 96–115. <https://jurnal.eraliterasi.com/index.php/jecmer/article/view/200>
- Aithal, P. S., Prabhu, S., & Aithal, S. (2024). Future of higher education through technology prediction and forecasting. *Poornaprajna International Journal of Management, Education, and Social Science (PIJMESS)*, 1(1), 01-50. <https://dx.doi.org/10.2139/ssrn.4901474>
- Andrianto. (2020). *Manajemen Kredit: Teori dan Konsep Bagi Bank Umum*. Penerbit Qiara Media.

- Anggraeni, V., & Handayani, A. (2022). Analisis Penyelesaian Kredit Bermasalah pada Perumda. Bpr Bank Gresik. *Jurnal AKMAMI (Akuntansi Manajemen Ekonomi)*, 3(1), 31–40. <https://doi.org/10.53695/JA.V3I1.550>
- Aswirah, A., Arfah, A., & Alam, S. (2024). Perkembangan dan Dampak Financial Technology terhadap Inklusi Keuangan di Indonesia: Studi Literatur. *Jurnal Bisnis Dan Kewirausahaan*, 13(2), 180–186. <https://doi.org/10.37476/jbk.v13i2.4642>
- Bakhti, H., Bensaad, S., & Yahia, F. (2024). *Implementing Language Laboratories In Coe Classes: The Tpack Framework Application Between Expectation And Realities. The Case Of L1 & L2 Efl Students At The University Of Ain Temouchent* (Doctoral Dissertation, University Of Ain Temouchent).
- Darmawi, T. (2016). *Manajemen Risiko dalam Organisasi: Teori dan Praktik*. Penerbit Media Sukses.
- Djatmika, G. H., Ningsih, P. T. S., Harsono, B., & Pratini, I. (2022). Kebijakan Perencanaan dan Pengendalian Piutang terhadap Efektivitas Arus Kas Pada Politeknik LP3I Jakarta. *Ilmu Ekonomi Manajemen Dan Akuntansi*, 3(1), 24–33. <https://doi.org/10.37012/ileka.v3i1.979>
- Epriliyana, N. N., Salsabila, A. P., & Tohari, N. (2024). Identifikasi, Penanganan, dan Penyelesaian Kredit Bermasalah pada Bank Perkreditan Rakyat. *ACCOUNT (Journal of Accounting and Finance)*, 2(2), 146–153. <https://doi.org/10.31537/account.v2i2.2214>
- Fitrah, M. S., Ramadhani, S., & Syakir, A. (2025). University Student Vulnerability to Phishing in Digital Banking across Social Platforms. *Journal of Social Commerce*, 5(2), 173–194. <https://doi.org/10.56209/jommerce.v5i2.166>
- Foong, Y. P., Pidani, R., Sithira Vadivel, V., & Dongyue, Y. (2024). Singapore smart nation: journey into a new digital landscape for higher education. In *Emerging Technologies in Business: Innovation Strategies for Competitive Advantage* (pp. 281–304). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-97-2211-2_13
- Gunter, A. (2025). The geography of distance education: spatial disparities, accessibility, and impact across place. *South African Geographical Journal*, 1–19. <https://doi.org/10.1080/03736245.2025.2472653>
- Hamizar, H. (2025). Mengukur Efektifitas Sistem Akuntansi Penjualan Kredit pada PT Bony Berkah Bersama Depok. *JURNAL LENTERA AKUNTANSI*, 9(2), 275–294. <https://doi.org/10.34127/jrakt.v9i2.1404>
- Hariyanto, L., Kusnedi, R., Elsty, K., Irfan, M., Choesrani, D. Z., & Nurhasanah, A. (2025). The role of technology in simplifying operations to strengthen customer relationships in the culinary industry. *Jurnal Ilmiah Manajemen Kesatuan*, 13(1), 315–324. <https://doi.org/10.37641/jimkes.v13i1.3083>
- Jaena, S., & Syamsudin, S. (2025). Peran Teknologi dan Literasi Keuangan terhadap Meningkatkan Keberlanjutan UMKM dengan Inklusi Keuangan sebagai Variabel Mediasi. *Economics and Digital Business Review*, 7(1), 237–252. <https://doi.org/10.37531/ECOTAL.V7I1.2899>
- Li, J., Xue, E., Wei, Y., & He, Y. (2024). How popularising higher education affects economic growth and poverty alleviation: empirical evidence from 38 countries. *Humanities*

and Social Sciences Communications, 11(1). <https://doi.org/10.1057/s41599-024-03013-5>

- Manongga, J. (2025). Peranan Sistem Informasi Akuntansi dalam Menunjang Efektivitas Pengendalian Internal Pemberian Kredit di PT. Bank Sulutgo Cabang Airmadidi. *Manajemen Bisnis Dan Keuangan Korporat*, 3(1), 229–244. <https://doi.org/10.58784/mbkk.313>
- Murti, D. A., Hanifa, L., Mahmuda, D., & Nurlinda, E. (2025). Analisis Pengendalian Piutang terhadap Efektivitas Arus Kas pada PT. Roid Bakti Persada. *ESCAF*, 222–232. <https://semnas.univbinainsan.ac.id/index.php/escaf/article/view/985>
- Mwale, M., & Phiri, J. (2024, February). Secure Mobile Payment Gateway for Higher Institutions of Learning. In *International Congress on Information and Communication Technology* (pp. 367-381). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-97-3302-6_30
- Nayga Jr, R. M., Liu, J., & Kassas, B. (2024). The looming demographic cliff: A wake-up call for the agricultural and applied economics profession. *American Journal of Agricultural Economics*, 106(2), 468-484. <https://doi.org/10.1111/ajae.12457>
- Ombui, J., Monari, D., Kamau, C., Kibiti, C., & Muhoro, G. (2025). Account Receivables, Payables Management, and Financial Performance of Public Universities in Kenya's Coastal Region. *Multidisciplinary Journal of Technical University of Mombasa*, 4(1), 18-29. <https://doi.org/10.48039/mjtm.v4i1.86>
- Pratiwi, M. A., Anggata, A., & Sukmono, Y. (2024). Peran Aplikasi SLIK sebagai Manajemen Risiko dalam Mengurangi Kredit Bermasalah (Studi Kasus: Implementasi Slik dan Restrukturisasi oleh OJK). *Jurnal Teknik Industri (JATRI)*, 2(2), 1–11. <https://doi.org/10.30872/jatri.v2i2.1493>
- Putra, F., Ramadhani, M. F., Rahman, A., Dewi, M. P., & Hamzah, A. (2025). Formulating Social Security Policy Models for Higher Education: A Funding Transformation for Inclusive and Sustainable Higher Education Access. *International Journal of Sustainable Development & Planning*, 20(7). <https://doi.org/10.18280/ijstdp.200704>
- Putranto, A., Razali, A., & Putra, B. A. (2025). *Komunikasi Media Baru dalam Dunia Pendidikan: Konsep dan Penerapan*. Penerbit Teknologi Informasi.
- Rachmawati, S., & Akharruddin, A. (2024). Strategi Pemberian Kredit dalam Pencegahan Kredit Macet pada PT. BPR Bank Jombang Perseroda. *VISA: Journal of Visions and Ideas*, 4(1), 366.
- Rashid, A., Rasheed, R., Ngah, A. H., Pradeepa Jayaratne, M. D. R., Rahi, S., & Tunio, M. N. (2024). Role of information processing and digital supply chain in supply chain resilience through supply chain risk management. *Journal of Global Operations and Strategic Sourcing*, 17(2), 429-447. <https://doi.org/10.1108/JGOSS-12-2023-0106>
- Rolando, B. (2024). Pengaruh Fintech Terhadap Inklusi Keuangan : Tinjauan Sistematis. *Jurnal Akuntansi Dan Bisnis*, 4(2), 50–63. <https://doi.org/10.51903/jiab.v4i2.808>
- Russell, J., Austin, K., Charlton, K. E., Igwe, E. O., Kent, K., Lambert, K., ... & McMahon, A. T. (2025). Exploring financial challenges and university support systems for student financial Well-Being: A scoping review. *International journal of environmental research and public health*, 22(3), 356. <https://doi.org/10.3390/ijerph22030356>

- Sackett, B. (2024). Ghosted: Challenges to conducting qualitative research in the digital era. *Journal of Contemporary Ethnography*, 53(4), 419-452. <https://doi.org/10.1177/08912416241237543>
- Saidi, A. (2024). Promoting access to, and success in postgraduate education in South Africa: A synthesis of emerging issues. *South African Journal of Higher Education*, 38(1), 1-27.
- Silaen, U., Srihandoko, W., & Listari, S. (2025). *Sustainable Banking Management*. Kesatuan Press.
- Sulistiyono, S. T., Hattori, M., Rochwulaningsih, Y., Matsumoto, A., Masruroh, N. N., & Widisuseno, I. (2025). The dynamics of state-market relations in the quest for world-class universities in Indonesia. *Discover Sustainability*, 6(1), 864. <https://doi.org/10.1007/s43621-025-01635-6>
- Vigim, J. A., Nugraha, N., Sofia, A., Apandi, R. N. N., & Purnomo, B. (2021). Identifikasi Risiko Sistem Informasi Teknologi pada Perguruan Tinggi. *Jurnal Ilmu Manajemen Dan Bisnis*, 12(2), 109–118. <https://doi.org/10.17509/jimb.v12i2.37877>
- Wang, X., Zhang, Z., Zheng, J., Ai, Y., & Wang, R. (2025). Debt Collection Negotiations with Large Language Models: An Evaluation System and Optimizing Decision Making with Multi-Agent. *arXiv preprint arXiv:2502.18228*. <https://doi.org/10.48550/arXiv.2502.18228>
- Wilke, A., van Rhijn, T., Squires, K., & Barton, K. (2024). Digital bonds: Exploring the impact of computer-mediated communication on parent–educator relationships in early childhood education and care. *Education Sciences*, 14(2), 123. <https://doi.org/10.3390/educsci14020123>
- Wulandari, H. A., Astuti, R. P., & Barokah, M. (2025). Peran Teknologi Finansial (Fintech) Dalam Meningkatkan Efisiensi Layanan Keuangan di Indonesia. *Menulis: Jurnal Penelitian Nusantara*, 1(5), 113–120. <https://doi.org/10.59435/MENULIS.V1I5.240>
- Yudhoyono, A. H., Dinda Nadia, F. N., Mudzakkir, M. F., & Suhariadi, F. (2024). Bridging the Gap: Orchestrating Indonesian Higher Education. *Jurnal Manajemen Teori dan Terapan*, 17(2).
- Yulianti, G., Chaidir, M., & Pramono, A. S. (2024). Peran Teknologi Keuangan (Fintech) dalam Mendorong Pertumbuhan Ekonomi dan Inklusi Keuangan di Indonesia: Tantangan dan Peluang. *Citizen : Jurnal Ilmiah Multidisiplin Indonesia*, 4(4), 349–355. <https://doi.org/10.53866/jimi.v4i4.649>