



Digitalized Accounting Information Systems in SMEs: A Contingency-Based Typology

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Abstract: This article develops a contingency-based typology of how digitalized accounting information systems (AIS) are used in small and medium-sized enterprises (SMEs). Prior research has examined digital accounting systems, cloud-based AIS, AIS success, information quality, decision-making effectiveness, management control effectiveness and SME performance. However, digitalized AIS use is often treated as a broad and undifferentiated construct, which limits understanding of the distinct purposes served by digitalized accounting information in SMEs. Drawing on a structured integrative literature review of 36 publications, this article integrates research on digitalized AIS, business intelligence and analytics, contingency theory, AIS alignment, SME accounting practices and information systems success. The analysis leads to a typology distinguishing three configurations: compliance-oriented digitalization, management-oriented digitalization and decision-support-oriented digitalization. The article argues that transitions among these configurations are not automatic but depend on technological, organizational, environmental, actor-related and information-related conditions. The contribution is conceptual: it shifts attention from whether SMEs adopt or use digitalized AIS to how, by whom and for what purposes digitalized accounting information is mobilized. The typology also provides a basis for empirical research on the determinants, transitions and effects of digitalized AIS use orientations in SMEs, particularly in contexts where accounting digitalization remains strongly shaped by compliance requirements and managerial appropriation.

Keywords: Digitalized accounting information systems; SMEs; digital accounting; contingency theory; management control; decision support.

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1. Introduction

The digitalization of accounting information systems (AIS) has become a central issue in the transformation of accounting and management practices in small and medium-sized enterprises (SMEs). Digital accounting systems, cloud-based AIS and computerized accounting infrastructures increasingly shape the way accounting data are

captured, processed, stored and mobilized in organizational settings (Al-Okaily et al., 2023; Lutfi et al., 2022; Ratmono et al., 2023). In SMEs, this transformation is particularly significant because accounting information has traditionally been associated with bookkeeping, tax reporting and financial statement preparation, while its contribution to internal management and decision-making often remains contingent on owner-manager profiles, accounting competencies and organizational routines (Chapellier, 1997; Chapellier et al., 2013; Lavigne, 2002). Recent research suggests that digitalized AIS may contribute to SME performance, decision-making effectiveness and management control effectiveness when digital systems provide high-quality information and are effectively used by organizational actors (Al-Hattami, 2024; Al-Hattami & Kabra, 2024; Jassem & Abdelfattah, 2026; Ratmono et al., 2023). Studies on cloud-based AIS further indicate that actual system use may enhance communication quality and decision quality, while research on digital accounting systems highlights the role of compatibility, organizational readiness, top management support and environmental conditions in shaping digital accounting use (Al-Okaily et al., 2023; Lutfi et al., 2022).

Despite these contributions, the literature remains conceptually fragmented. Digitalized AIS is frequently examined through adoption, continuance intention, system success, information quality, user satisfaction or performance effects (Al-Hattami & Almaqtari, 2023; Lutfi et al., 2022). These perspectives are valuable, but they tend to treat digitalized AIS use as a broad and undifferentiated construct. Less attention has therefore been paid to the different purposes for which SMEs actually use digitalized accounting information.

This distinction is theoretically important. Contingency-based accounting research has long argued that the usefulness of accounting information systems depends on the fit between system characteristics, information requirements and organizational context (Chenhall, 2003; Gordon & Narayanan, 1984; Otley, 1980). Management accounting information becomes more useful when it is broad in scope, timely, aggregated and integrated, particularly under conditions of uncertainty, interdependence and decentralization (Chenhall & Morris, 1986; Gul & Chia, 1994). Similarly, AIS alignment research shows that the effectiveness of accounting systems depends on the match between information needs, system capacity, coordination requirements and control requirements (Ismail & King, 2007; Nicolaou, 2000).

This article addresses the following research question: For what purposes are digitalized accounting information systems used in SMEs, and under what contingency conditions do they shift from compliance-oriented digitalization to management-oriented and decision-support-oriented uses?

To answer this question, the article adopts a structured integrative literature review. This approach is appropriate because the objective is not to test an empirical model, but to synthesize fragmented research streams and develop a conceptual framework (Snyder, 2019; Torraco, 2005). Following recommendations for transparent and concept-centered reviews, the analysis integrates literature on digitalized AIS and digital accounting systems in SMEs, business intelligence and analytics in management accounting, contingency theory, AIS alignment, SME accounting practices and information systems success (Tranfield et al., 2003; Webster & Watson, 2002).

This article contributes to AIS and SME accounting research by theorizing digitalized AIS use as a differentiated, purpose-driven and contingency-dependent construct. It distinguishes three configurations - compliance-oriented digitalization, management-oriented digitalization and decision-support-oriented digitalization - and identifies the technological, organizational, environmental, actor-related and information-related conditions that shape transitions between them.

The article is organized as follows. Section 2 presents the methodological approach. Section 3 synthesizes evidence on digitalized AIS in SMEs. Section 4 discusses the theoretical foundations of a contingency-based reading of digitalized AIS. Section 5 examines SME-specific conditions. Section 6 develops the typology and propositions. Section 7 discusses implications, limitations and avenues for future research. Section 8 concludes.

2. Method

This article adopts a structured integrative literature review to develop a conceptual typology of digitalized AIS uses in SMEs. This methodological choice is consistent with the objective of the paper, which is not to test causal relationships empirically, but to synthesize fragmented research streams and generate a conceptual framework. Literature reviews can constitute a rigorous research method when they follow a transparent process of identification, selection, analysis and synthesis (Snyder, 2019). In management research, systematic review principles help improve transparency and reduce the limitations of selective narrative reviews (Tranfield et al.,

2003). However, because the aim of this article is conceptual development rather than exhaustive evidence aggregation, the review is positioned as a structured integrative review rather than a full systematic review. The review follows a concept-centered logic. Webster and Watson (2002) argue that literature reviews should be organized around concepts, constructs and relationships rather than around sequential summaries of authors. Torraco (2005) further emphasizes that integrative reviews are particularly relevant when a field is fragmented and when the objective is to critique, synthesize and reorganize existing knowledge into a new conceptual framework. Because the purpose was conceptual development rather than exhaustive mapping, the review did not follow a PRISMA-type protocol. Instead, it relied on conceptual relevance, theoretical saturation and cross-stream synthesis.

2.1. Search Strategy and Corpus Construction

The literature search and corpus consolidation were conducted iteratively during June 2026. The search relied on academic databases, publisher platforms and scholarly search engines relevant to accounting, information systems, management accounting and SME research, including Google Scholar, ScienceDirect, Emerald Insight, Taylor & Francis Online, SpringerLink, SAGE Journals, Wiley Online Library, MIS Quarterly / AIS eLibrary, Cairn.info, Érudit and HAL.

The search combined keyword-based identification, backward citation tracking and theoretical sampling. Keyword combinations included: accounting information systems AND SMEs; digital accounting systems AND SMEs; cloud accounting OR cloud-based AIS; AIS success AND decision-making effectiveness; AIS AND management control effectiveness; digitalization AND management accounting systems; business intelligence OR analytics AND management accounting; management accounting systems AND contingency theory; SMEs AND management accounting practices; and information systems success AND system quality OR information quality. The review proceeded in three stages. First, potentially relevant publications were identified through keyword searches and backward citation tracking. Second, publications were screened for conceptual relevance to digitalized AIS, SME accounting practices, management accounting, information systems success, contingency theory or AIS alignment. Third, the corpus was stabilized through theoretical saturation: additional publications were retained only when they added a new construct, mechanism, contingency condition or empirical insight relevant to the proposed typology.

The final corpus comprised 36 publications. These publications were retained because they contributed directly or indirectly to the development of the proposed typology. The corpus is not presented as statistically exhaustive; rather, it represents a theoretically saturated set of contributions supporting the conceptual development of the article.

Table 1. Literature streams included in the review of digitalized accounting information systems (AIS).

Literature stream	No.	Role in the review
Digitalized AIS and digital accounting systems in SMEs	7	Evidence on digital accounting use, cloud AIS, AIS success, decision quality, management control effectiveness and SME performance
BI, analytics and enterprise systems in management accounting	3	Analytical and decision-support potential of advanced digital technologies
Contingency theory, technological context, AIS alignment and information characteristics	10	Theoretical foundation for context-dependent AIS use and transition conditions
SME accounting practices, management control and performance measurement	6	SME-specific accounting information use, owner-manager influence and management routines
Information systems success, acceptance and user appropriation	6	System quality, information quality, actual use, satisfaction, perceived usefulness and facilitating conditions
Literature review methodology	4	Structured, integrative and concept-centered nature of the review

2.2. Coding and Analytical Procedure

The selected literature was analyzed through a concept-centered coding procedure. The purpose was not to provide an author-by-author summary, but to identify how each contribution informs the conceptual development of a typology of digitalized AIS uses in SMEs.

Three coding dimensions were used. The first concerns use orientation: undifferentiated AIS use, compliance-oriented use, management-oriented use and decision-support-oriented use. The second concerns the mechanisms through which AIS may generate value, including adoption, system quality, information quality, actual use, user satisfaction, integration, management control effectiveness, decision-making effectiveness and performance. The third concerns contingency conditions: technological, organizational, environmental, actor-related and information-related conditions.

Table 2. Coding framework for digitalized accounting information system (AIS) uses.

Coding dimension	Codes	Meaning
Use orientation	U0 / U1 / U2 / U3	Undifferentiated use; compliance-oriented use; management-oriented use; decision-support-oriented use
Explanatory mechanisms	M1-M9	Adoption or continuance; system quality; information quality; actual use; satisfaction or usefulness; integration or alignment; management control; decision quality; performance
Contingency conditions	C1-C5	Technological; organizational; environmental; actor-related; information-related conditions

2.3. Synthesis Strategy

After coding, the literature was organized into six transversal matrices corresponding to the six literature streams. Each matrix identified the main contribution of the stream, its limitations and its relevance for the proposed typology. The synthesis focused on cross-cutting constructs rather than chronological or author-by-author presentation.

This synthesis revealed a recurrent limitation in the literature. Existing studies provide valuable insights into digitalized AIS adoption, continuance, actual use, system success, information quality, management control effectiveness, decision-making effectiveness and SME performance. However, they often treat digitalized AIS use as a broad and undifferentiated construct. They rarely distinguish whether digitalized AIS is used primarily for compliance, internal management or decision support.

3. Digitalized AIS in SMEs: Evidence, Mechanisms and Conceptual Blind Spots

3.1. From Digital Accounting Adoption to Organizational Value

Research on digitalized accounting information systems in SMEs has expanded around digital accounting systems, cloud-based AIS, AIS success, digitalized management accounting systems and accounting process digitalization. Taken together, these studies show that digitalized AIS may enhance information quality, communication quality, decision-making effectiveness, management control effectiveness and SME performance when digital systems are effectively used and aligned with organizational needs (Al-Hattami, 2024; Al-Hattami & Kabra, 2024; Al-Okaily et al., 2023; Lutfi et al., 2022; Ratmono et al., 2023).

Lutfi et al. (2022) show that digital accounting system usage is influenced by technological, organizational and environmental factors, including compatibility, organizational readiness, top management support and external support. Al-Okaily et al. (2023) show that actual cloud AIS use can enhance communication quality and decision quality in SMEs. Al-Hattami and Almaqtari (2023) show that continuance intention to use digital accounting systems is shaped by system quality, information quality, perceived usefulness, ease of use and satisfaction.

These studies explain why SMEs adopt or continue using digitalized accounting systems. However, they do not fully specify the purposes served by this use. A digital accounting system may be adopted to meet tax obligations, improve internal monitoring or support managerial decisions. These purposes are not equivalent, yet they are often grouped under the same general category of use.

3.2. Information Quality, System Success and User Appropriation

A second stream focuses on AIS success and the quality of digitalized accounting information. The information systems success literature emphasizes that system quality, information quality, use, user satisfaction and net benefits are central dimensions of information system value (DeLone & McLean, 2003; Gorla et al., 2010; Petter et al., 2008). Applied to digitalized AIS, this perspective suggests that system adoption is insufficient unless the

system produces reliable, timely and useful information and unless this information is effectively used by organizational actors.

Recent AIS studies in SMEs support this argument. Al-Hattami (2024) shows that AIS success dimensions, particularly information quality, system use and user satisfaction, influence decision-making effectiveness. Al-Hattami and Kabra (2024) similarly show that AIS contributes to management control effectiveness when system quality, information quality, use and satisfaction are present. Ratmono et al. (2023) also indicate that digitalization in management accounting systems can improve decision-making effectiveness through information quality and cost reduction.

3.3. Management Control and Decision-Making Effects

A third line of research links digitalized AIS to managerial outcomes. AIS may support management control when accounting information is used for budgeting, monitoring, performance measurement and internal reporting (Al-Hattami & Kabra, 2024). Similarly, digitalized AIS may support decision-making when accounting information improves analysis, planning, coordination and managerial judgment (Al-Hattami, 2024; Al-Okaily et al., 2023; Ratmono et al., 2023).

Research on business intelligence, analytics and enterprise systems reinforces this perspective by showing that digital technologies can extend accounting information beyond reporting toward analysis and decision support (Appelbaum et al., 2017; Rikhardsson & Yigitbasioglu, 2018). Yet this literature is generally less focused on SMEs and often assumes levels of technological and organizational maturity that may not be available in smaller firms.

3.4. The Conceptual Blind Spot: Undifferentiated AIS Use

The main limitation of the reviewed literature lies in the treatment of use. In many studies, digitalized AIS use refers broadly to the use of accounting software, computerized accounting tools, cloud-based AIS or digital accounting systems. This broad conceptualization is useful for testing antecedents and outcomes, but it obscures the heterogeneity of accounting information use in SMEs.

A SME that uses digital accounting tools to record transactions and prepare tax declarations is not using AIS in the same way as a SME that mobilizes accounting information for budgeting, cost monitoring, cash-flow follow-up or performance measurement. Similarly, a SME that uses digitalized accounting information for forecasting, scenario analysis, coordination or strategic decision-making reflects a different configuration of use. These three situations may all be labelled digitalized AIS use, but their organizational meaning, information requirements and expected value differ substantially.

The reviewed literature therefore provides partial support for three configurations, but does not fully theorize their boundaries. Compliance-oriented digitalization is implicitly present in studies referring to bookkeeping, reporting reliability and administrative efficiency. Management-oriented digitalization appears in studies linking AIS to management control effectiveness and performance measurement. Decision-support-oriented digitalization is suggested by studies connecting digitalized AIS to information quality, decision quality and decision-making effectiveness. This conceptual blind spot justifies the typology developed in this article.

4. Theoretical Foundations for a Contingency-Based Reading of Digitalized AIS Uses

4.1. Contingency Theory and the Context-Dependent Value of Digitalized AIS

Contingency theory has long challenged universalistic approaches to accounting and control systems. Otley (1980) argues that management accounting systems should be understood in relation to the organizational contexts in which they operate. Chenhall (2003) further shows that management control systems are shaped by contextual factors such as environment, technology, structure, size, strategy and culture. These contributions prevent a deterministic interpretation of digitalization.

From a contingency perspective, a digitalized AIS is not valuable simply because it is digital. Its value depends on whether its functionalities, information outputs and patterns of use fit the needs of the firm. This argument is especially important in SMEs, where organizational characteristics vary considerably in terms of size, resources, formalization, managerial competencies, accounting routines and environmental exposure.

4.2. Information Characteristics and Managerial Usefulness

The distinction between different use orientations also depends on the characteristics of the information produced by AIS. Gordon and Narayanan (1984) show that perceived environmental uncertainty increases the need for broader and more externally oriented management accounting information. Chenhall and Morris (1986) identify scope, timeliness, aggregation and integration as key characteristics of useful management accounting information. Gul and Chia (1994) further suggest that broad and aggregated information becomes more valuable when uncertainty and decentralization are high.

Compliance-oriented digitalization mainly requires reliable, accurate and traceable information. Management-oriented digitalization requires timely, relevant, understandable and sufficiently detailed information to support

budgeting, cost analysis, cash-flow monitoring, variance analysis and performance measurement. Decision-support-oriented digitalization requires broader, aggregated and integrated information that can support planning, forecasting, coordination and managerial judgment.

4.3. AIS Alignment and Integration

AIS alignment research reinforces the contingency argument by showing that accounting systems create value when system capacity matches organizational information requirements. Ismail and King (2007) show that AIS alignment in SMEs depends on the fit between AIS requirements and AIS capacity. Nicolaou (2000) links AIS effectiveness to organizational coordination and control requirements, suggesting that integration creates value when it supports coordination, monitoring and control.

The three configurations of the proposed typology may therefore be interpreted as different forms of alignment. Compliance-oriented digitalization reflects alignment with external reporting and administrative requirements. Management-oriented digitalization reflects alignment with internal monitoring and control needs. Decision-support-oriented digitalization reflects alignment with broader information requirements associated with uncertainty, coordination and strategic decision-making.

4.4. Transition Conditions: The Role of the TOE Perspective

Although contingency theory and AIS alignment provide the main theoretical foundation of this article, the Technology-Organization-Environment framework offers a useful complementary lens for classifying the conditions that shape digitalized AIS use. Tornatzky et al. (1990) conceptualize technological innovation as influenced by technological, organizational and environmental contexts. Baker (2012) shows that this framework has been widely used in information systems research to explain technology adoption and implementation.

In this article, the TOE framework is not used as a primary theory of adoption. Rather, it serves as a classification device for transition conditions between use orientations. Technological conditions include system reliability, usability, compatibility, integration, cloud availability, data security and analytical functionalities. Organizational conditions include firm size, resources, accounting competencies, formalization, management routines and business complexity. Environmental conditions include regulatory pressure, tax requirements, competition, uncertainty, government support, banking demands and crisis contexts.

5. SME-Specific Conditions: Accounting Practices, Management Control and Digitalized AIS Use

5.1. Owner-Manager Profile and the Appropriation of Accounting Information

The contingency-based perspective must be interpreted in light of the organizational features of SMEs. In such firms, accounting information use is rarely determined by system characteristics alone. It is shaped by owner-manager profiles, accounting culture, resource constraints, formalization, accounting competencies, external support and the existence of management routines (Chapellier, 1997; Chapellier et al., 2013; Garengo et al., 2005; Lavigne, 2002).

Chapellier (1997) shows that the use of accounting and management accounting data in SMEs varies according to owner-manager profiles, including training, experience, accounting culture and perceived usefulness of accounting information. Digital tools may improve the speed, accessibility and reliability of information, but they do not automatically change the way managers interpret and use accounting data. When accounting information is perceived mainly as a fiscal or administrative constraint, digitalized AIS is likely to remain compliance-oriented.

5.2. From Compliance Production to Managerial Reuse

SME accounting information is often produced under external constraints. Tax declarations, financial statements, banking documents and regulatory reporting requirements structure a significant part of accounting activity. This explains why compliance-oriented digitalization is a frequent and legitimate configuration in SMEs.

However, SME accounting literature suggests that accounting information should not be reduced to external reporting. Lavigne (2002) shows that SME financial statements may respond to multiple objectives and can also support internal information needs. Digitalization can facilitate this shift by making accounting information more accessible, timely and easier to process. Yet the move from compliance production to managerial reuse requires routines of interpretation, comparison and follow-up.

5.3. AIS Complexity, Actual Use and Management Practices

Chapellier et al. (2013) show that SME AIS can be analyzed through the organization of the accounting function, the production of accounting data and the use of information by managers. This distinction is particularly relevant for digitalized AIS because technological sophistication does not necessarily imply managerial sophistication.

A SME may possess accounting software, cloud-based accounting tools or digital reporting systems while using them only for bookkeeping and statutory reporting. Conversely, a relatively simple digitalized AIS may support

management if the information it produces is regularly used by the owner-manager or accounting actors. Urquía Grande et al. (2011) provide complementary evidence by linking AIS use in SMEs to performance measures.

5.4. Management Accounting and Performance Measurement in SMEs

Management-oriented digitalization becomes visible when digitalized accounting information is connected to management accounting practices. These practices include budgeting, cost monitoring, variance analysis, cash-flow follow-up, dashboards, internal reporting and performance measurement.

Azudin and Mansor (2018) show that management accounting practices in SMEs are influenced by organizational characteristics, business potential and operational technology. Abdel-Kader and Luther (2008) also show that firm characteristics influence management accounting practice sophistication. Garengo et al. (2005) emphasize that performance measurement systems in SMEs face specific constraints, including limited resources, informal structures, centralized management and weak formalization.

5.5. External Actors and the Digitalization of SME Accounting Information

In SMEs, the use of accounting information is not shaped only by internal actors. External accountants, consultants, software providers, banks and regulatory bodies may also influence how digitalized AIS is adopted and used. This is particularly relevant in contexts where SMEs have limited internal accounting or digital competencies.

External accountants may reinforce compliance-oriented digitalization when their intervention is mainly focused on bookkeeping, tax reporting and financial statements. They may also facilitate the transition toward management-oriented use when they help SMEs interpret accounting outputs, design dashboards, monitor cash flows or develop performance indicators. This argument is consistent with research highlighting the role of external support and environmental conditions in shaping digital accounting use (Lutfi et al., 2022).

6. A Contingency-Based Typology of Digitalized AIS Uses in SMEs

The preceding sections suggest that digitalized AIS use in SMEs cannot be adequately understood through adoption, technical availability or general system use alone. A digital accounting system may be implemented without being meaningfully appropriated; it may be used for reporting without supporting internal management; and it may improve administrative reliability without contributing to decision-making. The typology developed below distinguishes three dominant use orientations.

6.1. Compliance-Oriented Digitalization

Compliance-oriented digitalization refers to the use of digitalized AIS for transaction recording, bookkeeping, tax reporting, financial statement preparation, regulatory obligations, banking documentation and administrative reliability. In this configuration, the system primarily supports the production, storage and traceability of accounting information.

This orientation is consistent with the historical role of accounting information in many SMEs, where accounting systems have often been driven by external reporting and fiscal requirements rather than by internal management needs (Chapellier et al., 2013; Lavigne, 2002). Compliance-oriented digitalization should not be considered insignificant. Reliable digital records may constitute a necessary informational foundation for more advanced uses. However, the configuration remains limited when accounting information is not reused internally.

6.2. Management-Oriented Digitalization

Management-oriented digitalization emerges when digitalized AIS supports internal management practices such as budgeting, cost monitoring, cash-flow follow-up, variance analysis, dashboards, operational control and performance measurement. In this configuration, accounting information is no longer limited to external reporting; it becomes a resource for internal monitoring and control.

This orientation is supported by studies linking AIS and accounting information to management control effectiveness, management accounting practices and performance measurement in SMEs (Al-Hattami & Kabra, 2024; Azudin & Mansor, 2018; Garengo et al., 2005). Budgets, dashboards and cost reports create value when they are interpreted, discussed and used to monitor activity or guide corrective action.

6.3. Decision-Support-Oriented Digitalization

Decision-support-oriented digitalization refers to the use of digitalized AIS for analysis, planning, forecasting, coordination, strategic decision-making and organizational learning. In this configuration, accounting information is not only recorded or monitored; it is interpreted and mobilized to support managerial judgment.

This orientation is consistent with studies showing that AIS success and digitalized accounting systems may improve decision quality and decision-making effectiveness when information quality, actual use and user satisfaction are present (Al-Hattami, 2024; Al-Okaily et al., 2023; Ratmono et al., 2023). It is also supported by research on business intelligence, analytics and enterprise systems in management accounting (Appelbaum et al., 2017; Moll & Yigitbasioglu, 2019; Rikhardsson & Yigitbasioglu, 2018).

6.4. Comparative Structure of the Typology

Table 3. Typology of digitalized accounting information system (AIS) use orientations in small and medium-sized enterprises (SMEs).

Dimension	Compliance-oriented digitalization	Management-oriented digitalization	Decision-support-oriented digitalization
Dominant logic	Administrative and regulatory	Internal management and control	Analytical and decision-oriented
Main purpose	Bookkeeping, tax reporting, financial reporting, administrative reliability	Budgeting, cost monitoring, cash-flow follow-up, performance measurement	Planning, forecasting, analysis, coordination, strategic decision-making
Information requirements	Accuracy, reliability, traceability	Timeliness, relevance, understandability	Broad scope, aggregation, integration, decision relevance
System role	Compliance infrastructure	Management control support	Decision-support infrastructure
Key mechanisms	Reporting efficiency, accounting reliability, process automation	Information quality, actual use, routines, performance monitoring	Integration, interpretation, analytical capacity, decision quality
Main conditions	Regulatory pressure, tax requirements, basic digital tools	Accounting competencies, owner-manager involvement, management routines	System integration, uncertainty, analytical competencies, broader information needs
Main limitation	Information is produced but weakly reused internally	Information supports control but may remain operational	Requires stronger appropriation, integration and interpretation

6.5. Transition Conditions and Conceptual Framework

The transition from compliance-oriented to management-oriented and decision-support-oriented digitalization is contingent rather than automatic. Technological conditions shape what the system can technically support. Organizational conditions determine whether SMEs have the capacity to transform digitalized accounting information into managerial practices. Environmental conditions influence both adoption and use orientation. Actor-related conditions are decisive in SMEs, because owner-manager accounting culture, digital competencies and external advisory support influence whether accounting information is reused internally or remains confined to compliance. Information-related conditions determine the managerial relevance of system outputs.

The conceptual framework can be summarized as follows: digitalized AIS capabilities + information quality + user appropriation + contingency fit -> compliance-oriented, management-oriented or decision-support-oriented use. This framework implies that digitalized AIS does not create value in a uniform way. Its value depends on how the system is used, whether its outputs are reliable and relevant, whether users appropriate the information, and whether the system is aligned with the SME's needs, routines and context.

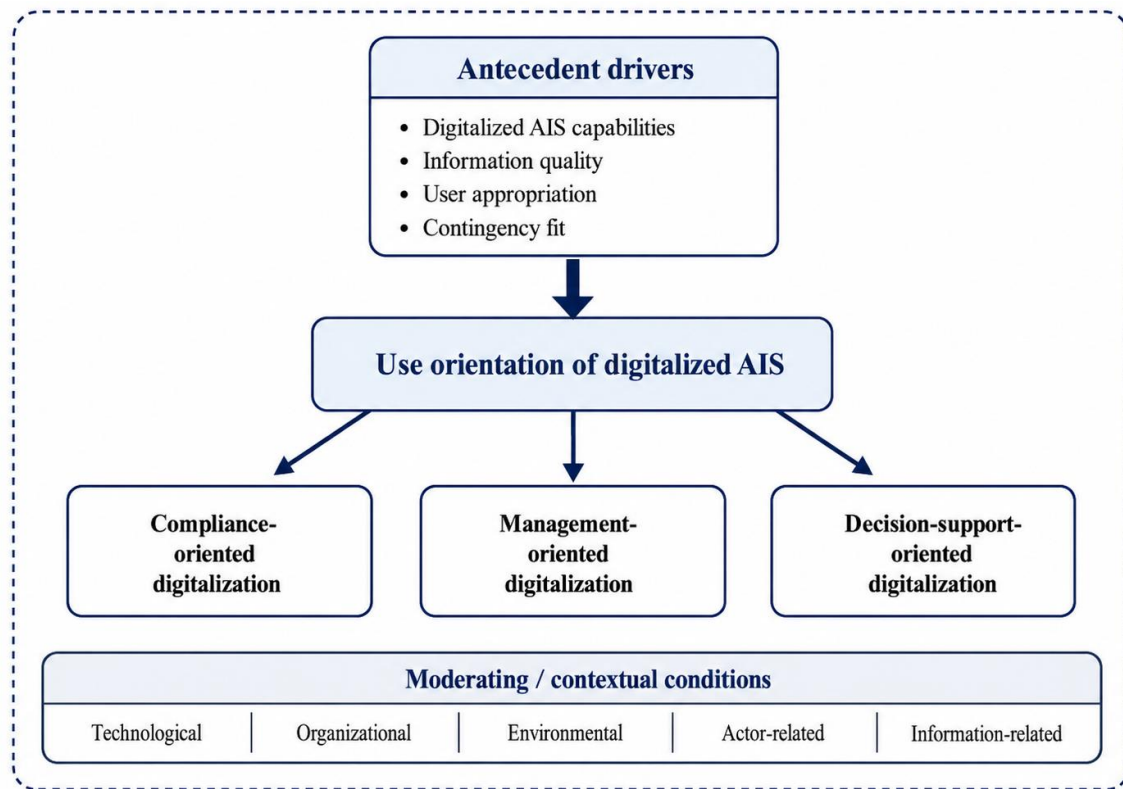


Figure 1. Conceptual framework of digitalized accounting information system (AIS) use orientations in small and medium-sized enterprises (SMEs). Note: AIS = accounting information systems; SMEs = small and medium-sized enterprises.

6.6. Conceptual Propositions

Proposition 1. The likelihood that digitalized AIS will be used for compliance-oriented purposes increases when accounting information is primarily driven by external reporting requirements and internal management routines are weakly formalized.

Proposition 2. The likelihood that digitalized AIS will be used for management-oriented purposes increases when accounting information is timely, relevant and embedded in recurrent budgeting, cost monitoring, cash-flow follow-up and performance measurement routines.

Proposition 3. The likelihood that digitalized AIS will be used for decision-support-oriented purposes increases when system integration, broad-scope information, analytical competencies and managerial appropriation are present.

Proposition 4. The transition from compliance-oriented to management-oriented digitalization is facilitated by owner-manager accounting culture, internal accounting competencies, external advisory support and perceived usefulness of accounting information.

Proposition 5. The transition from management-oriented to decision-support-oriented digitalization is facilitated by environmental uncertainty, information integration, analytical capacity and the use of accounting information in planning and strategic decision-making.

7. Discussion

The proposed typology shifts attention from the general question of whether SMEs adopt or use digital accounting systems to the more specific question of how digitalized accounting information is mobilized, by whom and for what purposes. This shift is important because digitalized AIS may generate different forms of value depending on whether it supports compliance, internal management or decision-making.

7.1. Theoretical Contributions

This article contributes to AIS and SME accounting research by theorizing digitalized AIS use as a differentiated, purpose-driven and contingency-dependent construct. Prior studies have provided valuable evidence on digital accounting adoption, continuance intention, AIS success, information quality, management control effectiveness, decision-making effectiveness and SME performance (Al-Hattami, 2024; Al-Hattami & Almaqtari, 2023; Al-

Hattami & Kabra, 2024; Al-Okaily et al., 2023; Lutfi et al., 2022; Ratmono et al., 2023). However, much of this literature treats use as a broad and relatively homogeneous construct.

The typology developed in this article extends this literature by distinguishing three use orientations. It also extends contingency-based accounting research by showing that digitalization does not create value in a universal or automatic way; its contribution depends on the fit between system capabilities, information needs, organizational routines and user appropriation. It further refines AIS alignment research by specifying three possible alignment targets: external reporting requirements, internal monitoring needs and decision-support requirements.

7.2. Practical Implications

For SME owner-managers, the framework suggests that digitalizing accounting processes should not be considered an end in itself. The key managerial issue is whether digitalized accounting information is actually used to monitor activity, understand costs, manage cash flows, follow performance indicators and support decisions.

For accountants and financial managers, the framework highlights the evolving role of accounting actors in digitalized contexts. In compliance-oriented digitalization, the accountant's role remains centered on recording, reliability and reporting. In management-oriented digitalization, accounting actors contribute to internal monitoring and performance measurement. In decision-support-oriented digitalization, their role extends toward interpretation, analysis and advisory support, consistent with research on the digital transformation of accounting work (Moll & Yigitbasioglu, 2019).

For external accountants, consultants and software providers, the typology suggests that support to SMEs should not be restricted to compliance services. External advisors may help SMEs configure digital tools, interpret accounting outputs, design dashboards and connect accounting information to management routines.

7.3. Future Research and Limitations

Future studies could operationalize the three use orientations and test whether they represent distinct empirical configurations. Existing studies often measure digital accounting system use or AIS use globally (Al-Okaily et al., 2023; Lutfi et al., 2022). Developing measurement scales for compliance-oriented, management-oriented and decision-support-oriented digitalization would allow researchers to examine AIS use more precisely.

Future research could also investigate the determinants and effects of each configuration, analyze transitions between use orientations through longitudinal case studies and examine how institutional and sectoral contexts affect the typology. Compliance-oriented digitalization may primarily improve administrative efficiency and reporting reliability; management-oriented digitalization may improve internal control and operational performance; decision-support-oriented digitalization may affect decision quality, adaptability and strategic responsiveness.

This article has limitations. The typology is developed from a structured integrative literature review rather than from primary empirical data. The three configurations are analytical categories rather than mutually exclusive empirical states. The framework should not be interpreted as a universal maturity model. It also focuses on use orientations rather than on specific technologies such as accounting software, cloud AIS, ERP modules, dashboards, business intelligence tools, analytics platforms or AI-based accounting applications.

8. Conclusion

This article set out to clarify how digitalized accounting information systems are used in SMEs and why similar digitalized AIS may generate different forms of value across firms. While prior research has provided important insights into digital accounting adoption, cloud-based AIS, AIS success, information quality, management control effectiveness, decision-making effectiveness and SME performance, it often treats digitalized AIS use as a broad and undifferentiated construct.

The main contribution of the article is the development of a contingency-based typology of digitalized AIS uses in SMEs. The typology distinguishes three dominant use orientations: compliance-oriented digitalization, management-oriented digitalization and decision-support-oriented digitalization. The article argues that transitions between these configurations are contingent rather than automatic. Digitalization alone does not transform accounting information into a managerial or decision-support resource. Such transformation depends on the interaction between digitalized AIS capabilities, information quality, user appropriation and contingency fit.

The framework suggests that future empirical studies should not measure digitalized AIS use as a single homogeneous construct. Instead, they should operationalize the three use orientations, examine their determinants, test their effects on management control and decision-making, and analyze transitions between configurations. Despite its limitations, the article contributes to a more precise understanding of accounting digitalization in SMEs by showing that the value of digitalized AIS lies not only in the adoption of digital tools, but in the purposes for which accounting information is produced, interpreted and used.

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