

Enhancing Transparency and Traceability of Sales Revenue via E-Invoices: Lessons from Bravo

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Abstract

This study investigates the role of e-invoices in enhancing the transparency, traceability, and reliability of sales revenue accounting in the context of digital transformation in Vietnam. Drawing upon institutional theory and decision usefulness theory, the research explores how regulatory frameworks, organizational culture, accounting staff competence, and information technology adoption influence the effectiveness of e-invoice implementation. A mixed-methods approach was employed, combining expert interviews with a survey of 287 enterprises using the BRAVO accounting software. Data were analyzed using structural equation modeling (SEM) to test the hypothesized relationships. The results indicate that regulatory clarity and professional competence of accountants have the strongest positive impacts, while IT adoption significantly improves accuracy and timeliness in revenue recognition. Organizational culture fosters compliance and information sharing, whereas competitive pressures exert only a marginal effect. The findings provide both theoretical and practical contributions by confirming the critical role of e-invoices in strengthening financial transparency, supporting corporate governance, and aligning Vietnam's accounting practices with international standards.

Keywords: E-invoices, Sales revenue accounting, Transparency, Traceability, BRAVO software, Digital transformation, Vietnam

1. Introduction

In the context of global economic integration and the rapid digitalization of business

operations, the accuracy, transparency, and traceability of revenue accounting have become critical determinants of both corporate governance and regulatory compliance. The recognition and reporting of sales revenue—as the primary source of financial information for internal and external stakeholders—not only influence managerial decision-making but also affect investor confidence, market discipline, and tax transparency (Nobes & Parker, 2019; Han & Liu, 2021). Within emerging economies such as Vietnam, where institutional frameworks are evolving, the modernization of accounting systems has become a pressing requirement to align domestic practices with international standards, particularly IFRS 15 on revenue recognition (IFRS Foundation, 2023).

Recent international studies have reaffirmed that digital transformation is reshaping the accounting landscape, especially in the domain of revenue recognition and reporting. According to Botes and Sharma (2021), the integration of digital technologies into financial processes has enhanced the timeliness and reliability of revenue data, thereby reducing audit risk and information asymmetry. Likewise, Moffitt, Richardson, and Vasarhelyi (2021) highlighted that automation, artificial intelligence (AI), and blockchain technologies have substantially improved revenue traceability, transaction validation, and compliance with IFRS 15 in multinational enterprises. A study by Pizzi, Venturelli, and Caputo (2022) further demonstrated that digital accounting tools contribute to sustainability reporting and transparency, positioning e-invoicing as a cornerstone of corporate accountability in the digital economy.

E-invoicing, in particular, has emerged as a transformative mechanism for enhancing transparency and strengthening internal controls throughout the revenue cycle. Unlike traditional paper-based systems, e-invoices enable real-time validation, secure digital archiving, and integration with enterprise resource planning (ERP) platforms, thus supporting end-to-end traceability of sales transactions and minimizing manipulation or fraud. Empirical research by Costa et al. (2023) and OECD (2020) revealed that mandatory adoption of e-invoicing in countries such as Italy, Mexico, and Chile has led to significant reductions in tax evasion and improvements in financial reporting quality. In addition, Hänninen, Pihkala, and Saaranen (2022) found that digital invoicing adoption fosters interorganizational trust and compliance efficiency, particularly when supported by government-driven regulatory frameworks.

For enterprises in the construction and software sectors such as BRAVO, a leading Vietnamese business management software company the adoption of e-invoicing technology in sales revenue accounting holds particular relevance. The complexity of long-term contracts, project-based revenue recognition, and increasing demands for transparent financial disclosure necessitate robust digital accounting systems that go beyond conventional bookkeeping. Nguyen and Le (2023) emphasized that Vietnamese firms adopting e-invoices integrated into ERP and AI-assisted systems demonstrated greater compliance accuracy and audit readiness. Similarly, Pham, Vu, and Tran (2024) found that e-invoicing adoption correlates positively with the timeliness and reliability of revenue recognition among enterprises subject to IFRS 15 convergence, particularly in industries with high customization and deferred revenue components.

From a theoretical perspective, recent scholarship has expanded the institutional theory and technology acceptance framework (DiMaggio & Powell, 1983; Davis, 1989) to incorporate digital compliance mechanisms. Al-Htaybat and von Alberti-Alhtaybat (2021) proposed that institutional coercion, normative professionalization, and mimetic benchmarking jointly accelerate digital adoption in accounting, while user perceptions of technological usefulness and system trust mediate successful implementation. This framework provides a robust foundation for examining how BRAVO and similar enterprises translate regulatory mandates on e-invoicing into operational and strategic advantages.

Moreover, contemporary literature has highlighted a growing intersection between digital accounting and sustainability-driven governance. Studies by Rau, Zhang, and Yu (2023) and Zhang & Pizzi (2024) demonstrated that transparent, technology-enabled revenue accounting strengthens ESG (Environmental, Social, Governance) disclosure, enhances investor confidence, and aligns financial reporting with global sustainability goals. Within transitional economies, however, challenges remain. According to Doan and Hoang (2025), Vietnamese enterprises continue to face institutional inertia, fragmented digital infrastructures, and limited human capital in fully realizing the potential of e-invoicing for transparent revenue management.

Collectively, the recent body of research (2020 -2025) indicates a paradigm shift in revenue accounting from a compliance-oriented system to a strategic, technology-enabled, and transparency-driven framework. This transition is particularly significant in Vietnam, where digital transformation, IFRS adoption, and regulatory reforms are converging. The case of BRAVO provides an empirical lens to explore how e-invoicing not only ensures compliance with IFRS 15 but also enhances financial integrity, operational efficiency, and stakeholder trust. Consequently, studying the integration of e-invoicing into revenue accounting contributes to the broader academic discourse on accounting digitalization, institutional change, and financial transparency in emerging markets.

2. Theoretical Background and Hypotheses Development

2.1 Theoretical Background

The adoption of e-invoicing in sales revenue accounting can be theoretically grounded in several complementary perspectives.

First, Institutional Theory (DiMaggio & Powell, 1983) provides a robust framework to explain organizational responses to external pressures in shaping accounting practices. Coercive pressures (e.g., legal mandates on e-invoices from the Vietnamese Ministry of Finance), normative pressures (e.g., compliance with IFRS 15 on revenue recognition), and mimetic pressures (e.g., industry-wide benchmarking of ERP adoption) collectively drive enterprises toward standardization and digitalization of revenue accounting. Prior studies confirm that institutional environments significantly influence accounting practices in emerging economies (Waweru, Hoque & Uliana, 2004; Albu et al., 2011). In the Vietnamese context, regulatory initiatives mandating nationwide e-invoicing (MoF, 2020) exemplify coercive pressures compelling firms to modernize their sales revenue accounting systems.

Second, the Technology Acceptance Model (TAM) (Davis, 1989) posits that the perceived usefulness and perceived ease of use of technological innovations determine users' intention to adopt and utilize such technologies effectively. Applied to e-invoicing, this theory implies that the extent to which accountants and managers perceive e-invoices as facilitating transparency, reducing errors, and improving traceability will directly affect implementation success. Prior AIS research has extended TAM to ERP and accounting systems, highlighting that managerial support and organizational readiness are critical enablers of adoption (Granlund, 2011; Sulaiman & Mitchell, 2005).

Third, the Decision-Usefulness Theory of accounting (Staubus, 2000) underlines that financial information should be relevant, reliable, and timely to support decision-making by stakeholders. E-invoicing directly enhances the decision-usefulness of sales revenue data by providing real-time, standardized, and auditable records. In transitional economies where revenue misstatement and tax evasion remain prevalent, such technological integration becomes pivotal to increasing trust in financial reporting (Nguyen & Tran, 2020).

Finally, insights from the Resource-Based View (RBV) (Barney, 1991) suggest that firms can develop competitive advantage through unique resources, including digital infrastructure, skilled human capital, and strong internal controls. By embedding e-invoices into revenue accounting systems, firms not only comply with legal mandates but also create organizational capabilities that enhance efficiency, reduce transaction costs, and foster sustainable competitiveness.

Collectively, these theoretical perspectives provide a multidimensional lens to analyze the drivers and outcomes of e-invoice adoption in sales revenue accounting.

2.2 Hypotheses Development

Drawing upon the above theoretical foundations and prior empirical studies, the following hypotheses are proposed:

H1: A clear and transparent legal and regulatory framework has a positive effect on the effective adoption of e-invoicing in sales revenue accounting.

- Supported by institutional theory, coercive pressures from the government (e.g., mandatory e-invoice regulations) are expected to drive enterprises toward compliance (Waweru et al., 2004).

H2: The professional competence of accountants positively influences the quality of sales revenue accounting using e-invoices.

- Prior studies indicate that human expertise remains central to effective accounting transformation (Hoang & Tran, 2020). Competence in IFRS, IT systems, and ethical conduct ensures reliable e-invoice implementation.

H3: Organizational culture oriented toward transparency and innovation positively affects the successful integration of e-invoicing into sales revenue accounting.

- Following Scapens (2006), cultural support for change and openness to innovation reduces resistance and facilitates institutionalization of new accounting practices.

H4: The application of information technology (ERP, AIS, and e-invoice platforms) positively impacts the timeliness, traceability, and accuracy of sales revenue accounting.

- Consistent with TAM (Davis, 1989), perceived usefulness of IT integration drives adoption and improves accounting outcomes.

H5: Competitive pressures positively influence enterprises' efforts to enhance transparency and traceability of sales revenue through e-invoicing.

- According to institutional and contingency perspectives, firms facing intense market competition are more likely to invest in modern accounting systems to improve efficiency and credibility (Chenhall, 2003).

H6: The effective adoption of e-invoicing in sales revenue accounting enhances financial transparency, traceability, and stakeholder trust.

- In line with decision-usefulness theory, e-invoices are expected to improve the quality of financial information, thereby fostering investor confidence and regulatory compliance (Albu et al., 2011).

3. Research Methodology

This study adopts a quantitative research design using survey data to empirically test the proposed hypotheses. The target respondents include chief accountants, accounting staff, and IT specialists in enterprises that have implemented e-invoices. The questionnaire was developed based on validated measurement scales from prior studies (Chenhall, 2003; Davis, 1989; Hair et al., 2019) and adapted to the Vietnamese context.

A stratified random sampling approach was applied to ensure representation across industries and firm sizes. Out of 350 distributed questionnaires, 287 valid responses were collected (response rate: 82%), which meets the recommended sample size for factor analysis and SEM (Comrey & Lee, 1992).

All constructs were measured using a 5-point Likert scale, capturing dimensions such as regulatory framework, accounting expertise, organizational culture, IT adoption, competitive pressure, and the outcomes of e-invoice implementation (transparency, traceability, and accuracy of revenue information).

Data analysis followed a two-step procedure (Anderson & Gerbing, 1988): (i) measurement model assessment using Cronbach's Alpha, Composite Reliability (CR), Average Variance Extracted (AVE), and Confirmatory Factor Analysis (CFA); and (ii) structural model testing via SEM, with model fit indices (CFI, TLI > 0.90; RMSEA < 0.08) as benchmarks. Multi-group analyses were conducted to validate robustness across firm characteristics.

The study strictly adhered to research ethics by ensuring respondent anonymity, confidentiality of data, and restricting data usage to academic purposes only.

4. Results and Discussion

4.1 Empirical Results

Based on survey data from 287 valid responses and subsequent analysis using Structural Equation Modeling (SEM), the findings provide robust empirical support for most of the proposed hypotheses. All constructs exhibited satisfactory reliability and validity, with Cronbach's Alpha values exceeding 0.80 and AVE values above 0.50, confirming measurement consistency. Model fit indices were within acceptable thresholds (CFI = 0.94; TLI = 0.92; RMSEA = 0.06), indicating a well-specified model.

The results reveal that the regulatory framework and accounting standards exert the strongest and most significant influence on the effectiveness of sales revenue accounting through e-invoices ($\beta = 0.42$; $p < 0.01$). This finding underscores the critical role of transparent, consistent, and enforceable legal frameworks in enhancing the traceability and reliability of financial information.

The professional competence of accountants is also shown to be a significant driver ($\beta = 0.31$; $p < 0.05$), highlighting that staff expertise, technological literacy, and ethical standards are indispensable for ensuring accurate revenue recognition and compliance with accounting norms.

The role of organizational culture is confirmed with a moderate but positive effect ($\beta = 0.19$; $p < 0.05$). Enterprises fostering a culture of transparency, accountability, and knowledge-sharing are better positioned to integrate digital solutions such as e-invoices effectively.

Similarly, IT adoption demonstrates a positive and statistically significant impact ($\beta = 0.28$; $p < 0.05$), aligning with prior studies emphasizing digital transformation as a catalyst for financial reporting quality (Granlund, 2011; Albu et al., 2011). Firms that deploy automated systems achieve higher accuracy, reduced errors, and improved timeliness in revenue reporting.

Finally, competitive pressure is found to have a weaker yet notable effect ($\beta = 0.14$; $p < 0.10$). While competition encourages firms to optimize operations, its indirect impact on revenue accounting practices suggests that many enterprises remain reliant on relational advantages and pricing strategies rather than fully leveraging accounting innovations.

4.2 Discussion

The results affirm the centrality of regulatory clarity and professional competence in shaping accounting practices in the digital era. These findings are consistent with Nobes and Parker (2019) and Nguyễn Văn Công (2021), who emphasize that well-structured accounting frameworks are foundational for financial transparency.

The evidence regarding human expertise resonates with earlier work by Hoàng & Trần (2020), confirming that investment in continuous training and IT-related skills is indispensable in ensuring the success of e-invoice adoption. Beyond technical compliance, the results indicate

that organizational and cultural factors often underestimated play a meaningful role in sustaining innovation and embedding digital tools within firms' accounting systems.

The positive influence of IT adoption corroborates the argument that digitalization is not merely a technical upgrade but a strategic necessity. It extends the literature by demonstrating how technology reinforces transparency and traceability of sales revenue in emerging markets.

Notably, the modest role of competitive pressure suggests that institutional and internal factors weigh more heavily than market dynamics in motivating firms to modernize accounting practices. This points to a policy implication: regulators should not only enforce compliance but also create incentive structures that encourage firms to adopt digital accounting solutions as part of a broader strategy for sustainable competitiveness.

5. Conclusion

This study has provided empirical evidence on the determinants influencing the effectiveness of sales revenue accounting through the adoption of e-invoices, with lessons drawn from the case of BRAVO. The findings demonstrate that among the examined factors, the regulatory framework and accounting standards exert the most substantial and positive effect, reaffirming that transparent, consistent, and enforceable regulations serve as the cornerstone of reliable financial reporting.

The results also highlight the indispensable role of accountants' professional competence, which directly enhances the accuracy and compliance of revenue recognition processes. This underscores the importance of continuous training in accounting, information systems, and ethical conduct to ensure successful digital adoption.

In addition, organizational culture and IT adoption emerged as significant drivers, reflecting that the integration of digital solutions is not purely a technical issue but also an organizational and cultural transformation. Enterprises that foster transparency, accountability, and digital readiness are better positioned to leverage e-invoices for improved traceability and efficiency.

Although competitive pressure was found to exert only a moderate effect, it remains a relevant factor that indirectly motivates firms to refine cost management and reporting practices. The relatively weak impact suggests that regulatory and organizational mechanisms remain more decisive than market forces in shaping firms' accounting modernization efforts.

Taken together, these findings contribute to both theory and practice. Theoretically, the study enriches the literature on digital accounting by elucidating the interaction between institutional, human, and technological factors. Practically, it provides policy implications for regulators and managers: policymakers should focus on strengthening legal frameworks and creating supportive environments for digital transformation, while enterprises should invest in human capital development and IT infrastructure to enhance transparency, accountability, and competitiveness in the digital era.

Competing interests

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

Informed consent

Obtained.

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The Publication Ethics Committee of the Macrothink Institute.

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The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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