Startupreneur Business Digital (SABDA Journal)
Vol. 5, No. 1, April 2026, pp. 14−22
E-ISSN: 2962-0260 | P-ISSN: 2962-0279, DOI:10.33050

Management Accounting as a Strategic Tool for Public Value in the Higher Education Sector

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Article Info

Article history:
Submission December 01, 2025
Revised January 20, 2026
Accepted February 06, 2026
Published February 11, 2026

Keywords:
MACS
Levers of Control
Public Value Creation

ABSTRACT

This study explores the role of management accounting and control systems (MACS) as conceptualized through Simons Levers of Control framework in supporting public value creation, contributing to the growing body of literature on public value accounting. **Adopting a mixed-method case study approach**, which includes document analysis and semi-structured interviews, the research uncovers varied applications of control systems within a Dutch university of applied sciences. The findings reveal a divergence in how control mechanisms are utilized. **Belief systems and interactive control systems** are employed extensively to facilitate strategic change and support the implementation of new strategic directions. **In contrast**, diagnostic control systems are primarily used at decentralized levels, functioning mainly as instruments to ensure compliance with operational and financial constraints. As such, belief and interactive controls form the core mechanisms for embedding public value considerations within the institution's strategic orientation, while diagnostic controls serve to regulate activities at the operational level. **Additionally**, although the institution emphasizes the importance of engaging with external stakeholders, such interactions predominantly occur during the strategy formulation phase, with limited involvement observed during interim evaluations of the strategy, thereby refining the Levers of Control framework in the context of public value creation and demonstrating that contextual and unbalanced control configurations can effectively support public value orientation in higher education.

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DOI: https://doi.org/10.33050/sabda.v5i1.1012
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1. INTRODUCTION

The concept of public value has become central to public administration discourse as governments and public organizations increasingly emphasize societal impact, legitimacy, and accountability beyond narrow efficiency metrics [1]. Despite this growing prominence, the application of public value within the accounting domain remains relatively limited and fragmented [2]. Existing studies have predominantly approached public value from a conceptual or normative perspective, offering important theoretical insights but providing limited empirical evidence on how accounting systems are mobilized in practice to support public value creation [3]. Addressing this gap, the present study adopts a process oriented perspective that conceptualizes Management

Accounting and Control Systems (MACS) not merely as instruments for measurement and reporting, but as active organizational mechanisms that shape strategic decision-making, guide managerial behavior, and structure ongoing processes of public value creation, particularly within higher education institutions [4, 5].

This study, focusing on universities of applied sciences in the Netherlands, is set in a post New Public Management (NPM) environment characterized by increased performance pressures, market oriented reforms, and demands for measurable outcomes [6]. While these reforms have increased transparency and efficiency, they raise concerns about the potential erosion of higher education's broader social mission [7]. Based on an in-depth qualitative case study, the findings indicate that trust systems and interactive control systems play a central role in embedding public value orientations such as student success, social relevance, and meaningful stakeholder engagement into the organization's strategic practices [8]. In contrast, diagnostic controls and boundaries primarily serve as supporting constraints that protect minimum standards of quality and financial sustainability [9]. This asymmetric configuration challenges the normative assumption of equilibrium in Simons's Levers of Control framework and suggests that the context-specific dominance of certain control levers may be more effective in supporting public value creation in complex public sector environments [10, 11].

Therefore, this study extends the public value accounting literature by providing empirically based insights into how MACS operates as a strategic driver in higher education organizations facing increasing accountability demands and stakeholder complexity. By demonstrating how control systems can be configured to simultaneously support strategic flexibility, institutional accountability, and social impact, this study contributes to the ongoing debate at the intersection of management control, public sector governance, and higher education reform [12]. The findings align with the global agenda of the Sustainable Development Goals, specifically SDG 4 (Quality Education) through improved educational outcomes and inclusiveness, SDG 16 (Peace, Justice, and Strong Institutions) through strengthened governance and public accountability, and SDG 17 (Partnerships for the Goals) through sustained stakeholder engagement in the co-creation of sustainable social value.

2. LITERATURE REVIEW

Recent literature increasingly positions public value as a core analytical lens for understanding the role of public organizations in addressing complex societal challenges, moving beyond performance models oriented toward efficiency and outcomes. Contemporary studies emphasize public value as a dynamic, co-created outcome, shaped by institutional context, stakeholder engagement, and governance arrangements [13]. In this view, public value is not simply an abstract normative goal, but an outcome that emerges through organizational processes and managerial choices [14]. Despite these conceptual advances, scholars continue to highlight the need for empirical research demonstrating how public value is operationalized within organizational systems, particularly in sectors characterized by multiple, sometimes conflicting objectives, such as higher education [15, 16].

Recent studies in the accounting and management control literature increasingly link accounting systems to public value creation, emphasizing that accounting plays a constitutive role in shaping what is defined, measured, and managed in public organizations. Rather than viewing accounting solely as a reporting or accountability mechanism, this stream of research conceptualizes management accounting and control systems (MACS) as a strategic infrastructure influencing priorities, organizational learning, and stakeholder dialogue. However, empirical evidence remains limited on how MACS can be mobilized as sustainable mechanisms for public value creation, particularly in higher education institutions facing strong accountability pressures alongside broader societal missions such as inclusion, knowledge transfer, and social impact.

Recent studies have revisited management control frameworks to emphasize that control systems are shaped by institutional context, governance arrangements, and societal expectations [17]. In higher education institutions influenced by post New Public Management reforms, performance-oriented controls often prioritize measurable indicators such as graduation rates, research output, and financial efficiency at the expense of broader public value objectives, including social inclusion and long-term societal impact [18]. This emphasis creates ongoing tensions between accountability requirements and the public mission of higher education [19]. While these tensions are widely acknowledged, empirical research remains limited in explaining how management accounting and control systems (MACS) are configured and used in practice to reconcile competing demands [20]. In particular, there is a lack of in-depth studies integrating public value theory with management control frameworks to examine how different control configurations can actively support public value creation in higher education institutions [21].

3. METHOD

3.1. Dutch Universities of Applied Sciences

Higher education is organized differently across countries in some countries, it is part of the public sector, in others the private sector, and sometimes a combination of both [22]. This is also the case in the Netherlands, where the strategic agenda for higher education aims to be more integrated with the environment, pursuing impact at the societal level [23]. This research focuses on one of the largest Dutch universities (UAS). UAS is part of the Dutch higher education system [24]. Dutch higher education is a binary system, consisting of research universities (14 institutions, over 290,000 students in 2018, the Vereniging van Universiteiten [VSNU]), which focus on theory and theoretical aspects, and UAS (36 institutions, over 450,000 students, the Vereniging Hogescholen [VH]), which focus on the application of knowledge. UAS has a triple role educating, connecting with industry and society, and conducting research that facilitates these efforts [25]. In the UAS quality assurance system, external bodies play a key role. Most importantly, the Accreditation Organization of the Netherlands and Flanders (NVAO) assesses the quality of educational programs.

3.2. Data Collection and Analysis

This study presents an in-depth qualitative case study of Fontys University of Applied Sciences, the second-largest university of applied sciences in the Netherlands, which operates on a large scale with more than 45,000 students, approximately 5,000 staff members, and a broad educational portfolio comprising 75 bachelor's programs, 28 master's programs, and 15 diploma programs, reflecting its extensive social mandate and strong regional embeddedness [26]. Fontys is characterized by a highly decentralized organizational structure spread across 10 cities, creating a complex governance and control environment and making it a particularly relevant context for examining management accounting and control practices in public higher education institutions [27]. A qualitative case study approach was adopted because it allows for an in-depth understanding of how public organizations operate within complex institutional, regulatory, and social contexts, with data collected through document analysis (see Table 1) and semi-structured interviews to ensure triangulation and analytical rigor [28]. Document analysis was used to provide initial contextual insights into strategic documents, governance structures, and formal control mechanisms, as well as to complement the empirical findings, thereby enabling a comprehensive exploration of how management accounting and control systems are designed and used in practice to support strategic decision-making and public value creation in a large, decentralized higher education institution [29, 30].

Table 1. Case Study Context: Profile of Fontys University of Applied Sciences

Aspect	**Description**
Case organization	Fontys University of Applied Sciences
Country	The Netherlands
Type of institution	Public University of Applied Sciences
Size of institution	Second-largest university of applied sciences in the Netherlands
Number of students	Over 45,000
Number of employees	Approximately 5,000
Academic programs offered	75 bachelor's programs, 28 master's programs, and 15 diploma programs
Organizational structure	Decentralized
Geographic dispersion	Located across 10 cities
Research approach	Qualitative single-case study
Data collection methods	Document analysis and semi-structured interviews
Purpose of document analysis	Preparation for interviews and generation of complementary insights

Table 1 summarizes the context of the case study organization, Fontys University of Applied Sciences, highlighting its size, scope, and structural complexity. With over 45,000 students, approximately 5,000 employees, and operations across 10 cities, Fontys represents a large and decentralized public organization, making it a suitable case for examining the use of management accounting and control systems in a complex institutional environment. The table also outlines the research design and data collection methods, showing that a qualitative single-case study was conducted using document analysis and semi structured interviews, with document analysis serving to inform the interviews and provide complementary empirical insights.

Table 2. Overview of Interviewees

Category	Role/Position	Organizational Level	Number
Internal stakeholders	Executive board members	Central	3
Internal stakeholders	Directors/senior managers	Central	4
Internal stakeholders	Program managers/department heads	Decentralized	5
Internal stakeholders	Controllers/support staff	Central & decentralized	3
External stakeholders	Industry/societal partners	External	2
Total			**17**

Table 2 summarizes the profile of the 17 interviewees included in this study, comprising both internal and external stakeholders. Internal participants represented multiple organizational levels, ranging from executive board members and senior managers at the central level to program managers, department heads, and controllers at decentralized units. This diversity enabled the analysis of variations in the use of management accounting and control systems (MACS) across hierarchical levels. In addition, external stakeholders such as industry and societal partners were included to incorporate perspectives beyond the organization and to strengthen triangulation in examining public value creation.

Table 3. Overview of Interview Protocol

Theme	Focus of Questions	Illustrative Topics
Strategic developments	Strategic orientation and change	Public value ambitions, post-NPM context
Public value framing	Understanding of public value	Societal contribution, educational mission
MACS usage	Use of control systems	Belief, boundary, diagnostic, interactive controls
MACS and public value	Role of MACS in value creation	Strategic alignment, enabling or constraining effects
Stakeholder involvement	Engagement processes	Internal and external stakeholder participation
Evaluation and control	Monitoring and assessment	Performance indicators, feedback practices

Table 3 presents an overview of the semi-structured interview protocol applied in this study. The questions were structured around key themes, including strategic developments, public value orientation, the use of management accounting and control systems (MACS), stakeholder involvement, and evaluation practices. This structure ensured a systematic examination of how control mechanisms are used to support public value creation. The protocol was aligned with public value theory and the Levers of Control framework, allowing for comparability across interviews while retaining flexibility to capture context-specific insights. This design supports the rigor and consistency of the qualitative analysis.

4. RESULT AND DISCUSSION

Presenting findings on strategic developments, followed by a discussion of the control framework [31]. This is followed by the discussion of the role of stakeholders in strategy implementation and evaluation. Strategic Developments to explore which developments play a role in determining strategy, therefore, objectives to rank their importance,The number of respondents mentioning these developments and the number of citations addressing these issues were counted (see Table 1). A distinction was then made between respondents and citations at the central and regional levels. Flexibility and practice-based research emerged as the most frequently raised issues. Flexibility refers to the provision of more personalized and adaptable learning paths, which differ substantially from the fixed educational programs typically offered by UAS. Although much of the information reported by management is qualitative in nature, a considerable amount of quantitative information is also available [32, 33]. Continuous information is provided to managers at the central and regional levels using PowerBI. PowerBI includes information on budget utilization and indicators indicating the level of study success achieved. Financial information has been processed down to the team level, and this also applies to information on student progress, which can be viewed by group and location [34].

Financial reports are reviewed monthly by the control department. If further discussion is needed between central management and decentralized units, Table 2 shows that only 12 of the 17 respondents explicitly mentioned diagnostic controls, which primarily relate to financial indicators (budget and number of personnel) and basic performance indicators such as dropout rates. Meeting these minimum standards is considered a crucial prerequisite for "getting the basics right," as failure to do so would alter the nature of management control [35]. Indicators related to accreditation, NVAO regulations, and educational quality are also consid-

ered fundamental, but the primary focus remains on meeting core operational conditions to ensure stakeholder value expectations. Therefore, these indicators are integrated into the control system to monitor compliance with quality criteria, resulting in significant reliance on MACS, including in the context of quality agreements with the Ministry of Education [36]. In contrast, boundary controls are discussed much more limitedly and primarily relate to risk and decentralization. Budget constraints are seen as an important mechanism for maintaining focus and resource allocation, although the degree of emphasis on financial controls varies across units. Furthermore, the audit unit acts as a third line of defense by conducting thematic audits that support quality assurance [37]. Overall, diagnostic control and boundary control are closely intertwined, with meeting minimum quality standards and financial standing understood as prerequisites for achieving strategic objectives [38].

Empirical analysis shows that specific management accounting tools play a direct role in creating public value. The use of PowerBI enables financial monitoring and performance studies, as well as early identification of student failure risks, thus supporting public value in educational success and inclusiveness. Budget reports and education quality indicators serve as diagnostic mechanisms to ensure compliance with accreditation and core quality standards, which are prerequisites for achieving broader societal impact [39]. These findings confirm that the contribution of management accounting and control systems (MACS) to public value is operational and integrated into everyday organizational practices. The Levers of Control framework is used as an analytical lens to demonstrate that asymmetric control configurations can effectively support a public value orientation [40]. In the case study, trust systems and interactive controls form the primary strategic logic, while diagnostic and boundary controls serve as supporting mechanisms that establish minimum performance and quality thresholds [41]. This configuration challenges the normative assumption of Simons' equilibrium and highlights that the selective dominance of certain levers, influenced by the institutional context and stakeholder demands, can enhance local flexibility but also pose risks to institutional accountability if not consciously managed [42].

Figure 1. Integrating MACS for Enhanced Stakeholder Engagement

This figure 1 illustrates how management accounting and control systems (MACS) function as operational mechanisms in the process of creating public value through stakeholder engagement. Internal performance data such as that generated through PowerBI and budget reports is used not only for internal control purposes but also serves as a critical input in ongoing dialogue with external stakeholders. Feedback from surveys, community forums, and stakeholder interactions is then integrated back into the management accounting system to assess social impacts, such as student success and the institution's contribution to society. This cyclical process emphasizes that MACS acts as an enabling infrastructure that connects transparency, adaptability, and public accountability, thus supporting the sustainable creation of public value within higher education organizations.

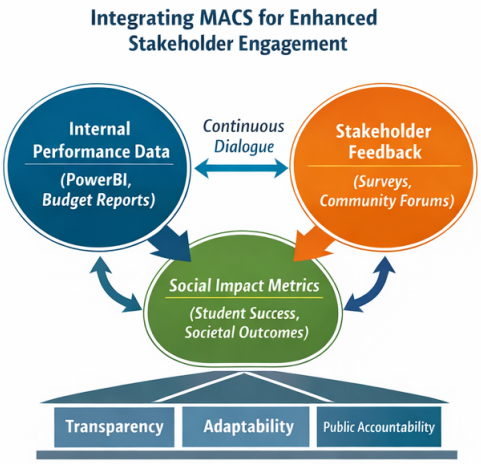

Figure 2. Refining the Levers of Control in Public Value Context

This figure 2 presents a refinement of Simons' Levers of Control (LoC) framework in the context of public value creation. Rather than assuming a normative balance between levers, the figure demonstrates an asymmetrical and contextual control configuration, where belief systems and interactive controls are the primary drivers of public value creation through shared vision formation, strategic dialogue, and stakeholder-involved innovation. Meanwhile, diagnostic and boundary controls serve as supporting mechanisms that establish minimum performance standards, compliance, and operational boundaries. This configuration emphasizes that in public sector organizations, the effectiveness of management control is not determined by the formal balance between levers, but rather by the organization's ability to adapt the use of controls to the public value orientation and the complexity of stakeholder demands.

5. MANAGERIAL IMPLICATIONS

The findings of this study indicate that leaders and managers in public higher education institutions need to position belief systems and interactive control systems as the primary mechanisms for integrating public value orientation into managerial practices. Clear articulation of the vision, mission, and public values, supported by strategic dialogue across organizational levels, enables public values to be internalized in daily decision-making and not merely at the symbolic level. Thus, MACS serves as a means of organizational learning and strategic alignment, not merely as a tool of administrative control.

The results also indicate that the effectiveness of control in the higher education context does not depend on the balanced application of all control levers, but rather on a contextual and adaptive control configuration. The dominance of belief and interactive controls can productively support innovation, responsiveness, and public value creation, as long as diagnostic and boundary controls are designed as enabling constraints that ensure educational quality, financial accountability, and regulatory compliance. These implications encourage managers to reflectively adapt the design and use of MACS to institutional complexity and stakeholder demands, rather than rigidly following normative control models.

The differences in the use of control between central and decentralized levels highlight the importance of strengthening coordination and learning mechanisms across organizational levels. Central management needs to ensure that performance information, strategic learning, and input from decentralized units can be consolidated without compromising the local autonomy necessary for educational innovation. Furthermore, expanding external stakeholder involvement in the strategy evaluation phase will strengthen the legitimacy and social relevance of institutional policies, while enhancing the organization's capacity to create sustainable public value.

6. CONCLUSION

By examining in-depth the interplay between governance structures, post New Public Management (NPM) policy logics, and managerial control configurations, this study provides conceptual insights relevant for further research in other higher education contexts, including research universities or higher education systems in countries with different regulatory regimes. While the findings are contextual and not intended to be directly generalized, the study's primary contribution lies in enriching the theoretical and analytical framework that can be tested, compared, and refined through future cross-case studies.

This study uses Simons' Levers of Control (LoC) framework to analyze how management accounting and control systems (MACS) are used as public value creation tools. While Simons' model emphasizes the importance of balancing the four levers of control belief, interactive, diagnostic, and boundary controls the empirical findings indicate that the use of control at the university of applied sciences studied is unbalanced but contextual. Belief systems and interactive controls serve as primary strategic mechanisms in strategy formulation, implementation, and learning, while diagnostic and boundary controls are primarily used as basic prerequisites to ensure educational quality and adequate financial performance. These findings also emphasize the importance of distinguishing between centralized and decentralized control practices and understanding MACS as a complementary control package.

Furthermore, this study challenges normative assumptions about the balance of controls by demonstrating that in public value oriented public sector organizations, control effectiveness depends on the selective dominance of certain levers tailored to the institutional context and stakeholder demands. Diagnostic and boundary controls act as enabling constraints, while belief and interactive controls encourage innovation, learning, and strategic alignment. These findings align with the ambidexterity literature and recent meta-studies showing that diagnostic controls often serve as boundary conditions. Furthermore, this study emphasizes the importance of stakeholder engagement in strategy formulation and evaluation, given that higher education creates public value at multiple levels and for diverse actors, and the legitimacy and effectiveness of strategies are highly dependent on such participatory processes.

7. DECLARATIONS

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7.2. Author Contributions

Conceptualization: FA; Methodology: LR; Software: LR; Validation: AF and AF; Formal Analysis: FA and AF; Investigation: LR; Resources: LR; Data Curation: AF; Writing Original Draft Preparation: FA and LR; Writing Review and Editing: FA and LR.; Visualization: LR; All authors, FA, LR and AF have read and agreed to the published version of the manuscript.

7.3. Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

7.4. Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

REFERENCES

[1] C. Van Noordt and L. Tangi, "The dynamics of ai capability and its influence on public value creation of ai within public administration," *Government Information Quarterly*, vol. 40, no. 4, p. 101860, 2023.
[2] M. Mazzucato and J. Ryan-Collins, "Putting value creation back into "public value": from market-fixing to market-shaping," *Journal of Economic Policy Reform*, vol. 25, no. 4, pp. 345–360, 2022.

[3] L. Salemans and T. Budding, "Management accounting and control systems as devices for public value creation in higher education," *Financial Accountability & Management*, vol. 40, no. 1, pp. 105–123, 2024.
[4] G. D. Carnegie, "Global university rankings: The macro-micro contradiction in public university management," *Accounting and Management Review— Revista de Contabilidade e Gestão*, vol. 26, no. 1, 2022.
[5] A. Scupola and I. Mergel, "Co-production in digital transformation of public administration and public value creation: The case of denmark," *Government Information Quarterly*, vol. 39, no. 1, p. 101650, 2022.
[6] T. Christensen and P. Lægreid, "Taking stock: New public management (npm) and post-npm reforms-trends and challenges," *Handbook on the politics of public administration*, pp. 38–49, 2022.
[7] P. Virtanen and H. Jalonen, "Public value creation mechanisms in the context of public service logic: an integrated conceptual framework," *Public Management Review*, vol. 26, no. 8, pp. 2331–2354, 2024.
[8] E. K. Funck, "Management control under post-npm: Replacing performance evaluation with trust-based management," *Financial Accountability & Management*, vol. 41, no. 2, pp. 346–363, 2025.
[9] N. Muravu, "Strategic performance measurement and management: The distinctive nature of the public sector and implications on performance measures," *IOSR Journal of Business and Management*, vol. 25, no. 12, pp. 26–52, 2023.
[10] P. Pavone, P. Ricci, and M. Calogero, "New challenges for public value and accountability in the age of big data: a bibliometric analysis," *Meditari Accountancy Research*, vol. 32, no. 2, pp. 396–423, 2024.
[11] T. J. Kallio, K.-M. Kallio, M. Huusko, R. Pyykkö, and J. Kivistö, "Balancing between accountability and autonomy: the impact and relevance of public steering mechanisms within higher education," *Journal of Public Budgeting, Accounting & Financial Management*, vol. 34, no. 6, pp. 46–68, 2022.
[12] R. S. Barros and A. M. D. S. d. C. Ferreira, "Management control systems and innovation: a levers of control analysis in an innovative company," *Journal of Accounting & Organizational Change*, vol. 18, no. 4, pp. 571–591, 2022.
[13] P. A. Sunarya, U. Rahardja, S. C. Chen, Y.-M. Lic, and M. Hardini, "Deciphering digital social dynamics: A comparative study of logistic regression and random forest in predicting e-commerce customer behavior," *Journal of Applied Data Sciences*, vol. 5, no. 1, pp. 100–113, 2024.
[14] L. Höglund, M. Mårtensson, and K. Thomson, "Strategic management, management control practices and public value creation: the strategic triangle in the swedish public sector," *Accounting, Auditing & Accountability Journal*, vol. 34, no. 7, pp. 1608–1634, 2021.
[15] K. Baird, S. Su, and R. Munir, "The mediating role of levers of controls on the association between sustainable leadership and organisational resilience," *Journal of Management Control*, vol. 34, no. 2, pp. 167–200, 2023.
[16] F. Alfiana, N. Khofifah, T. Ramadhan, N. Septiani, W. Wahyuningsih, N. N. Azizah, and N. Ramadhona, "Apply the search engine optimization (seo) method to determine website ranking on search engines," *International Journal of Cyber and IT Service Management*, vol. 3, no. 1, pp. 65–73, 2023.
[17] S. Ayuso, X. Carbonell, and L. Serradell, "Assessing universities' social sustainability: Accounting for stakeholder value," *International Journal of Sustainability in Higher Education*, vol. 23, no. 2, pp. 443–457, 2022.
[18] T. T. T. Phong, H. M. Dao, L. A. T. Nguyen *et al.*, "Impact of strategic management accounting on operating performance: research in public universities of vietnam," *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev.*, vol. 8, no. 8, p. 60, 2023.
[19] A. Y. M. Alastal, A. Ateeq, S. A. Ali, C. Z. M. Jamil, and H. Abd-Mutalib, "Levers of control framework and environmental strategy," in *The AI Revolution: Driving Business Innovation and Research: Volume 1*. Springer, 2024, pp. 485–495.
[20] T. Gonçalves and C. Gaio, "The role of management accounting systems in global value strategies," *Journal of Business Research*, vol. 124, pp. 603–609, 2021.
[21] D. S. Wuisan and T. Handra, "Maximizing online marketing strategy with digital advertising," *Startupreneur Business Digital (SABDA Journal)*, vol. 2, no. 1, pp. 22–30, 2023.
[22] U. Rahardja, T. Hongsuchon, T. Hariguna, and A. Ruangkanjanases, "Understanding impact sustainable intention of s-commerce activities: The role of customer experiences, perceived value, and mediation of relationship quality," *Sustainability*, vol. 13, no. 20, p. 11492, 2021.
[23] P. Pineda and S. Mishra, "The semantics of diversity in higher education: differences between the global

north and global south," *Higher Education*, vol. 85, no. 4, pp. 865–886, 2023.
[24] M. Soleymanpor, R. Norouzi Ajirloo, and T. Alizadeh Hossein Hajloo, "Investigating the role of strategic control levers on competitive advantage with the role of innovative performance," *Journal of Strategic Management Studies*, vol. 15, no. 60, pp. 287–300, 2024.
[25] A. H. Hussain, A. Ummihusna, S. Eni, W. N. W. Mohamad, and N. C. Musa, "Integrating industry 4.0 into higher education: a case study of a drone course for multidisciplinary learning course," *International Journal of Academic Research in Business and Social Sciences*, vol. 14, no. 6, 2024.
[26] C. M. White, S. Mangubhai, L. Rumetna, and C. M. Brooks, "The bridging role of non-governmental organizations in the planning, adoption, and management of the marine protected area network in raja ampat, indonesia," *Marine Policy*, vol. 141, p. 105095, 2022.
[27] Z. Aripin, F. Yulianty *et al.*, "A quantitative performance management framework to improve community economy through omnichannel supply chain: a case study in the banking and marketing industry," *KRIEZ ACADEMY: Journal of development and community service*, vol. 1, no. 1, pp. 15–24, 2023.
[28] O. Neumann, K. Guirguis, and R. Steiner, "Exploring artificial intelligence adoption in public organizations: a comparative case study," *Public Management Review*, vol. 26, no. 1, pp. 114–141, 2024.
[29] F. Kitsios, M. Kamariotou, and A. Mavromatis, "Drivers and outcomes of digital transformation: The case of public sector services," *Information*, vol. 14, no. 1, p. 43, 2023.
[30] B. E. Sibarani, C. Anggreani, B. Artasya, and D. A. P. Harahap, "Unraveling the impact of self-efficacy, computer anxiety, trait anxiety, and cognitive distortions on learning mind your own business: The student perspective," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 6, no. 1, pp. 29–40, 2024.
[31] J. A. Pfister, P. Peda, and D. Otley, "A methodological framework for theoretical explanation in performance management and management control systems research," *Qualitative Research in Accounting & Management*, vol. 20, no. 2, pp. 201–228, 2023.
[32] C. Lukita, G. A. Pangilinan, M. H. R. Chakim, D. B. Saputra *et al.*, "Examining the impact of artificial intelligence and internet of things on smart tourism destinations: A comprehensive study," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 5, no. 2sp, pp. 135–145, 2023.
[33] D. Agostino and M. Arnaboldi, "From cost accounting to strategic cost management: The experience of italian higher education," in *Managing Public Services*. Routledge, 2021, pp. 61–78.
[34] E. Bracci, T. Mouhcine, T. Rana, and D. Wickramasinghe, "Risk management and management accounting control systems in public sector organizations: a systematic literature review," *Public Money & Management*, vol. 42, no. 6, pp. 395–402, 2022.
[35] D. S. S. Wuisan, R. A. Sunardjo, Q. Aini, N. A. Yusuf, and U. Rahardja, "Integrating artificial intelligence in human resource management: A smartpls approach for entrepreneurial success," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 5, no. 3, pp. 334–345, 2023.
[36] E. Bracci, I. Saliterer, M. Sicilia, and I. Steccolini, "Accounting for (public) value (s): reconsidering publicness in accounting research and practice," *Accounting, Auditing & Accountability Journal*, vol. 34, no. 7, pp. 1513–1526, 2021.
[37] M. Carlsson-Wall, L. Goretzki, J. Hofstedt, K. Kraus, and C.-J. Nilsson, "Exploring the implications of cloud-based enterprise resource planning systems for public sector management accountants," *Financial accountability & management*, vol. 38, no. 2, pp. 177–201, 2022.
[38] L. Cannavacciuolo, G. Capaldo, and C. Ponsiglione, "Digital innovation and organizational changes in the healthcare sector: multiple case studies of telemedicine project implementation," *Technovation*, vol. 120, p. 102550, 2023.
[39] H. Salmanzadeh, G. Kordestani, and H. Kazemi, "The role of management accounting in improving management control system in public sector," *Iranian Journal of Finance*, vol. 6, no. 1, pp. 54–82, 2022.
[40] E. Dolan, S. Kosasi, and S. N. Sari, "Implementation of competence-based human resources management in the digital era," *Startupreneur Business Digital (SABDA Journal)*, vol. 1, no. 2, pp. 167–175, 2022.
[41] G. Grossi, I. Steccolini, P. Adhikari, J. Brown, M. Christensen, C. Cordery, L. Ferry, P. Lassou, B. McDonald III, R. Raudla *et al.*, "The future of public sector accounting research. a polyphonic debate," *Qualitative Research in Accounting & Management*, vol. 20, no. 1, pp. 1–37, 2023.
[42] K. DERROUICH, E.-Z. Zakaria, and A. ELASSALI, "Conceptual analysis of the role of accounting in optimizing the management of higher education institutions," *International Journal of Accounting Finance Auditing Management and Economics*, vol. 6, no. 4, pp. 733–746, 2025.