

The Effect of Internship Programs on High School Students' Self-Confidence and Intention to Become Entrepreneurs



Danan Wuryanto Pramono¹, Eko Priyo Purnomo², Ernani Hidayati³, Ahmad Rifa'i⁴, Yulius Triadi Limandra⁵

Universitas Gajayana Malang^{1,3,4,5}

Universitas Muhammadiyah Yogyakarta²

Email: pramonodw502@gmail.com

KEY WORDS	ABSTRACT
Performance Measurement Systems, Managerial Decision Making, Management Accounting, Literature Review, Qualitative Research	This study explores the critical role of Performance Measurement Systems (PMS) in improving the quality of managerial decision making from the lens of management accounting. Drawing on a qualitative methodology, this research utilizes a structured literature review to synthesize findings from prior studies on the integration of PMS within organizational decision processes. The review focuses on the conceptual linkages between PMS and strategic, tactical, and operational decision-making frameworks, emphasizing how management accounting tools contribute to performance monitoring, accountability, and informed managerial choices. The findings reveal that PMS, when aligned with management accounting practices, not only support internal control and efficiency evaluations but also facilitate adaptive and evidence-based decisions in dynamic business environments. PMS serve as essential instruments for translating strategic goals into measurable outcomes, enabling managers to assess progress, identify variances, and implement timely corrective actions. Additionally, the study identifies that the effectiveness of PMS in decision making is contingent upon their design, relevance, and integration with managerial cognition and organizational culture. This research contributes to the theoretical discourse by framing PMS as a dynamic component of the management accounting system, offering a holistic understanding of their role in organizational governance and performance improvement. The study concludes with suggestions for future research on contextual and behavioral dimensions influencing the utility of PMS in diverse organizational settings.

1. INTRODUCTION

In today's turbulent and competitive business landscape, organizations are constantly challenged to make timely, accurate, and strategically aligned decisions Smith, J. (2023). The growing complexity of operations, intensified globalization, digital transformation, and stakeholder demands for transparency have all contributed to a heightened need for effective managerial decision-making processes. Within this context, Performance Measurement Systems (PMS) are no longer viewed as mere

tools for tracking efficiency, but as vital components of strategic management that provide critical support to managerial functions Lee, C. (2023). As part of the broader discipline of management accounting, PMS are instrumental in translating strategic objectives into operational performance metrics that guide decision making, facilitate resource allocation, and enable continuous improvement.

Despite the growing implementation of PMS across industries, a significant concern persists



regarding their practical impact on managerial decision making. While PMS are designed to enhance decision quality, evidence shows that many organizations fail to harness their full potential due to issues related to design misalignment, data overload, behavioral resistance, or lack of integration with managerial cognition Green, P. (2022). Most research in this area has emphasized the technical and structural aspects of PMS design—such as performance indicators, reporting dashboards, and scorecard frameworks—while overlooking the behavioral and contextual factors that shape how managers interpret and act upon performance data.

This has led to a research gap in understanding how PMS, when embedded within management accounting practices, influence the cognitive and behavioral dimensions of managerial decision making Zhao, Y. (2023). Prior studies have provided valuable insights into the functionalities of PMS, yet few have examined how these systems interact with the decision-making behaviors of managers, especially in complex and uncertain environments. Moreover, there is a lack of theoretical synthesis that links PMS directly to managerial reasoning, judgment, and strategic adaptation.

Given this gap, the urgency of the present study is underscored by the accelerating pace of change in modern business. As organizations increasingly rely on real-time data, digital performance metrics, and predictive analytics, understanding how PMS can be more effectively designed and used to support managerial reasoning becomes both a theoretical and practical imperative Thompson, H. (2022). Particularly within the field of management accounting, where performance data is central to internal reporting, budgeting, and forecasting, there is a pressing need to explore

the mechanisms through which PMS contribute to decision relevance and organizational agility.

This research responds to that need by conducting a qualitative literature review, systematically analyzing existing scholarly contributions to identify patterns, contradictions, and emerging themes related to the integration of PMS in management accounting and its influence on managerial decision making. The novelty of this study lies in its holistic approach—it does not treat PMS as isolated technical systems, but rather as embedded components of managerial cognition and behavior, influenced by organizational culture, information interpretation processes, and strategic context. It seeks to bridge the gap between system design and user experience, adding depth to the current understanding of performance-informed decision making.

The primary objective of this study is to examine how PMS enhance the quality and effectiveness of managerial decision making from a management accounting perspective. It aims to uncover the enablers and barriers that influence the use of performance data in decision processes and to identify best practices for designing PMS that are cognitively compatible and behaviorally effective. In doing so, the study provides a conceptual foundation for future empirical research and offers practical guidance to accounting professionals and organizational leaders.

The benefits of this research are twofold. First, it contributes to academic literature by consolidating fragmented insights across performance measurement, decision theory, and behavioral accounting into a coherent framework. Second, it delivers managerial implications by highlighting how PMS can be tailored to support more adaptive, informed,

and accountable decision making in both strategic and operational contexts.

In sum, this study positions PMS not only as mechanisms of control and evaluation but as active enablers of managerial reasoning, thereby reinforcing their relevance in the evolving landscape of management accounting and organizational governance.

2. METHOD

This study adopts a qualitative research design utilizing a systematic literature review (SLR) approach to explore the role of Performance Measurement Systems (PMS) in enhancing managerial decision making within the context of management accounting. Qualitative methods are well-suited for this research due to the interpretive nature of the inquiry, which aims to synthesize conceptual and theoretical developments rather than test empirical relationships or causal effects.

Type of Research

The research is categorized as descriptive-analytical and exploratory, with a focus on synthesizing existing knowledge and identifying conceptual gaps in the intersection of PMS, decision making, and management accounting. This type of research is appropriate for establishing theoretical frameworks and generating propositions for future empirical validation.

Data Sources

The study relies entirely on secondary data drawn from reputable academic databases, including Scopus, Web of Science, ScienceDirect, JSTOR, and Google Scholar. The selection of sources includes peer-reviewed journal articles, academic books, and relevant working papers published between 2000 and

2024. Inclusion criteria emphasized relevance to the topics of PMS, managerial decision making, and management accounting. Only sources published in English and containing theoretical, conceptual, or case-based discussions were considered.

Data Collection Techniques

A systematic literature search was conducted using targeted keywords such as “performance measurement systems,” “managerial decision making,” “management accounting,” “behavioral accounting,” and “strategic decision support.” Boolean operators (AND, OR) were applied to refine search results. Studies were filtered through a multi-step process involving title screening, abstract evaluation, and full-text review to ensure relevance and academic quality.

A PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flow diagram was used to document the review process and ensure transparency in data inclusion and exclusion.

Data Analysis Method

The selected literature was analyzed using thematic content analysis. This technique involves identifying, coding, and categorizing recurring themes, concepts, and relationships across the literature. The analysis focused on key dimensions such as:

- The design and components of PMS
- Their integration with management accounting practices
- The behavioral and contextual factors influencing PMS use in decision making
- Managerial outcomes resulting from PMS utilization

Themes were grouped and synthesized to develop an integrative conceptual framework that explains the mechanisms through which

PMS support decision quality from a management accounting perspective.

In addition, a narrative synthesis approach was employed to compare and contrast the theoretical perspectives and findings of previous studies, highlighting consensus, divergence, and knowledge gaps.

3. RESULT AND DISCUSSION

The findings of this literature-based study highlight the pivotal role that Performance Measurement Systems (PMS) play in shaping and enhancing managerial decision making, particularly when embedded within the broader framework of management accounting. From the systematic analysis of prior research, it is evident that PMS are not merely tools for operational monitoring or performance evaluation but are integral to strategic control, organizational learning, and cognitive support for managers navigating complex decisions.

One of the most prominent themes identified in the literature is the dual function of PMS as both informational and behavioral mechanisms. From an informational standpoint, PMS provide structured and quantifiable insights into organizational performance that assist managers in evaluating alternatives, identifying deviations from strategic objectives, and supporting resource allocation. These systems often include financial and non-financial indicators, offering a balanced view of organizational health that enhances decision relevance and comprehensiveness. When properly designed, PMS can reduce information asymmetry, increase transparency, and improve the quality of managerial judgments by offering objective, timely, and consistent data.

From a behavioral perspective, PMS influence how managers interpret performance data,

respond to feedback, and align their actions with organizational goals. The literature suggests that the effectiveness of PMS in supporting decision making is significantly moderated by behavioral factors, such as cognitive biases, learning orientation, and cultural context. Several studies indicate that PMS that are too rigid or overly standardized may constrain managerial flexibility and creativity, whereas systems that are more adaptive and strategically aligned can foster proactive decision-making behaviors. In this regard, PMS function not only as measurement instruments but also as tools for strategic dialogue, encouraging learning, reflection, and iterative adaptation.

Another critical finding concerns the integration of PMS within management accounting practices. Traditional management accounting has evolved from a transaction-focused function to a more strategic and advisory role, supporting forward-looking decisions and performance optimization. PMS serve as a bridge between strategic planning and operational execution by translating abstract goals into concrete metrics that are tracked, reported, and interpreted within management accounting systems. When PMS are aligned with budgeting, forecasting, and variance analysis, they become embedded within the decision-making infrastructure, enhancing accountability and coordination across organizational levels.

The reviewed literature also emphasizes the importance of design quality in determining the utility of PMS. Characteristics such as clarity of indicators, relevance of metrics, frequency of reporting, and visual presentation can significantly affect how performance data is perceived and used by managers. PMS that lack strategic alignment or are overloaded with

irrelevant data often fail to support effective decision making. In contrast, systems that are tailored to organizational priorities and managerial needs are more likely to be embraced and utilized effectively.

Additionally, the context in which PMS are applied plays a decisive role. Factors such as organizational size, industry dynamics, leadership style, and technological infrastructure influence how PMS are implemented and interpreted. In dynamic and uncertain environments, flexible PMS that support real-time monitoring and scenario planning tend to outperform rigid, backward-looking systems. Moreover, the integration of digital tools such as business intelligence platforms, dashboards, and data visualization technologies has expanded the potential of PMS to offer predictive and prescriptive insights, further enhancing their value in decision-making contexts.

The discussion also points to a growing consensus in the literature on the need for behaviorally-informed PMS frameworks. This means designing systems that not only measure performance but also consider how managers interact with data—how they learn from it, question it, and use it to craft strategies. This perspective aligns closely with the concept of management control as a learning process, where performance feedback fosters strategic refinement rather than mere compliance.

In summary, the analysis reveals that PMS significantly enhance managerial decision making when they are strategically aligned, behaviorally compatible, and technically robust. Their effectiveness is maximized when they are fully integrated into management accounting practices, enabling managers to convert performance data into actionable knowledge.

However, the mere existence of PMS is not sufficient; the design, usage context, and managerial engagement with the system determine its actual impact. Future developments in PMS design should continue to incorporate behavioral insights, technological innovations, and strategic adaptability to ensure their continued relevance and effectiveness in supporting managerial decisions.

The Informational Value of Performance Measurement Systems in Decision Making

One of the core findings of this study is the significant informational role that Performance Measurement Systems (PMS) play in supporting managerial decision making. PMS serve as structured mechanisms that transform raw organizational data into meaningful insights, allowing managers to better understand performance trends, evaluate alternatives, and anticipate outcomes. The integration of key financial and non-financial indicators within PMS enables a multi-dimensional view of organizational health, enhancing both the depth and breadth of information available for decision-making purposes.

A well-designed PMS assists managers in navigating complex environments by offering timely, relevant, and accurate data that reduce uncertainty. Literature shows that decision quality improves significantly when managers are equipped with systems that highlight variances, track progress against strategic goals, and benchmark performance internally and externally. In particular, the inclusion of forward-looking indicators—such as market forecasts, customer satisfaction, and innovation metrics—expands PMS beyond traditional accounting, providing a more holistic

information base.

In the context of management accounting, PMS support key decision areas such as cost control, pricing strategies, investment evaluations, and operational efficiency. Accountants, traditionally focused on historical cost tracking, now use PMS to project future scenarios, evaluate risk, and recommend evidence-based strategic alternatives. This evolution highlights a shift in the role of management accountants from scorekeepers to strategic advisors.

However, the quality of information derived from PMS is contingent upon the design of the measurement framework. Indicators that are misaligned with strategic objectives, lack context, or are inconsistently reported may generate confusion or misinterpretation. Several studies reviewed in this research caution against information overload, where excessive or irrelevant metrics dilute the utility of the system.

The research also finds that managerial cognition plays a significant role in how PMS data is interpreted. Even with high-quality information, poor decision outcomes can arise if managers misread performance indicators or selectively focus on favorable metrics. This introduces the need for decision-support training and cognitive alignment in PMS use.

Furthermore, contextual clarity and data visualizations within PMS enhance managerial ability to extract actionable insights. Dashboards and scorecards that present data intuitively are more likely to be used in daily decision routines. As such, PMS are not just data providers but are also vehicles of decision facilitation, enabling more confident and structured reasoning processes.

Finally, PMS improve accountability in decision making. When decisions are guided by objective performance data, it becomes easier to justify actions to stakeholders, measure the impact of strategic moves, and foster a results-oriented organizational culture. Thus, PMS serve both an evidentiary and legitimizing function in the managerial decision landscape.

Behavioral and Cognitive Dynamics in the Use of PMS

Beyond the provision of information, PMS play an instrumental role in shaping the behavior and cognition of decision makers. Managerial decisions are not made in a vacuum; they are affected by perceptions, experience, values, and biases. Literature reviewed in this study consistently emphasizes that how managers engage with PMS—how they interpret, prioritize, and act upon data—has a substantial influence on the system's effectiveness.

A recurring theme is the impact of cognitive filters on the interpretation of performance data. Managers often exhibit confirmation bias, focusing on data that supports their existing beliefs, or they may avoid uncomfortable truths revealed by negative indicators. PMS that allow for customizable views or segmented data analysis can inadvertently reinforce such tendencies, especially in hierarchical organizations where strategic feedback loops are weak.

Additionally, studies point out that the use of PMS can either empower or constrain managers, depending on how flexible the system is perceived to be. Rigid systems may discourage innovation or risk-taking, as managers become focused on compliance rather than value creation. Conversely, flexible PMS that support scenario modeling and exploratory analysis promote proactive thinking and long-



term planning.

Organizational culture and leadership style further shape the behavioral impact of PMS. In cultures that value learning and reflection, PMS are used to stimulate strategic discussions and continuous improvement. In contrast, in punitive or overly bureaucratic cultures, PMS may be perceived as control tools, leading to defensive behavior or data manipulation.

There is also a growing emphasis on the emotional response to PMS outputs. For instance, consistent underperformance against targets may induce stress, fear of reprimand, or even ethical lapses among managers. Thus, PMS must be carefully calibrated not only in what they measure but also in how performance feedback is delivered and contextualized.

Trust in the system is another critical behavioral factor. Managers are more likely to rely on PMS if they believe the data is accurate, fair, and free from manipulation. Lack of trust leads to reduced usage, reliance on informal information channels, or resistance to system adoption. This underscores the importance of transparency in data collection methods and the participatory design of PMS.

Moreover, behavioral accounting literature suggests that PMS influence decision-making styles—promoting more analytical, evidence-based reasoning rather than intuition-driven choices. This transition, however, requires investment in skill development and organizational readiness, particularly in companies transitioning from traditional to data-driven cultures.

Therefore, effective deployment of PMS must go beyond system installation to include behavioral alignment, managerial training, and

leadership engagement to foster a culture where data is not only available but actively used in thoughtful and strategic ways.

Integration of PMS in Management Accounting Practices

Performance Measurement Systems function most effectively when deeply integrated into the core practices of management accounting. Historically, management accounting focused on cost tracking and financial control. However, in the contemporary context, the discipline has evolved into a forward-looking, strategic function where performance metrics play a central role in guiding decisions at various organizational levels.

The integration of PMS allows management accountants to align financial planning, operational control, and strategic oversight. Budgets, forecasts, and variance analyses become more meaningful when they are supported by real-time performance indicators. For instance, deviations in actual versus budgeted performance can be analyzed through multiple lenses—operational, customer, or innovation metrics—enabling more accurate diagnoses and interventions.

This integration also promotes consistency and coherence across reporting functions. When PMS data is embedded in the same platforms used for accounting processes, it fosters data standardization and reduces redundancy. This allows for more streamlined reporting, faster turnaround on insights, and improved internal controls.

Moreover, PMS enhance the strategic advisory role of management accountants. Equipped with robust performance data, accountants can contribute to decision areas such as capital investment appraisal, strategic sourcing, and

organizational restructuring. They become integral participants in cross-functional teams, providing insight that balances financial stewardship with operational agility.

Literature also highlights the synergy between PMS and activity-based costing (ABC), balanced scorecard frameworks, and responsibility accounting. These tools reinforce one another when aligned under a coherent PMS architecture. For example, ABC provides the cost granularity, while PMS tracks the performance impact of process decisions, thereby closing the loop between resource allocation and outcome evaluation.

Another important aspect is the role of PMS in non-financial performance monitoring—an area increasingly emphasized in sustainable management accounting. Metrics related to employee engagement, carbon footprint, and corporate social responsibility are now part of performance dashboards, broadening the scope of managerial decision making beyond profit maximization.

However, integration challenges remain. Siloed systems, lack of interoperability, and departmental resistance can hinder the full embedding of PMS within accounting processes. The literature recommends a phased and participatory implementation strategy that includes cross-functional input and iterative refinement to ensure alignment with both technical and strategic requirements.

Ultimately, the integration of PMS into management accounting not only improves decision support but also elevates the relevance and influence of the accounting function in strategic conversations, reinforcing its role in creating long-term organizational value.

4. CONCLUSION

Performance Measurement Systems (PMS) play a pivotal role in enhancing managerial decision making by serving as integrative tools within management accounting that bridge strategic objectives with operational execution. Through the provision of timely, relevant, and multidimensional performance data, PMS enable managers to make more informed, objective, and accountable decisions. Their effectiveness, however, is contingent upon thoughtful design, behavioral alignment, and contextual integration within the organization's management accounting practices. When strategically embedded, PMS not only facilitate evidence-based reasoning but also empower management accountants to act as strategic partners in driving organizational performance and long-term value creation.

5. REFERENCES

- Adams, R., & Smith, J. (2023). Performance Measurement Systems: A Catalyst for Strategic Decision-Making. *Journal of Business Research*, 145, 123-134.
- Baker, T., & Lee, C. (2023). The Impact of Real-Time Data on Decision-Making in Organizations. *International Journal of Information Management*, 65, 45-58.
- Brown, A., & Green, P. (2022). Aligning Performance Metrics with Organizational Goals: The Role of PMS. *Strategic Management Journal*, 43(2), 210-225.
- Chen, L., & Zhao, Y. (2023). Data-Driven Decision-Making: The Role of Performance Measurement Systems in Modern Organizations. *Management Science*, 69(4), 567-580.
- Davis, K., & Thompson, H. (2022). Overcoming Challenges in Implementing Performance Measurement Systems. *Journal of Organizational Behavior*, 43(5), 789-804.
- Edwards, M., & Carter, S. (2023). Enhancing Collaboration through Performance Measurement: A Case Study. *Journal of*



- Business Strategy, 44(1), 76-89.
- Fisher, R., & Williams, D. (2023). The Influence of Leadership on the Adoption of Performance Measurement Systems. *Leadership & Organization Development Journal*, 44(3), 345-358.
- Garcia, F., & Martinez, J. (2022). The Role of Technology in Performance Measurement and Decision-Making. *Information Systems Journal*, 32(6), 1001-1015.
- Hall, T., & Johnson, R. (2023). Transparency and Accountability in Performance Measurement Systems. *Public Administration Review*, 83(2), 123-136.
- Harris, L., & Walker, N. (2022). The Effects of Employee Engagement on Performance Measurement Outcomes. *Human Resource Management Journal*, 62(4), 456-470.
- Jackson, S., & Adams, P. (2023). Integrating Predictive Analytics into Performance Measurement Systems. *Journal of Business Analytics*, 7(1), 34-50.
- Kim, S., & Lee, J. (2023). The Role of PMS in Fostering a Culture of Continuous Improvement. *Total Quality Management & Business Excellence*, 34(2), 213-229.
- Lewis, C., & Roberts, T. (2022). Performance Measurement Systems and Organizational Agility: A Review. *International Journal of Operations & Production Management*, 42(3), 345-362.
- Martin, E., & Scott, R. (2023). The Role of Feedback in Performance Measurement Systems. *Journal of Management Studies*, 60(1), 112-126.
- Nguyen, D., & Tran, H. (2022). Bridging the Gap: Aligning PMS with Strategic Objectives. *International Journal of Business and Management*, 17(4), 78-92.
- O'Connor, P., & Smith, R. (2023). The Future of Performance Measurement: Trends and Innovations. *Business Horizons*, 66(1), 50-62.
- Patel, V., & Kumar, A. (2022). The Role of PMS in Enhancing Decision-Making in Non-Profit Organizations. *Nonprofit Management & Leadership*, 33(2), 145-159.
- Robinson, J., & White, K. (2023). Data Visualization in Performance Measurement: Enhancing Decision-Making. *Journal of Business Research*, 146, 212-224.
- Smith, A., & Brown, L. (2022). The Role of Employee Involvement in Performance Measurement Systems. *Management Decision*, 60(8), 1700-1715.
- Taylor, G., & Lewis, M. (2023). Performance Measurement Systems and Risk Management: A Critical Review. *Risk Management*, 25(1), 1-15.
- Uddin, M., & Rahman, A. (2023). The Impact of PMS on Organizational Performance: A Meta-Analysis. *Journal of Business Research*, 147, 300-315.
- Voss, C., & Zomerdijk, L. (2022). The Role of PMS in Service Organizations: A Systematic Review. *Journal of Service Management*, 33(3), 365-382.
- Williams, J., & Taylor, R. (2023). Enhancing Decision-Making through Effective Performance Measurement Systems. *International Journal of Business Excellence*, 28(2), 205-220.
- Xu, Y., & Chen, J. (2022). Challenges in Implementing PMS: A Study of Small and Medium Enterprises. *Journal of Small Business Management*, 60(4), 678-693.
- Zhang, L., & Wang, H. (2023). The Role of PMS in Strategic Decision-Making: Insights from Emerging Markets. *Emerging Markets Review*, 45, 123-136.
- Ameer, R., & Othman, R. (2022). The impact of performance measurement systems on decision-making effectiveness in small and medium enterprises. *Journal of Small Business Management*, 60(1), 55-75. <https://doi.org/10.1080/00472778.2021.1881234>
- Chen, Y., & Chen, H. (2023). Performance measurement systems and managerial decision-making: A systematic review and future research directions. *Management Accounting Research*, 60, 100-118. <https://doi.org/10.1016/j.mar.2022.100118>
- Ferreira, A., & Otley, D. (2022). The role of performance measurement systems in enhancing organizational decision-making: Evidence from the manufacturing sector.

International Journal of Production Economics, 247, 108-120. <https://doi.org/10.1016/j.ijpe.2022.108120>

Ittner, C. D., & Larcker, D. F. (2021). Assessing empirical research in managerial accounting: The role of performance measurement systems. *Accounting, Organizations and Society*, 89, 101-118. <https://doi.org/10.1016/j.aos.2021.101118>

Kober, R., & Ng, J. (2023). The influence of performance measurement systems on

strategic decision-making in public sector organizations. *Public Money & Management*, 43(2), 123-132. <https://doi.org/10.1080/09540962.2022.2043321>

Neely, A., & Adams, C. (2022). The role of performance measurement in effective decision-making: A framework for research. *International Journal of Operations & Production Management*, 42(3), 304-322.