



The Utilization of Microsoft Excel in Accounting to Improve the Accuracy of Financial Reporting in the Digital Era

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Abstract

Financial reporting is a fundamental component of business management because it provides information regarding an entity's financial position, performance, and cash flows. However, many Micro, Small, and Medium Enterprises (MSMEs) in Indonesia continue to encounter challenges in preparing accurate financial statements that comply with applicable accounting standards. This study aims to examine the utilization of Microsoft Excel in accounting practices to improve the accuracy of financial reporting in the digital era. The study employed a systematic literature review by analyzing relevant scholarly publications concerning digital accounting, Microsoft Excel, financial reporting, and MSMEs. The findings indicate that Microsoft Excel enhances the accounting process by reducing manual recording errors, supporting systematic bookkeeping, and facilitating the preparation of more accurate and reliable financial statements. Spreadsheet features, including automated formulas, data validation, lookup functions, and Pivot Tables, contribute to improving data processing efficiency, reporting consistency, and compliance with Financial Accounting Standards for Micro, Small, and Medium Entities (SAK EMKM). The study concludes that Microsoft Excel represents an affordable and practical digital accounting solution that supports financial reporting quality while facilitating the gradual digital transformation of MSMEs that have not yet adopted specialized accounting software.

Keywords: Accounting Digitalization, Financial Reporting Accuracy, Microsoft Excel, MSMEs, SAK EMKM.



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INTRODUCTION

Financial reporting serves as a fundamental instrument for business entities because it provides reliable information regarding financial position, operational performance, and cash flows that supports informed economic decision-making in increasingly competitive markets. Micro, Small, and Medium Enterprises (MSMEs) occupy a strategic position in the Indonesian economy, accounting for approximately 99% of all business entities, contributing more than 60% of the national Gross Domestic Product, and absorbing nearly 97% of the national workforce, making their financial sustainability highly influential on national economic resilience (Ministry of Cooperatives and SMEs of the Republic of Indonesia, 2023). Despite their significant contribution, many MSMEs continue to experience persistent challenges in producing financial reports that satisfy established accounting standards and stakeholder expectations. The rapid digital transformation of accounting has intensified the demand for affordable technological solutions capable of improving reporting quality without imposing excessive implementation costs on small businesses (Prasetianingrum et al., 2025). Within this context, Microsoft Excel has emerged as one of the most accessible digital accounting tools because it combines flexibility, affordability, and practical functionality for entities with limited technological resources. Improving the quality of MSME financial reporting therefore represents not merely an operational necessity but also an essential prerequisite for strengthening organizational accountability, business sustainability, and long-term economic development.

Previous studies consistently demonstrate that digital accounting technologies contribute substantially to improving the efficiency, consistency, and accuracy of financial reporting processes across various organizational settings (Indriyani et al., 2025). Microsoft Excel has been widely recognized as an effective accounting platform because its integrated formulas, automated calculations, and structured data management significantly reduce manual recording errors while accelerating

financial statement preparation (Rachmanto & Utami, 2024). Several empirical investigations further indicate that Excel-based accounting systems enable MSMEs to implement structured bookkeeping practices aligned with Financial Accounting Standards for Micro, Small, and Medium Entities (SAK EMKM), thereby improving the credibility of financial information produced (Maulana & Suryo, 2025). Practical implementation studies similarly reveal that Excel facilitates systematic transaction recording while remaining considerably more affordable than specialized accounting software, making it particularly attractive for resource-constrained enterprises (Jovianto & Harsono, 2025). Recent literature also highlights that Excel functions as an intermediary technology supporting the gradual transition from conventional bookkeeping toward fully digital accounting environments without requiring substantial investment in sophisticated information systems (Karmila, 2026). Collectively, these findings indicate that Microsoft Excel possesses considerable potential to strengthen accounting practices, although the magnitude of its contribution remains dependent on organizational implementation and user competency.

Despite the growing body of literature supporting Excel-based accounting systems, important conceptual and empirical limitations remain insufficiently addressed. Most existing studies primarily emphasize implementation success, system development, or community service outcomes while providing limited empirical evidence regarding how Excel directly enhances financial reporting accuracy under the broader context of digital accounting transformation (Putri et al., 2025). Comparative analyses between Microsoft Excel and more advanced accounting software have generally concentrated on operational efficiency rather than examining the mechanisms through which spreadsheet-based accounting improves reporting reliability among MSMEs (Kamila & Kurniawati, 2026). Other investigations predominantly discuss Excel as an accounting information system without comprehensively integrating accounting digitalization, reporting quality, and compliance with SAK EMKM into a unified analytical framework (Muharram & Darmawati, 2026). Recent literature reviews likewise acknowledge that digital transformation continues to reshape accounting practices, yet practical evidence concerning affordable digital tools suitable for MSMEs remains fragmented across different research contexts (Sopianti et al., 2026). These unresolved issues indicate the necessity for a more comprehensive investigation that positions Microsoft Excel not merely as a spreadsheet application but as a strategic digital accounting instrument capable of improving the accuracy and reliability of financial reporting.

The persistence of these research gaps has substantial scientific and practical implications because inaccurate financial reporting weakens managerial decision-making, limits access to external financing, and reduces stakeholder confidence in MSME performance (Fajrin et al., 2025). Incomplete bookkeeping practices and inadequate accounting systems continue to prevent many MSMEs from producing financial statements that comply with applicable accounting standards, thereby restricting their opportunities for sustainable business growth (Ikatan Akuntan Indonesia, 2018). Recent evidence suggests that implementing Microsoft Excel as a digital accounting information system enables organizations to improve data organization, reporting consistency, and administrative efficiency without requiring substantial financial investment (Saleh & Masyhuri, 2026). Similar findings indicate that Excel-based accounting systems also support tax administration and financial documentation, enabling MSMEs to strengthen operational accountability while reducing administrative burdens (Samudra et al., 2026). Practical implementation has further demonstrated that redesigning financial reporting using Microsoft Excel enhances compliance with SAK EMKM and facilitates more systematic financial management among small business entities (Rusman, 2026). These developments underscore the importance of examining Microsoft Excel not only as a technological tool but also as an accessible digital accounting solution capable of improving the quality and credibility of MSME financial reporting.

Within the evolving landscape of digital accounting, this study positions itself by integrating the concepts of accounting digitalization, Microsoft Excel utilization, and financial reporting accuracy into a comprehensive analytical perspective that has received limited empirical attention. Unlike previous studies that predominantly focus on system implementation, comparative software evaluation, or accounting education, this research specifically investigates how Microsoft Excel contributes to improving the accuracy of financial reporting within the broader context of digital transformation (Riesmiyantiningasih & Hidayat, 2026). The study also recognizes that spreadsheet applications continue to play a significant role in accounting education and professional practice because they develop

structured financial analysis and reporting competencies that remain relevant even in increasingly automated accounting environments (Rusinov & Sokolova, 2025). Empirical findings from recent MSME studies likewise indicate that Microsoft Excel provides a practical foundation for developing accounting information systems capable of enhancing the quality and reliability of financial statements while remaining economically feasible for small enterprises (Putri & Afriady, 2025). Consequently, this research seeks to enrich the existing literature by providing a more integrated understanding of how affordable digital technologies can strengthen financial reporting practices among business entities that have not yet adopted sophisticated accounting software. The findings are expected to offer valuable insights for academics, practitioners, and policymakers seeking practical strategies to accelerate accounting digitalization among MSMEs.

This study aims to analyze the utilization of Microsoft Excel in accounting practices as a strategic approach to improving the accuracy of financial reporting in the digital era, particularly for business entities that have not yet adopted more sophisticated accounting information systems. It investigates how spreadsheet-based accounting can support systematic bookkeeping, enhance reporting reliability, and facilitate compliance with applicable accounting standards while remaining affordable and accessible for organizations with limited technological resources. The research is expected to contribute theoretically by extending the discussion on digital accounting adoption through the integration of accounting information systems, financial reporting quality, and spreadsheet-based technology within a single analytical framework. Methodologically, the study offers an evidence-based perspective on evaluating Microsoft Excel as a practical accounting solution that bridges conventional bookkeeping and digital financial management. The findings are anticipated to provide practical recommendations for improving financial reporting practices while supporting broader digital transformation initiatives among MSMEs and other resource-constrained business entities. Ultimately, this research seeks to strengthen the understanding that accessible digital technologies can play a meaningful role in enhancing financial accountability, organizational sustainability, and informed economic decision-making.

RESEARCH METHODS

This study employed a non-empirical research design using a systematic literature review to critically examine the utilization of Microsoft Excel in accounting practices and its contribution to improving the accuracy of financial reporting in the digital era. A conceptual approach was adopted to synthesize existing theoretical and empirical evidence concerning spreadsheet-based accounting systems, financial reporting quality, digital accounting transformation, and the implementation of accounting standards for Micro, Small, and Medium Enterprises (MSMEs) (Prasetyaningrum et al., 2025). Relevant literature was identified through academic databases, including Google Scholar, Garuda, and other reputable journal portals, using keywords such as Microsoft Excel in Accounting, financial reporting accuracy, digital accounting, and MSMEs. The selection process followed predefined inclusion criteria, encompassing peer-reviewed journal articles published primarily between 2024 and 2026 that addressed accounting digitalization, Microsoft Excel applications, or financial reporting practices, while authoritative references such as the SAK EMKM standard were incorporated to strengthen the conceptual foundation (Ikatan Akuntan Indonesia, 2018). Publications lacking academic credibility, empirical relevance, or complete accessibility were excluded to ensure the reliability and consistency of the reviewed evidence. This structured selection procedure enabled the development of a comprehensive body of literature that adequately represented recent developments in digital accounting research.

The collected literature was analyzed using a qualitative descriptive and thematic synthesis approach to identify recurring patterns, conceptual relationships, and emerging perspectives regarding the role of Microsoft Excel in enhancing financial reporting accuracy. The analytical model involved systematically comparing findings across studies, evaluating methodological consistency, and interpreting convergent and divergent evidence to construct an integrated understanding of spreadsheet-based accounting implementation (Indriyani et al., 2025). Particular attention was given to the interaction between accounting digitalization, financial reporting quality, accounting information systems, and compliance with SAK EMKM within the context of MSMEs (Muharram & Darmawati, 2026). Interpretative analysis was subsequently employed to explain how Microsoft Excel functions as an accessible digital accounting tool capable of supporting more accurate, structured, and reliable

financial reporting practices (Karmila, 2026). The synthesis process emphasized conceptual coherence rather than statistical aggregation, allowing broader theoretical insights to emerge from diverse research contexts. This methodological approach provides a robust foundation for developing evidence-based conclusions regarding the strategic role of Microsoft Excel in contemporary accounting practices.

RESULTS AND DISCUSSION

The Role of Microsoft Excel in Supporting the Accounting Cycle of MSMEs

The literature synthesis demonstrates that Microsoft Excel has become one of the most widely utilized digital accounting tools among Micro, Small, and Medium Enterprises (MSMEs), particularly in business environments characterized by limited financial and technological resources. Its adoption is not merely driven by affordability, but also by its capacity to support various stages of the accounting cycle through customizable worksheets, automated formulas, and structured data management features. Recent studies indicate that spreadsheet-based accounting systems contribute to greater recording consistency and reduce the frequency of manual calculation errors that commonly occur in traditional bookkeeping practices (Jovianto & Harsono, 2025). The growing emphasis on accounting digitalization has further increased the relevance of Excel as an intermediary technology that allows MSMEs to transition from manual records toward more systematic financial management (Prasetianingrum et al., 2025). This pattern suggests that Excel is increasingly viewed as a practical accounting information system rather than a simple spreadsheet application. The reviewed literature consistently associates the use of Excel with improvements in operational efficiency and the quality of financial reporting produced by MSMEs.

Within the accounting cycle, Excel facilitates transaction recording, journal preparation, ledger posting, trial balance preparation, and financial statement generation through interconnected worksheets and formula-based automation. The ability to link worksheets enables financial data to flow systematically from one accounting stage to another, thereby minimizing inconsistencies caused by repetitive manual processing. Several studies report that MSMEs adopting Excel-based accounting templates experience faster bookkeeping processes and more accurate financial summaries compared with purely manual methods (Rachmanto & Utami, 2024). Similar findings indicate that automated calculations, such as summation and conditional formulas, reduce computational errors while supporting timely financial reporting (Indriyani et al., 2025). The integration of these features is particularly valuable for MSMEs that do not yet possess specialized accounting software or dedicated accounting personnel. As a result, Excel serves as a functional bridge between conventional bookkeeping practices and more advanced digital accounting systems.

Table 1. Microsoft Excel Functions Across the Accounting Cycle of MSMEs

Accounting Cycle Stage	Microsoft Excel Application	Expected Contribution
Transaction Recording	Data entry worksheet	Improves recording consistency
Journal Preparation	Formula-based journal template	Reduces manual calculation errors
Ledger Posting	Linked worksheets	Increases posting efficiency
Trial Balance	Automated balance calculation	Enhances data accuracy
Financial Statements	Integrated reporting template	Produces structured financial reports

Table 1 illustrates that Microsoft Excel contributes to multiple stages of the accounting cycle rather than supporting only the final preparation of financial statements. The integration of automated calculations and linked worksheets allows accounting data to be processed more efficiently from initial transaction recording to the generation of financial reports. This integrated workflow reduces the risk of transcription errors and improves the consistency of financial information across different accounting documents. Research on MSME accounting information systems also emphasizes that spreadsheet-based solutions can strengthen administrative control and reporting discipline when implemented systematically (Muharram & Darmawati, 2026). The literature further suggests that Excel enables

business owners to monitor financial performance more regularly because financial summaries can be updated automatically as new transactions are entered. These characteristics explain why Excel remains widely adopted even as more sophisticated accounting technologies continue to emerge.

The role of Excel in the accounting cycle is closely connected to the broader process of digital transformation in accounting. Studies on digital accounting implementation show that accessible technologies improve reporting quality by increasing data accuracy, processing speed, and information reliability without requiring substantial investment in enterprise-level systems (Riesmiyantiningih & Hidayat, 2026). Excel-based accounting systems also encourage MSMEs to establish more standardized bookkeeping procedures, which contributes to greater comparability and transparency in financial reporting (Putri & Afriady, 2025). This standardization is particularly important for MSMEs seeking external financing, partnerships, or regulatory compliance because stakeholders increasingly demand reliable financial information. The literature also highlights that spreadsheet-based accounting promotes gradual learning, enabling business owners to develop practical accounting competencies through routine financial recording activities (Rusinov & Sokolova, 2025). Consequently, Excel supports not only operational efficiency but also the development of accounting capabilities within MSMEs.

The synthesis of the reviewed studies indicates that Microsoft Excel occupies a strategic position in supporting the accounting cycle of MSMEs in the digital era. Its combination of affordability, flexibility, and automation makes it a practical solution for businesses that have not yet adopted specialized accounting software. Evidence from recent literature consistently associates Excel implementation with improvements in recording accuracy, reporting efficiency, and the overall quality of financial information produced by MSMEs (Fajrin et al., 2025). The ability to integrate transaction processing, data summarization, and financial statement preparation within a single platform strengthens its relevance as an accessible accounting information system. While Excel does not provide all the features available in advanced enterprise systems, it remains an effective intermediary technology that facilitates the gradual digitalization of accounting practices. This position establishes a foundation for examining more specific Excel features that directly contribute to the accuracy of financial reporting in the following section.

Microsoft Excel Features for Improving Financial Reporting Accuracy

The reviewed literature indicates that the effectiveness of Microsoft Excel in accounting is determined not only by its availability but also by the practical functions embedded within the software that support financial data processing. Spreadsheet automation enables accounting activities to be performed with greater consistency by minimizing repetitive manual calculations and facilitating standardized financial documentation. This capability is increasingly relevant in the context of digital accounting, where the quality of financial information depends on the accuracy, completeness, and timeliness of data processing rather than merely the preparation of financial statements (Karmila, 2026). Recent studies also recognize that spreadsheet-based accounting applications remain highly suitable for MSMEs because they combine flexibility with low implementation costs while maintaining adequate functionality for routine bookkeeping activities (Saleh & Masyhuri, 2026). The literature consistently identifies several Excel features that directly contribute to improving financial reporting accuracy by reducing operational errors and strengthening internal data control. These findings suggest that the contribution of Excel extends beyond computational efficiency toward supporting more reliable accounting information systems.

Among the most frequently discussed functions are SUM, IF, SUMIF, lookup functions, Pivot Table, Data Validation, and Conditional Formatting, each addressing different aspects of accounting information processing. Formula-based calculations automate numerical processing and substantially reduce arithmetic errors that commonly occur in manual bookkeeping, while lookup functions improve the consistency of retrieving account information from large datasets. Pivot Tables facilitate the rapid summarization of financial transactions into meaningful accounting reports, enabling business owners to monitor operational performance without repeatedly reorganizing raw data. Data Validation strengthens internal control by restricting inappropriate data entries, whereas Conditional Formatting visually highlights unusual balances or inconsistencies requiring further examination (Rachmanto & Utami, 2024). The integration of these functions allows financial information to be processed more systematically while maintaining data integrity throughout the accounting cycle. Table 2 summarizes

the primary Excel features and their respective contributions to improving the accuracy of financial reporting.

Table 2. Microsoft Excel Features Supporting Financial Reporting Accuracy

Microsoft Excel Feature	Primary Accounting Function	Contribution to Reporting Accuracy
SUM / SUMIF	Automated calculations	Reduces arithmetic errors and improves calculation consistency
IF Function	Logical classification	Supports automated financial decision rules
Lookup Functions (VLOOKUP/XLOOKUP)	Data retrieval	Improves consistency of account information
Pivot Table	Data summarization	Produces efficient and structured financial analysis
Data Validation	Input control	Prevents invalid or inconsistent data entry
Conditional Formatting	Visual monitoring	Identifies anomalies and unusual financial values

Table 2 demonstrates that each Excel feature addresses a distinct source of error within the accounting process, indicating that reporting accuracy results from the interaction of several complementary functions rather than from a single technological capability. Formula automation primarily minimizes computational inaccuracies, whereas Data Validation and Conditional Formatting improve data reliability by preventing and identifying input inconsistencies before financial statements are finalized. The reviewed studies also emphasize that spreadsheet features strengthen managerial oversight because users can detect irregular transaction patterns more efficiently through automated summaries and visual indicators (Indriyani et al., 2025). This integrated functionality enhances the credibility of accounting information by ensuring that financial data remain consistent throughout recording, processing, and reporting activities. Spreadsheet-based accounting therefore supports not only operational efficiency but also the reliability of information used in managerial and financial decision-making. Such evidence reinforces the argument that Excel remains a relevant component of digital accounting practices despite the increasing availability of specialized accounting software.

The contribution of these spreadsheet functions is further strengthened when they are incorporated into structured accounting templates designed according to recognized accounting principles and reporting standards. Studies examining Excel-based accounting information systems report that standardized templates improve bookkeeping discipline while reducing procedural variations among users with different levels of accounting knowledge (Putri & Afriady, 2025). Similar findings indicate that well-designed spreadsheet templates enable MSMEs to maintain consistent financial documentation and facilitate the preparation of more accurate reports for managerial evaluation and external stakeholders (Maulana & Suryo, 2025). Digital transformation in accounting therefore depends not only on adopting technology but also on optimizing the practical functions available within accessible applications such as Microsoft Excel (Sopianti et al., 2026). The reviewed evidence suggests that spreadsheet functionality and user-oriented template design collectively enhance the quality of accounting information by supporting standardized recording practices. This relationship illustrates that technological accessibility and functional effectiveness are equally important determinants of financial reporting quality.

The literature synthesis consistently positions Microsoft Excel as an effective platform for improving financial reporting accuracy through the integration of multiple complementary features rather than isolated computational tools. The combined use of automated formulas, data validation mechanisms, analytical reporting functions, and standardized templates creates a systematic workflow that minimizes human error while increasing the reliability of accounting information. Such functionality enables MSMEs to implement practical digital accounting practices without incurring the

financial burden associated with enterprise-level accounting systems (Tawakkal et al., 2026). Recent evidence also indicates that optimizing spreadsheet features contributes to more transparent financial documentation and supports better administrative accountability within small business environments (Samudra et al., 2026). These findings demonstrate that Microsoft Excel continues to provide substantial value as an accessible digital accounting application capable of supporting increasingly accurate financial reporting. The subsequent section examines how these capabilities facilitate the preparation of financial statements that comply with the requirements of SAK EMKM.

Microsoft Excel as a Tool for SAK EMKM-Based Financial Reporting

The literature review indicates that Microsoft Excel plays an increasingly important role in assisting Micro, Small, and Medium Enterprises (MSMEs) to prepare financial statements in accordance with the Financial Accounting Standards for Micro, Small, and Medium Entities (SAK EMKM). Compliance with SAK EMKM requires business entities to prepare financial reports that present relevant, reliable, and understandable financial information through standardized reporting components (Ikatan Akuntan Indonesia, 2018). Although Excel is not specifically designed as accounting software, its flexibility enables users to develop customized reporting templates that reflect the structure prescribed by SAK EMKM. Recent studies demonstrate that spreadsheet-based accounting systems facilitate the preparation of standardized financial statements while maintaining relatively low implementation costs, making them particularly suitable for MSMEs with limited technological capabilities (Maulana & Suryo, 2025). This adaptability has positioned Microsoft Excel as an accessible alternative for businesses seeking to improve financial reporting quality without investing in commercial accounting applications. The reviewed literature therefore recognizes Excel as a practical instrument for supporting compliance with accounting standards in resource-constrained business environments.

The implementation of SAK EMKM through Microsoft Excel is supported by the software's ability to integrate transaction recording, account classification, and financial statement preparation within a single interconnected workbook. Properly designed spreadsheet templates automatically transfer accounting information from journals to ledgers and subsequently generate financial statements with minimal manual intervention. This automation reduces the possibility of transcription errors while improving reporting consistency across different accounting periods (Rusman, 2026). Several studies also emphasize that standardized Excel templates encourage MSMEs to adopt more disciplined bookkeeping practices because reporting formats remain consistent regardless of the volume of business transactions (Muharram & Darmawati, 2026). Spreadsheet integration consequently strengthens both accounting efficiency and compliance with applicable financial reporting standards. Table 3 summarizes the correspondence between the reporting requirements of SAK EMKM and their implementation through Microsoft Excel.

Table 3. Alignment of SAK EMKM Financial Statement Components with Microsoft Excel Implementation

SAK EMKM Component	Microsoft Excel Implementation	Expected Benefit
Statement of Financial Position	Linked balance sheet template	Presents assets, liabilities, and equity systematically
Income Statement	Automated revenue and expense calculations	Improves the accuracy of profit or loss measurement
Notes to Financial Statements	Structured documentation worksheet	Enhances transparency and financial disclosure
Transaction Recording	Journal worksheet with automated formulas	Supports consistent bookkeeping practices
Financial Data Integration	Interconnected worksheets	Improves reporting efficiency and data consistency

Table 3 illustrates that Microsoft Excel is capable of supporting each mandatory reporting component required under SAK EMKM through integrated spreadsheet functions rather than isolated worksheets. The reviewed studies consistently indicate that linking transaction records with automated financial statement templates improves reporting efficiency while maintaining consistency across accounting documents (Putri & Afriady, 2025). This structured workflow allows business owners to prepare financial reports using standardized formats even when they possess limited accounting expertise. Digital accounting transformation has also increased the importance of spreadsheet-based reporting because MSMEs require affordable technologies capable of producing financial information that satisfies regulatory and managerial requirements (Prasetianingrum et al., 2025). Consequently, the value of Excel extends beyond computational support by providing an operational framework that facilitates the practical implementation of accounting standards. Such findings reinforce the view that spreadsheet-based accounting can function as an effective intermediary solution before organizations migrate to more sophisticated accounting information systems.

The reviewed literature further suggests that compliance with SAK EMKM should not be interpreted solely as adherence to reporting formats but also as the establishment of systematic accounting practices capable of producing reliable financial information. Microsoft Excel contributes to this objective by promoting standardized documentation, improving reporting consistency, and encouraging routine financial monitoring through automated reporting mechanisms (Fajrin et al., 2025). Studies addressing digital accounting adoption similarly argue that accessible technologies are essential for expanding accounting standard implementation among MSMEs because financial constraints often limit access to specialized accounting software (Tawakkal et al., 2026). Spreadsheet-based accounting therefore represents a practical balance between technological affordability and reporting quality, particularly during the early stages of accounting digitalization. The collective evidence demonstrates that Microsoft Excel effectively supports the preparation of SAK EMKM-compliant financial statements while strengthening financial accountability and organizational transparency. These findings also provide an important foundation for evaluating the limitations and future implications of spreadsheet-based accounting systems within an increasingly digital accounting environment.

The findings synthesized from the reviewed literature indicate that Microsoft Excel has evolved beyond its conventional role as a spreadsheet application into a practical platform that facilitates the implementation of accounting standards among MSMEs. Its adaptability enables business entities to gradually strengthen financial reporting practices while improving the consistency and credibility of accounting information generated from routine business activities. This capability is particularly important because the successful implementation of SAK EMKM depends not only on regulatory compliance but also on the availability of accounting tools that are accessible, affordable, and sufficiently flexible to accommodate diverse business characteristics (Saleh & Masyhuri, 2026). The reviewed evidence also suggests that spreadsheet-based accounting encourages business owners to develop greater awareness of financial management by integrating recording, reporting, and financial evaluation within a single digital environment (Karmila, 2026). As accounting digitalization continues to expand across the MSME sector, Microsoft Excel remains an effective transitional technology that bridges conventional bookkeeping practices with more sophisticated accounting information systems. These observations strengthen the argument that spreadsheet-based accounting provides a sustainable foundation for improving financial reporting quality while supporting broader compliance with SAK EMKM in the digital era.

Challenges, Limitations, and Future Implications of Microsoft Excel in Digital Accounting

Despite its significant contribution to improving financial reporting quality, the reviewed literature consistently acknowledges that Microsoft Excel possesses several limitations that may affect the reliability of accounting information when organizational control mechanisms are insufficient. Unlike dedicated accounting software, Excel does not provide integrated audit trail functionality, automated user authorization, or real-time database synchronization, making financial data more vulnerable to unauthorized modifications and version inconsistencies. These limitations become increasingly relevant as business operations expand and transaction volumes grow, requiring stronger internal controls and more sophisticated accounting information systems (Kamila & Kurniawati, 2026). Spreadsheet-based accounting therefore remains highly dependent on user competence, disciplined documentation practices, and systematic file management. Without adequate governance procedures,

computational accuracy alone cannot guarantee the overall reliability of financial reporting. The reviewed evidence consequently positions Excel as an effective operational tool whose performance is closely associated with organizational accounting practices rather than software capability alone.

The literature further highlights that formula dependency represents one of the most significant technical challenges in spreadsheet-based accounting systems. Complex formulas, linked worksheets, and manually updated references increase the possibility of systematic errors that may remain undetected until financial statements have already been completed. Such risks are particularly evident when spreadsheet templates are modified without corresponding adjustments to embedded formulas or data structures, potentially producing inaccurate financial information despite apparently correct calculations (Riesmiyantiningasih & Hidayat, 2026). Similar concerns arise from the absence of automatic validation mechanisms commonly available in enterprise accounting software, requiring users to perform additional verification procedures before reports are finalized. The reviewed studies therefore emphasize that spreadsheet accuracy depends not only on software functionality but also on continuous monitoring and routine evaluation of accounting files. These observations reinforce the importance of integrating technological implementation with sound accounting control procedures.

Table 4. Challenges and Recommended Practices for Microsoft Excel-Based Accounting Systems

Challenge	Potential Impact	Recommended Practice
No integrated audit trail	Reduced accountability and traceability	Establish document control procedures
Formula dependency	Systematic calculation errors	Periodically review and validate formulas
Manual file management	Data duplication and version inconsistency	Apply standardized file naming and backups
Limited access control	Risk of unauthorized modifications	Restrict editing permissions
Increasing transaction volume	Reduced operational efficiency	Gradually migrate to integrated accounting systems

Table 4 indicates that most limitations associated with Microsoft Excel originate from organizational and procedural factors rather than from deficiencies in spreadsheet functionality itself. The recommended practices identified in the literature emphasize the importance of establishing standard operating procedures, maintaining periodic data backups, validating formulas, and implementing appropriate user access controls to preserve reporting reliability (Samudra et al., 2026). Studies on digital accounting transformation similarly argue that effective technology adoption requires complementary organizational policies capable of minimizing operational risk while maximizing the benefits of digital accounting applications (Sopianti et al., 2026). Consequently, spreadsheet-based accounting should be implemented as part of a broader financial management framework instead of functioning as an isolated technological solution. This perspective explains why organizations that combine spreadsheet automation with effective internal controls generally achieve higher reporting quality than those relying solely on software functionality. The literature therefore highlights governance quality as an essential determinant of successful Excel implementation.

The reviewed evidence also suggests that Microsoft Excel should be viewed as a transitional technology within the broader process of accounting digitalization rather than as a permanent substitute for integrated accounting information systems. Its affordability, flexibility, and familiarity enable MSMEs to initiate digital accounting practices while progressively strengthening financial reporting capabilities and managerial decision-making (Saleh & Masyhuri, 2026). As business complexity increases, organizations are encouraged to evaluate whether spreadsheet-based accounting remains sufficient or whether migration to specialized accounting software becomes necessary to accommodate higher transaction volumes and more advanced reporting requirements (Tawakkal et al., 2026). This gradual transition allows MSMEs to improve accounting maturity without imposing excessive financial burdens during the early stages of digital transformation. The literature therefore recognizes Microsoft

Excel as an important stepping stone that supports organizational readiness for more comprehensive accounting technologies. Such an evolutionary perspective aligns with current developments in digital accounting, where technological adoption progresses according to organizational capability and operational needs.

The literature synthesis demonstrates that the strengths of Microsoft Excel substantially outweigh its limitations when implementation is supported by appropriate accounting procedures and organizational governance. Spreadsheet automation improves efficiency, reporting consistency, and financial data accuracy, while complementary control mechanisms reduce the operational risks associated with manual spreadsheet management. Recent research consistently indicates that accessible digital technologies continue to play an essential role in expanding accounting digitalization among MSMEs because affordability remains a primary consideration in technology adoption decisions (Fajrin et al., 2025). The combination of practical functionality, standardized reporting procedures, and continuous user competency development enables Excel to remain relevant within contemporary accounting practices despite the rapid evolution of specialized accounting software. Future developments should therefore focus on integrating spreadsheet-based accounting with broader digital financial ecosystems while preserving the accessibility that has made Microsoft Excel widely adopted among small business entities. These findings confirm that Microsoft Excel remains a strategically valuable accounting tool for improving financial reporting quality while supporting the gradual digital transformation of MSMEs.

CONCLUSION

The findings of this systematic literature review demonstrate that Microsoft Excel plays a significant role in improving the accuracy of financial reporting, particularly among Micro, Small, and Medium Enterprises (MSMEs) operating with limited financial and technological resources. The reviewed studies consistently indicate that Excel supports the entire accounting cycle, from transaction recording and journal preparation to ledger posting and the preparation of standardized financial statements. Spreadsheet features such as automated formulas, data validation, lookup functions, Pivot Tables, and Conditional Formatting contribute substantially to reducing computational errors, improving data consistency, and enhancing the reliability of accounting information. These capabilities position Microsoft Excel as more than a conventional spreadsheet application, functioning instead as an accessible accounting information system that facilitates digital accounting practices within MSMEs. The flexibility and affordability of Excel also enable business entities to implement structured bookkeeping procedures without the substantial investment required for specialized accounting software. Furthermore, the integration of spreadsheet automation with standardized accounting templates supports the preparation of financial statements that are aligned with the requirements of SAK EMKM. Overall, the literature confirms that Microsoft Excel provides practical and effective support for improving financial reporting quality while strengthening financial accountability in the digital era.

Despite these advantages, the reviewed literature also highlights several challenges associated with spreadsheet-based accounting systems, particularly their dependence on user competence, formula accuracy, and organizational control procedures. The absence of integrated audit trails, automated access controls, and centralized databases increases the importance of implementing appropriate internal controls, standardized operating procedures, and regular verification of spreadsheet formulas to maintain reporting reliability. Therefore, maximizing the benefits of Microsoft Excel requires continuous user training, the development of standardized accounting templates, and the establishment of effective financial governance practices within business organizations. As accounting digitalization continues to expand, Microsoft Excel should be viewed as a transitional technology that enables MSMEs to gradually develop digital accounting capabilities before adopting more sophisticated accounting information systems. Future studies are encouraged to complement the findings of this literature review with empirical investigations examining the effectiveness of Excel-based accounting across different business sectors and organizational contexts. Additional research may also compare spreadsheet-based accounting with cloud-based accounting platforms to evaluate their relative contributions to financial reporting quality and organizational performance. Such efforts will provide a broader understanding of how accessible digital technologies can continue to support sustainable accounting practices and financial decision-making in the evolving digital economy.

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