Interdisciplinary Journal of Global and Multidisciplinary
IJGAM
+62852-3430-9925 https://jurnal-ijgam.or.id/ admin@jurnal-ijgam.or.id
Vol. 2, No. 4, October 2026 | Page. 288 - 302

STRATEGIC MANAGEMENT ACCOUNTING AS A STRATEGIC DECISION-MAKING INSTRUMENT FOR COMPANIES FACING DIGITAL DISRUPTION

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Keywords:

Strategic Management Accounting,
Digital Disruption,
Strategic Decision-Making,
Big Data Analytics,
Artificial Intelligence.

Abstrak

Digital disruption has transformed business competition, consumer behavior, business models, and corporate decision-making. These changes require accounting information systems that integrate financial and non-financial data to support strategic decisions. This study aims to analyze Strategic Management Accounting (SMA) as a strategic decision-making instrument in companies facing digital disruption. Using a structured literature review of 25 scientific publications from 2022–2026, the study examines SMA, digitalization, big data analytics, artificial intelligence, and strategic decision-making. The findings indicate that digital technologies enhance SMA through competitor analysis, forecasting, scenario planning, strategic costing, and performance measurement. Integration with AI, cloud computing, ERP, and business intelligence improves information processing and decision-making accuracy. However, successful implementation depends on data quality, analytical competence, organizational readiness, system integration, information security, and professional judgment. This study concludes that SMA serves as a strategic intelligence system that helps companies respond to environmental changes and maintain competitive advantage.

INTRODUCTION

Digital technologies, including artificial intelligence, big data analytics, cloud computing, automation, ERP, and IoT, have transformed business operations and decision-making. These developments affect organizational structures, business models, customer relationships, competition, and control systems. Digitalization therefore extends beyond adopting new software; it changes how organizations generate, process, and use managerial information. Arkhipova et al. (2024) explain that technology reshapes data characteristics, decision processes, and organizational boundaries across increasingly complex business environments.

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Digital disruption increases uncertainty because competitors, consumer preferences, pricing, production, and supply chains can change rapidly. Companies must evaluate financial, operational, technological, market, and competitive factors simultaneously. Traditional management accounting, which emphasizes internal costs, budgets, variance analysis, and historical performance, remains useful but insufficient for these conditions. Strategic Management Accounting (SMA) addresses this limitation by incorporating external, competitive, and long-term information into organizational planning, strategic decisions, and resource allocation.

SMA helps management understand customers, competitors, suppliers, markets, value chains, and environmental conditions. Oyewo (2022) links SMA practices with competitive advantage, while Ditkaew (2023) shows their role in connecting business strategy with competitive positioning. Big data analytics expands these capabilities by providing information from transactions, ERP systems, social media, IoT devices, and supply chains. However, Franke and Hiebl (2023) emphasize that benefits depend on accountants' analytical capabilities and data quality.

Artificial intelligence and digital systems support forecasting, anomaly detection, pattern recognition, scenario modelling, and decision analysis. Hossain et al. (2026) associate big data analytics with more effective management accounting systems and improved organizational performance. AI introduces privacy, cybersecurity, bias, transparency, and accountability risks (Abbas, 2026). Meanwhile, management accountants undertake strategic analysis and business partnering rather than routine reporting (Yigitbasioglu et al., 2023), although digitalization can create role ambiguity and conflict

Existing research often examines digitalization, SMA, and competitive advantage separately, leaving opportunities for integrated analysis (Elawadly, 2026). This study examines SMA as a mechanism connecting digital capabilities with strategic decision-making. It analyzes technological integration, changing accountant competencies, implementation challenges, and implications for competitive advantage. Its contribution is a conceptual synthesis positioning digital SMA as a strategic intelligence system and dynamic capability that transforms data into knowledge and organizational action.

LITERATURE REVIEW

2.1 Strategic Management Accounting Concept

Strategic Management Accounting (SMA) integrates accounting information with corporate strategy to support long-term decisions and competitive advantage. Unlike conventional management accounting, which emphasizes internal costs, budgets, and performance control, SMA incorporates external information about competitors, customers, suppliers, markets, and value chains. Its techniques include strategic costing, target costing, lifecycle costing, benchmarking, competitor analysis, customer profitability analysis, and strategic performance measurement. Oyewo (2022) highlights organizational and environmental influences, while Ditkaew (2023) links SMA with business strategy and competitive advantage.

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2.2 Strategic Decision-Making

Strategic decision-making involves selecting actions that influence organizational direction, resource allocation, and sustainability under uncertainty. Decisions concerning technology investment, market expansion, product development, and business model changes require accurate information, analytical capabilities, and professional judgment. Historical data remains useful but becomes insufficient during disruption. Organizations therefore need descriptive, diagnostic, predictive, and prescriptive information. SMA supports these requirements through performance evaluation, cost and customer analysis, forecasting, predictive analytics, and strategic modelling, helping managers compare alternatives and align decisions with organizational objectives.

2.3 Digital Disruption and Management Accounting Transformation

Digital disruption refers to fundamental changes in business processes, markets, and business models driven by digital technologies. These developments transform management accounting through changing data sources, automation, information processing, and organizational structures. Fähndrich (2023) explains that digitalization affects management control instruments, responsibilities, competencies, and coordination. Arkhipova et al. (2024) identify shifts toward unstructured data, algorithm-supported decisions, and collaborative organizations. Yudhistira et al. (2024) highlight how digital technologies strengthen reporting, planning, control, and management accounting decision-making.

2.4 Big Data Analytics and Strategic Management Accounting

Big data analytics strengthens SMA through deeper analysis of transactions, operations, customers, sensors, social media, and digital platforms. These sources support competitor analysis, customer profitability evaluation, and forecasting. However, data availability alone does not guarantee decision quality. Franke and Hiebl (2023) emphasize the importance of accountants' analytical capabilities in transforming data into valuable information. Mukherjee et al. (2025) identify essential competencies, including statistical analysis, business knowledge, technological risk management, data integrity evaluation, professional expertise, and communication skills.

2.5 Artificial Intelligence in Management Accounting

Artificial Intelligence (AI) enables pattern recognition, prediction, classification, and automated recommendations in management accounting. Abbas (2026) identifies developments involving machine learning, deep learning, explainable AI, generative AI, and large language models. Within SMA, these technologies support demand forecasting, customer segmentation, anomaly detection, competitor analysis, cost estimation, and scenario modelling. Nevertheless, AI introduces risks involving accuracy, algorithmic bias, privacy, cybersecurity, and transparency. Therefore, strategic decisions supported by AI require human oversight, professional judgment, and appropriate organizational governance.

2.6 Dynamic Capabilities as a Theoretical Perspective

Dynamic capabilities explain how organizations adapt resources and processes through three dimensions: sensing, seizing, and transforming. Sensing involves identifying

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opportunities and threats through competitor analysis, customer information, and environmental monitoring. Seizing concerns selecting opportunities and allocating resources based on cost, return, and risk assessments. Transforming involves adjusting organizational processes, systems, and structures. Elawadly (2026) integrates the Technology–Organization–Environment perspective with dynamic capabilities, emphasizing that successful digitalization requires organizations to adopt, integrate, and strategically utilize technology.

RESEARCH METHODS

This study uses the structured literature review method with a qualitative approach. The research method was chosen because the purpose of the research is not to test statistical relationships using primary data, but to develop an integrated understanding of the role of Strategic Management Accounting in decision-making for companies that are experiencing digital disruption.

The literature was selected for the period 2022–2026 so that the study reflects the latest developments, especially after the use of big data, AI, cloud systems, digital platforms, and automated analytics is growing in organizations. The five-year period also allows the research to pay attention to the latest changes in the management accountant profession and the emergence of generative AI.

The first stage is the identification of topics and keywords. Relevant keywords include *strategic management accounting*, *management accounting digitalization*, *digital transformation*, *big data analytics*, *artificial intelligence in management accounting*, *strategic decision making*, *management accounting information systems*, *competitive advantage*, and *management control digitalization*.

The second stage is the determination of inclusion criteria. The article is included if it meets at least one of several criteria: discussing high school and competitive advantage; examining the digitalization of management accounting; discussing big data or AI in accounting functions; discussing management accounting information systems; explaining changes in the role of management accountants; or directly related to managerial and strategic decisions.

The third stage is selection based on quality and relevance. A total of 25 sources were selected with priority to peer-reviewed articles that have DOIs and are published by verifiable academic journals or publishers. Several national articles were used to strengthen the relevance of the Indonesian context.

The fourth stage is to conduct thematic synthesis. The literature is grouped into themes: (1) SMA information transformation; (2) digital technologies as SMA enablers; (3) big data analytics and decision quality; (4) artificial intelligence and predictive decision support; (5) changes in the role of management accountants; (6) competitive advantage and organisational agility; (7) management control and performance measurement; and (8) implementation risks and challenges.

The last stage is the integration of findings into a conceptual framework. The framework explains that digital capability provides data and analytical capability, SMA interprets information based on a strategic perspective, and the results improve the quality of decision-making and competitive advantage.

This method has limitations because the conclusions produced are a synthesis of previous research and are not intended as evidence of direct causal relationships. However, structured literature review allows research to identify patterns, gaps, as well

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as conceptual relationships that can be the basis for subsequent empirical research.

RESULTS AND DISCUSSION

4.1 SMA's Transformation from Historical Reporting to Strategic Intelligence

The results of the study show that digital disruption changes the nature of the information that management needs. In conventional practice, accounting reports are generally available periodically, such as weekly, monthly, quarterly, or yearly reports. This information is essential for evaluating performance, but it often describes conditions that have occurred.

In the digital environment, the time interval between business events and the need for action is getting shorter. Changes in customer demand, competitor activity, supply chain disruptions, cost movements, and market responses can take place quickly. Therefore, companies need more real-time information systems.

(Rieg et al., 2023) Shows the growing use of online management information systems in management accounting. The switch to cloud-based systems allows for more flexible access to information and improves users' ability to obtain management data quickly.

These developments have prompted a shift from a dominant historical reporting system to strategic intelligence. Strategic intelligence does not just provide data, but helps management understand changes, identify opportunities, and assess various possible actions.

For example, traditional product profitability reports usually show margins based on past revenue and costs. In digital SMAs, these reports can be supplemented with demand predictions, competitor price changes, customer sentiment, churn rates, and margin scenarios if the company changes its pricing strategy. Thus, the information generated not only answers the question "how is the product currently performing?" but also "what is likely to happen and what actions can be chosen?"

These changes increase the contribution of management accountants in the strategic process. Management accountants are no longer the party that only sends reports to managers, but rather part of the information interpretation process. Their role is getting closer to decision support and business partnering.

(Rosmala, 2024)It shows that digital transformation in management accounting can provide benefits for data management efficiency and strategic decision-making. Digital tools help speed up processes and provide more relevant information for management.

An important implication of this transformation is the need to change the way organizations evaluate accounting functions. The performance of management accounting functions is not measured by the speed of report completion, recording accuracy, or budget compliance. Organizations need to see their contribution in generating insights, helping to identify risks, improve decisions, and support strategies.

4.2 Integration of Internal and External Information

The fundamental characteristic of SMA is the use of external information. Digital disruption has further increased this need. The corporate environment has become increasingly open and interconnected, so that internal decisions are greatly influenced by external changes.

Traditional accounting systems often have high quality in recording internal

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transaction data, but have limitations in providing competitor intelligence and market intelligence. Digital technology reduces these limitations as external information sources are becoming wider.

Competitor data can be obtained through public information, e-commerce platforms, marketplaces, industry reports, or digital activities. Customer data can be obtained through CRM, online transactions, loyalty programs, or digital interactions. Supply chain information can be obtained through an integrated logistics system. When this information is combined with internal cost and financial information, the company gains a more comprehensive strategic picture.

For example, a decrease in margins is not always due to an increase in internal costs. The cause can come from changes in competitor prices, customer preferences, the emergence of substitution products, or changes in distribution channels. If management accounting uses only internal data, management may make cost reduction decisions that do not actually solve the source of the problem.

SMA allows companies to combine internal cost information with market information. Under these conditions, accounting functions change from just a data provider to a strategic information integrator.

(Nadiar et al., 2025)shows that the use of cloud accounting, ERP, and big data analytics has an impact on managerial accounting practices in Indonesian companies. Digitalization increases the availability of information and changes the way data is used in management processes.

Information integration also strengthens horizontal collaboration. Management accountants need to interact more intensively with marketing, production, information technology, supply chain, human resources, and strategy departments. This is in line with the findings (Arkhipova et al., 2024) Regarding the increasingly blurring of functional boundaries in digital organizations.

4.3 Big Data Analytics as a Booster of SMA Effectiveness

Big data analytics is one of the technologies that has the strongest relationship with the development of high school. This is because high school techniques are highly dependent on the quality and scope of information.

Under traditional conditions, analysis can be done using some of the available data due to the limitations of processing capacity. Big data allows companies to take advantage of much larger amounts of data. However, the main advantage lies not in the amount of data, but in the ability to find relevant patterns and relationships.

(Franke & Hiebl, 2023) emphasizing the relationship between big data and decision quality by paying attention to data analytics skills management accountants. The findings indicate that investment in technology needs to be followed by investment in human capital.

(Siahaan et al., 2025) directly connects big data analytics with SMA and decision-making quality. The research shows that big data capabilities can improve SMA effectiveness and decision quality. SMA has an important position as a mechanism that transforms analytical capability into relevant information for management.

The mechanism can be explained through four stages of analytics. The first is descriptive analytics, which is used to find out what is happening. In the context of SMA, descriptive analytics can show changes in margin, sales, market share, or

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customer profitability.

The second is diagnostic analytics, which answers why a condition occurs. The analysis can identify whether the decline in profit is due to changes in price, volume, product mix, raw material costs, or customer behavior.The third is predictive analytics, which is the use of statistical or machine learning models to forecast future conditions. In high school, predictive analytics can be used to predict demand, cash flow, churn, cost behavior, or changes in profitability.

The fourth is prescriptive analytics, which recommends a choice of actions taking into account objectives and various constraints. For example, the system can simulate a combination of price and volume that results in optimal margins or determine an alternative supply-chain configuration with the most appropriate cost and risk. The integration of these four types of analytics brings SMA closer to the strategic decision support function.

4.4 AI and Changing Decision Mechanisms

Artificial intelligence accelerates these developments because it improves the system's ability to recognize patterns and make predictions. If big data provides the raw material for information, AI improves its processing capabilities. (Abbas, 2026) shows that the use of AI in management accounting has expanded into various areas, including machine learning, generative AI, and large language models. These technologies have the potential to change routine and non-routine tasks, as well as affect the structure of accounting work.

In the context of strategic decision-making, AI can be used to perform scenario generation. For example, management can evaluate the effects of rising raw material costs, declining demand, exchange rate changes, or competitors' pricing strategies simultaneously. AI can also improve anomaly detection. The system can automatically detect cost irregularities, transaction patterns, or performance changes that previously required manual checks. When used in SMA, this capability can become an early warning system.

However, the use of AI raises important issues regarding decision accountability. Strategic decisions have such great consequences that management cannot leave full responsibility to algorithms. AI results need to be considered as decision support, not decision authority. The most appropriate approach is human–AI complementarity. AI is used to expand human analytical capacity, while humans retain responsibility for context, judgment, ethics, and final decisions.

Professional judgement is becoming increasingly important because AI models have limitations. Models can generate recommendations that are statistically consistent but do not consider certain qualitative factors. In addition, models trained from historical data can reinforce existing biases. Companies also need to pay attention to explainability. AI-powered strategic decisions should have explanations that management can understand. Black-box recommendations can be problematic when the results cannot be traced.

4.5 Strategic Cost Management in the Digital Environment

One of the important aspects of SMA is strategic cost management. Digital disruption is changing the cost structure of companies. Many companies are changing from fixed physical infrastructure to digital infrastructure, from manual labor to

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automation, and from individual transaction costs to subscription-based systems.

These changes require companies to update their cost models. Using old cost methods without adjusting the digital business model can result in irrelevant information. For example, a platform business may have a relatively low marginal cost once the digital infrastructure is available. Under these conditions, decisions regarding pricing, customer acquisition, and scalability cannot be analyzed in the same way as traditional manufacturing companies.

Digital SMA must be able to identify new cost drivers such as cloud usage, data processing, cybersecurity, digital marketing, software licensing, system integration, and technology maintenance. Strategic costing should also consider costs throughout the lifecycle. AI investments may require high development costs, but they yield benefits through automation and decision quality in the long run. If decisions are based solely on short-term accounting returns, companies could miss out on strategic opportunities.

Therefore, digital SMA needs to combine financial evaluation with strategic value assessment. Management needs to assess not only how much investment is made, but also whether the investment increases strategic flexibility, data capability, customer experience, or speed to market.

4.6 Customer Analysis and Customer Profitability

Digital transformation makes companies have greater access to customer data. This strengthens one of SMA's important techniques, namely customer profitability analysis. Customer profitability is not always in line with sales value. Customers with high sales may need high service costs, discounts, distribution, or customer support. On the other hand, customers with smaller transactions but have loyalty and low service costs can generate greater value in the long run.

Digital data allows companies to develop an analysis from customer profitability to customer lifetime value. Companies can estimate the revenue and costs generated by customers during the business relationship period. This analysis is especially important for digital businesses that use a subscription model. Management needs to compare customer acquisition costs with lifetime value. If the cost of acquiring customers is higher than the economic value generated, growth strategies are potentially unsustainable. SMA can help connect marketing data with cost data. This improves the quality of decisions regarding promotion, segmentation, pricing, loyalty programs, and marketing resource allocation.

4.7 Competitor Accounting and Digital Competition

Digital disruption increases the importance of competitor accounting. Competition can develop rapidly because new companies can use technology to enter the market with different cost structures or business models. Competitor accounting includes competitor cost analysis, performance appraisal, market position, and strategic factors that can affect competitive advantage. Digital data improves the ability to perform such analysis.

Companies can monitor price changes, new products, promotional strategies, customer responses, and technological developments used by competitors. The information can then be compared with internal cost structures and capabilities. Competitive intelligence integrated with SMA can reduce the risk of overly inward-looking decisions. A company may feel that it has a good performance because profits

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are increasing, but at the same time market share can decline as competitors grow faster. External information provides the relative perspective needed in strategic decisions.

In this context, SMA's advantage is its ability to connect competitor information with economic consequences. Information on competitor activities is not just described, but analyzed on its influence on pricing, volume, costs, margins, and the company's strategic position.

4.8 Value-Chain Analysis in Digital Disruption

Digital disruption is changing the value chain. Activities that were previously done internally can be shifted to cloud services, outsourcing, digital platforms, or automation. Instead, companies can integrate functions that were previously outside the organization through technology.

Value-chain analysis helps companies determine the activities that actually generate value. In a digital context, such analysis can help answer whether activities need to be maintained, automated, diverted, or developed. For example, process automation can reduce costs, but implementation decisions need to consider the quality of service and technology risks. IT outsourcing can lower fixed costs but increase reliance on vendors. SMA provides a framework for comparing financial and strategic consequences.

4.9 Digitization of Management Control

Strategic decision-making cannot be separated from management control. The strategy that has been formulated must be translated into targets, indicators, monitoring systems, and feedback mechanisms.

(Fähndrich, 2023) It shows that digitalization changes management control in various aspects, ranging from activities, instruments, behaviors to the organization of control functions. Digital tools improve monitoring capabilities but also change the relationship between controllers and management. Digital systems allow performance indicators to be monitored in real time. Dashboards can present sales, margins, inventory, customer satisfaction, operational efficiency, and other indicators at the same time.

The advantage of real-time monitoring is increased responsiveness. When indicators show irregularities, companies can take action faster than if they were waiting for the month-end report. However, there is a risk that companies become too focused on indicators that are easy to measure. Not all strategic aspects can be represented in dashboards. Innovation, organizational culture, reputation, and adaptability often require qualitative interpretation.

Therefore, digital management control must still combine quantitative metrics with managerial discussion. (Sihombing & Surbakti, 2026) It shows that digitalization can strengthen strategic management accounting through management control systems, performance measurement, and decision-making. Technology provides data integration capabilities that allow control systems to be more responsive.

4.10 Changes in Strategic Performance Measurement

Digital disruption also changes the relevant measure of performance. Financial performance remains important, but it is not enough to explain a company's ability to survive in a digital environment. Companies need to consider indicators such as

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customer retention, digital engagement, conversion rate, innovation speed, data quality, cybersecurity incidents, system uptime, time-to-market, automation rate, and supply-chain responsiveness.

SMA can help ensure that these non-financial indicators remain connected to economic value. For example, increasing customer engagement needs to be analyzed for its relationship with retention and profitability. Increasing automation needs to be associated with cost reduction and process quality.

4.11 Business Partnering and Changing the Role of Management Accountants

One of the most consistent findings in the digital management accounting literature is the change in the role of management accountants. Automation reduces the need for manual tasks while increasing the need for interpretation skills. (Yigitbasioglu et al., 2023) shows that digital transformation encourages the role of accountants as advisors. An advisor not only has technical accounting knowledge, but understands the business context and is able to communicate with decision makers.

(Rautiainen et al., 2024) found that the identity of the management accountant became increasingly fluid. Emerging roles can include bean counters, business partners, and IT-related specialists. This shows that there is no one form of management accountant profession that applies uniformly to all organizations.

4.12 Management Accountant Competencies in the Digital Era

(Mukherjee et al., 2025) Identify seven competencies that are increasingly important in the era of big data. These findings can be grouped into four main categories. First, accounting competency, which is understanding cost principles, budgeting, performance measurement, and financial analysis. Traditional competencies remain the basis because management accountants must understand the economic meaning of data.

Second, analytical competency, including statistical skills, data analytics, data quality assessment, and the ability to understand model output. Management accountants do not always have to be data scientists, but need to have enough digital literacy to communicate with data specialists. Third, business competency. Management accountants must understand business models, strategies, industries, customers, and operating processes. Without business understanding, data analysis can lose relevance.

4.13 Digitization as a Double-Edged Sword

While digitalization provides many opportunities, the literature also shows potential negative effects. (Van Slooten et al., 2026) It found that the relationship between digitalization and role conflict and role ambiguity depends on the professional orientation of management accountants. Those who are more business partner-oriented are relatively able to benefit from digitalization, while watchdog orientation can increase the difficulty of adaptation. (Boerner, 2026) It also shows that business analytics creates both opportunities and threats to management control departments. Analytics can improve information, but it also changes the distribution of knowledge and power relations within organizations.

4.14 Data Quality Risk

One of the main risks of digital SMA is data quality. Strategic decisions can

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only be of as good quality as the underlying information.

Big data often comes from different sources with different formats and reliability. Errors in integration can produce misleading information. Therefore, data governance is an important part of SMA. Companies need to have procedures in place to ensure accuracy, completeness, consistency, timeliness, and validity. Lineage data also needs to be available so that users understand where the data comes from and how the data is processed (Fähndrich & Pedell, 2025).

Management accountants have an important role because they are familiar with the concept of internal control and reliability of information. These competencies can be extended to digital data governance.

4.15 Cybersecurity, Privacy, and Confidentiality

Digital SMA contains highly sensitive information. Data on price, cost, margin, strategy, customers, and investment plans has a high competitive value. Cloud systems and interconnectivity increase accessibility, but also expand exposure to cyber risks. Leaks of strategic accounting information can be detrimental to companies. (Abbas, 2026) placing privacy, confidentiality, security, and ethical concerns as important challenges of the development of AI in management accounting. Therefore, digital transformation must be accompanied by cybersecurity governance. Access rights to dashboards, databases, and AI models need to be managed on a responsible basis. Strategic information does not have to be freely available to all users just because technology allows broad access.

4.16 Algorithmic Bias and Transparency

AI works based on data and models. If the data contains bias, the system's output can reproduce that bias. For example, the customer profitability model can give low priority to certain groups based on historical patterns without considering new strategic potentials. The forecasting model can also fail when there is a structural break that never appears in the training data.

Therefore, AI results should not be accepted automatically. Management accountants must be able to challenge the model's assumptions and outputs. Explainable AI is important because decision-makers need to understand the reasons for the recommendations. Transparency is even more important when decisions involve high risk.

4.17 Information Overload

One of the paradoxes of digitalization is that more and more information can degrade the quality of decisions if users are unable to select relevant information. Dashboards that contain too many indicators can make managers lose focus. Big data without strategic filtering can also create noise.

SMA has an important function as a strategic relevance filter. Management accountants not only collect as much data as possible, but also determine information that is material to the strategy. Thus, one of SMA's main contributions is not to increase the amount of information, but to reduce complexity into actionable insights (Saleh & Al-Nimer, 2022).

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4.18 SMA and Organisational Agility

Organisational agility is the ability of a company to respond to changes quickly. In a digital environment, agility is a source of excellence because changes occur in a relatively short time. SMA supports agility through three mechanisms. First, increasing visibility to change. Second, helping to evaluate economic consequences. Third, accelerating the feedback process.

Digital dashboards and analytics accelerate sensing. Strategic accounting provides economic interpretation. Management control provides feedback on implementation. With this combination, companies can shorten the decision cycle from information collection to action. (Bhimani et al., 2026) It shows that digitalization changes the structure and nature of the data processed by the organization while affecting accounting controls and financial reporting. This shows that accounting is not just a recipient of technological impacts, but is part of the organizational transformation process.

4.19 High School and Competitive Advantage

Competitive advantage occurs when a company is able to create value that is difficult for competitors to replicate. Technology alone is not necessarily a source of sustainable advantage because technology can be purchased or adopted by many organizations (Boerner, 2026).

Advantages that are more difficult to replicate are the combination of technology, data, processes, competencies, and organizational knowledge. SMA can be an important part of this combination because it helps companies use data strategically. Oyewo (2022) and Ditkaew (2023) both show the relevance of SMA to competitive advantage.

In the digital context, competitive advantage can be formed when a company is able to generate insights faster than competitors, understand customer economics more accurately, make resource allocation more effectively, or adjust cost structure faster. Thus, SMA plays the role of an information-based capability.

4.20 SMA as a Dynamic Strategic Capability

Based on the synthesis of the study results, SMA can be positioned as a dynamic strategic capability. This concept is broader than considering SMA as an engineering. In the sensing stage, SMA integrates competitors, customers, market, cost, and operational data so that companies can identify changes.

In the seizing stage, SMA helps management evaluate the financial consequences, strategic fit, and risks of alternatives. In the transforming stage, performance measurement and management control help organizations monitor implementation and adjust systems.

(Of, 2026) emphasizing that the digital revolution creates opportunities as well as challenges for accounting practice and research. In this condition, accounting needs to transform to remain relevant to management practices. The dynamic capability approach also explains why companies that use the same technology can produce different performance. The difference lies in the ability to integrate technology into organizational processes.

4.21 Strategic Digital Management Accounting Framework

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Based on the synthesis of the literature, the process of using SMA in companies facing digital disruption can be divided into six stages. The first stage is strategic data acquisition. Organizations collect internal and external data from ERP, CRM, digital platforms, supply chains, markets, and competitors.

The second stage is data governance and integration. The data is cleaned, validated, and integrated so that it has adequate reliability.The third stage is digital analytics. Big data analytics, business intelligence, AI, and statistical modelling are used to find patterns and make predictions.

The fourth stage is SMA interpretation. Digital output is analyzed through strategic costing, competitor accounting, customer profitability, value-chain analysis, benchmarking, and performance measurement. The fifth stage is strategic decision-making. Management compares alternatives based on financial impact, strategic value, risk, and capability.

The sixth stage is feedback and organisational learning. The results of the strategy are measured, analyzed, and used to improve subsequent decisions.The framework shows that technology is not a substitute for high school. Digital technology is an enabler, while high school provides strategic interpretation.

4.22 Synthesis of Findings and Research Gaps

The literature during 2022–2026 shows a rapid increase in the discussion of digitalization of management accounting. However, there are several research gaps. First, many studies still discuss technology individually. Research can examine big data, AI, ERP, or cloud computing without integrating how these various technologies work together in high school.

Second, some studies focus on efficiency and automation, while the contribution to strategic decision quality still requires broader empirical testing. Third, the literature on human-AI interaction in strategic accounting is still relatively new. Research is needed on when managers should follow AI recommendations and when professional judgement needs to be more dominant. Fourth, the context of developing countries, including Indonesia, still needs broader empirical research. Nadiar et al. (2025), Yudhistira et al. (2024), Rosmala (2024), and Siahaan et al. (2025) show increasing attention to digital management accounting in Indonesia, but industry variations and company sizes still provide research space.

Fifth, governance issues need to receive greater attention. Digital SMA is not only related to efficiency, but also security, privacy, accountability, ethical AI, and data ownership. Sixth, there is a need for longitudinal research. Digital transformation is not a one-time event. Longitudinal studies are needed to understand how the role of SMA develops during the technology adoption process.

CONCLUSION

Digital disruption has fundamentally changed the decision-making environment of companies. Companies face larger volumes of information, faster market changes, technology-based competition, and increasingly dynamic business models. These conditions cause management accounting systems that are only oriented to historical and internal information to be inadequate.

Strategic Management Accounting offers a relevant approach because it has an external, long-term, and competitive orientation. SMA integrates information regarding

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costs, customers, competitors, markets, value chains, as well as financial and non-financial performance.

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