RAIS Journal for Social Sciences | VOL. 9, No. 2, 2025
ISSN 2574-0245 (Print) | ISSN 2574-1179 (Online) | DOI: 10.5281/zenodo.17670033

Bridging the IT Value Gap: A Narrative Review and Research Agenda for Customer-Centric IT Business Value

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Abstract: Research on information technology business value (ITBV) has long emphasized firm-level assessments grounded in accounting metrics, productivity models, and systems-focused frameworks. While these approaches provide important insights into the organizational impacts of IT, such as efficiency, innovation, and competitive advantages, they predominantly reflect an internal perspective that overlooks the customer-mediated dimensions of value creation. Recent scholarship argues that ITBV must be understood not only through internal process improvements but also through customers' perceptions, experiences, and willingness to pay. These external indicators better capture the relational and experiential outcomes increasingly central to digital-era business performance. The literature further highlights the role of complementary resources, environmental factors, and specific IT capabilities in shaping ITBV, yet these considerations alone remain insufficient for capturing how value materializes across stakeholder domains. This narrative review synthesizes the evolution of ITBV research and identifies significant gaps related to the limited use of intangible, non-financial, and customer-centric metrics. The findings underscore the need for more holistic assessment models that integrate firm-level and customer-level indicators and emphasize experiential value delivered through IT-enabled services. The review concludes by calling for empirical research that leverages subjective customer data, explores willingness-to-pay metrics, and examines the indirect pathways through which IT capabilities shape market outcomes and long-term competitive advantage.

Keywords: Information Technology Business Value (ITBV), Customer Value, Willingness to Pay, IT Capabilities, Intangible and Non-Financial Metrics, Digital Experience, Competitive Advantage

Introduction

Information technology (IT) has evolved from a back-office enabler of efficiency to a strategic driver of competitive advantage and value creation. Over the past three decades, researchers have sought to understand how IT investments contribute to business performance, developing a broad body of literature known as Information Technology Business Value (ITBV) research. Traditionally, ITBV studies have examined this relationship through firm-level analyses, focusing on how IT enhances productivity, profitability, and organizational performance (Melville et al., 2004; DeLone & McLean, 2003). These frameworks emphasize measurable, internal outcomes such as process optimization, cost reduction, and output quality rooted in the resource-based and systems-oriented views of the firm. However, as digital transformation reshapes industries, these

models have increasingly been criticized for their narrow focus on internal efficiency while neglecting the external, customer-facing dimensions of value creation (Schweikl & Obermaier, 2023; Gellweiler & Krishnamurthi, 2022).

Recent scholarship recognizes that IT's true business value extends beyond organizational boundaries into the marketplace, where customers' perceptions, experiences, and willingness to pay ultimately determine economic returns (Oberholzer-Gee, 2021). In today's service-driven digital economy, firms derive competitive advantage not merely from technological assets, but from their ability to leverage IT to enhance customer satisfaction, engagement, and loyalty. This evolving perspective calls for a reexamination of ITBV through a dual lens that integrates both firm-centric and customer-centric value constructs (Masli et al., 2011; Bayer et al., 2020). Accordingly, this narrative literature review synthesizes contemporary research to illuminate how IT capabilities generate business value across organizational and customer dimensions, addressing critical theoretical gaps and establishing a foundation for future inquiry into IT-enabled value creation.

Problem Statement

Despite decades of inquiry into information technology business value (ITBV), the literature continues to rely heavily on firm-level perspectives that emphasize internal performance metrics such as productivity, profitability, and efficiency (Melville et al., 2004; DeLone & McLean, 2003). This organizational bias has resulted in an incomplete conceptualization of ITBV that fails to capture how information technology investments create value from the customer's standpoint, the ultimate arbiter of market success. The dominance of financial and process-oriented models neglects experiential and relational factors that determine customers' perceptions of value, satisfaction, and willingness to pay (Schweikl & Obermaier, 2023; Gellweiler & Krishnamurthi, 2022). Consequently, the existing literature insufficiently addresses how IT-enabled capabilities translate into meaningful customer outcomes, thereby creating a significant theoretical and practical gap in understanding the multidimensional nature of IT value creation.

Moreover, prior research often overlooks the moderating influence of contextual variables such as competitive intensity, regulatory environments, and market volatility on IT's contribution to both firm and customer value (Ali et al., 2023; Dehning & Richardson, 2002; Soh & Markus, 1995). Even frameworks that account for complementary assets, such as organizational culture or managerial capabilities, inadequately explain how these assets interact with IT to enhance customer-perceived value. This gap is particularly salient in service-based digital economies, where customer experience, personalization, and trust increasingly define competitive advantage. The absence of integrated, stakeholder-inclusive frameworks thus constrains the explanatory power of ITBV theory and limits managerial insight into the true value-generating mechanisms of digital technologies.

Purpose Statement

The purpose of this study is to explore how information technology capabilities contribute to customer-perceived business value, thereby bridging the persistent divide between organizational efficiency and market-driven outcomes. By integrating customer value theory with established ITBV frameworks, this research aims to advance a multidimensional understanding of IT value that encompasses both internal operational benefits and external experiential advantages (Bayer et al., 2020; Oberholzer-Gee, 2021). Specifically, the study seeks to examine how IT resources, when complemented by managerial, cultural, and process-based factors, influence customers' willingness to pay, loyalty, and perceived differentiation in competitive digital markets.

Through this integrative lens, the study intends to illuminate how IT investments create both tangible and intangible forms of value that extend beyond traditional financial indicators. This exploration emphasizes that IT's true contribution lies not only in optimizing internal efficiency but in enhancing customer experience, satisfaction, and perceived value. By synthesizing existing research and identifying gaps in current theoretical models, this study seeks to provide both scholars and practitioners with a more comprehensive framework for understanding and measuring ITBV in dynamic, customer-centric business environments.

Significance Statement

This study is significant because it addresses a fundamental gap in the ITBV literature which is the neglect of customer-perceived value as a critical dimension of technology-driven business performance. By reconceptualizing IT business value through a dual organizational–customer lens, the research contributes to a more holistic theoretical framework capable of explaining how IT enhances both firm outcomes and customer experiences (Gellweiler & Krishnamurthi, 2022; Schweikl & Obermaier, 2023). The inclusion of the customer perspective recognizes that IT's ultimate impact is realized when it fosters customer engagement, satisfaction, and willingness to pay, thereby driving sustainable competitive advantage (Christensen, 2010; Masli et al., 2011).

Practically, this research offers actionable insights for decision-makers seeking to justify IT investments not only on operational grounds but also in terms of customer impact and market performance. It encourages organizations to adopt integrated measurement systems that capture IT's contribution to customer experience and value creation, providing a more accurate reflection of digital transformation success. The findings will therefore be valuable to executives, policymakers, and researchers aiming to design and evaluate IT strategies that align technological capability with market responsiveness and customer-centric performance indicators (Enholm et al., 2022; Mayer, 2021).

Nature of the Study

This study employs a qualitative, narrative literature review design to synthesize and critically analyze existing scholarship on IT business value. The narrative review methodology allows for an interpretive examination of theoretical and empirical developments across multiple perspectives, including the resource-based view, process-oriented frameworks, and customer value theory (Schryen, 2013; Schweikl & Obermaier, 2023). This qualitative synthesis identifies patterns, contradictions, and gaps within the literature, offering a cohesive understanding of how IT capabilities have been conceptualized as drivers of both organizational and customer value.

The study's qualitative nature enables the inclusion of diverse sources, including conceptual papers, case studies, empirical analyses, older studies, and recent studies to develop an integrated conceptual framework that reflects the evolving nature of ITBV in digital economies. By focusing on interpretive depth rather than numerical generalization, the study uncovers the relational and experiential mechanisms through which IT contributes to customer value creation. This approach establishes a strong theoretical foundation for future empirical research aimed at operationalizing ITBV constructs that encompass both firm-level and customer-level dimensions.

Narrative Literature Review

Research on information technology business value (ITBV) has traditionally been anchored in the firm-level analytical paradigm, wherein scholars assess IT's contribution to

organizational performance through either systems-oriented qualitative analyses or accounting-based quantitative models utilizing archival data (Banker et al., 2009). This dual methodological orientation of balancing subjective and objective indicators reflects an enduring effort to capture how IT investments translate into measurable business outcomes. Bayer et al. (2020) define business value as improvements across four dimensions of competitive advantage: efficiency, quality, innovation, and customer responsiveness. This multidimensional definition implicitly acknowledges that IT value is not confined to internal operational metrics but extends to customer-facing outcomes such as service personalization, response time, and digital experience quality. For instance, a logistics company that implements an AI-powered route optimization system may achieve both operational efficiency (reduced delivery time) and enhanced customer satisfaction (more accurate delivery windows), thereby demonstrating IT's dual contribution to firm and customer value creation.

Nevertheless, much of the ITBV literature continues to privilege the organizational lens. Melville et al. (2004, p. 287) define IT business value as "the organizational performance impacts of information technology at both the intermediate process level and the organization-wide level and comprising both efficiency impacts and competitive impacts." This widely cited conceptualization reinforces the primacy of firm-centric measures, focusing on how IT shapes internal processes, productivity, and profitability. Similarly, DeLone and McLean's (2003), influential IS Success Model operationalizes ITBV through constructs such as system quality, information quality, use, user satisfaction, individual impact, and organizational impact, each predominantly assessed within the organizational boundary. However, subsequent scholarship has argued that this narrow focus overlooks the external, customer-mediated dimensions of IT value (Masli et al., 2011; Schweikl & Obermaier, 2023). In practice, this limitation becomes evident in service-driven industries such as digital banking or e-commerce where IT investments often yield value indirectly through enhanced customer experiences, trust, and loyalty rather than through traditional financial performance indicators. Thus, while firm-level metrics remain foundational, a comprehensive assessment of ITBV must integrate external stakeholder perspectives to reflect the increasingly relational and experiential nature of value creation in contemporary digital economies.

The extant literature on ITBV has predominantly emphasized firm-level analyses, often neglecting the heterogeneous and subjective preferences of stakeholders, particularly customers, who ultimately determine the perceived value of IT-enabled offerings (Schryen, 2013; Gellweiler & Krishnamurthi, 2022). While this organizational lens has yielded valuable insights into productivity gains and financial performance, it insufficiently captures the nuanced mechanisms through which IT generates value across different stakeholder domains. Synthesizing prior research, Schweikl and Obermaier (2023) concluded that the ITBV discourse has largely overlooked the interplay between IT resources and complementary non-IT assets such as organizational culture, managerial capabilities, and process innovation that collectively influence value creation. Although this complementary resource perspective advances theoretical understanding, it remains inadequate for explaining how IT-derived value materializes in practice, especially in dynamic service environments where intangible outcomes, customer experience, and perceived quality are central to performance.

Beyond internal resource configurations, contextual and environmental factors such as competitive intensity, market volatility, and regulatory frameworks also exert a moderating influence on the IT value creation process (Ali et al., 2023; Dehning & Richardson, 2002; Soh & Markus, 1995; Schweikl & Obermaier, 2023). For instance, a financial services firm may realize significant returns from its IT investments during periods of stable regulation but experience diminished value when abrupt policy shifts

disrupt its data management systems. Yet, these environmental and complementary factors, while amplifying IT's value-generating potential, cannot by themselves serve as reliable indicators of ITBV. Consistent with calls to disaggregate the IT construct, researchers have underscored the need to evaluate the differential effects of specific IT capabilities such as analytics infrastructure, customer relationship platforms, or cybersecurity systems on various dimensions of firm performance (Bayer et al., 2020; Mistry, 2006). Traditional approaches grounded in accounting metrics or systems engineering paradigms, though appropriate for manufacturing contexts with quantifiable outputs, fail to capture the experiential and relational dimensions that define value in service industries (Kauffman & Kriebel, 1998). As Oberholzer-Gee (2021) posits, customer willingness to pay represents a more authentic and actionable metric of value creation, reflecting how IT investments translate into market advantage and consumer satisfaction. Consequently, a comprehensive understanding of ITBV necessitates an integrated framework that reconciles both firm-centric and customer-centric perspectives, thereby recognizing that the true measure of IT's value lies not merely in operational efficiency, but in its capacity to enhance the perceived and realized worth of products and services in competitive markets.

Measuring customers' willingness to pay for a product or service remains one of the most fundamental indicators of business value creation, as it directly reflects how effectively a firm's offerings translate into perceived market worth (Christensen, 2010; Oberholzer-Gee, 2021). From this perspective, value is not solely determined by internal efficiencies or cost advantages but by the degree to which customers recognize and are willing to reward the differentiated benefits of a product or service. As Masli et al. (2011, p. 83) observe, the customer perspective captures "how the firm's value proposition, its product and service attributes, relationship with its customer, and its image deliver customer value." Treacy and Wiersema (1993) further argue that while organizations universally succeed by selling value, what often remains elusive is how customers define that value. They conceptualized customer value as a multifaceted judgment encompassing not only price–quality trade-offs but also convenience, reliability, post-purchase support, and the overall experience of engaging with the firm. This understanding has evolved over time: whereas customers once evaluated value primarily in terms of product quality and price, they now emphasize seamless digital experiences, rapid service responsiveness, and the dependability of ongoing engagement. For instance, in the modern retail environment, a customer's willingness to pay may hinge as much on the ease of navigating an e-commerce platform or the speed of customer support as on the tangible quality of the purchased good.

Customer value derived from IT, therefore, extends beyond technological capability, it is embedded within the internal IT competencies that enable superior products and services, sustain high-quality customer relationships, and reinforce favorable brand perceptions (Collis, 1994; Enholm et al., 2022; Mayer, 2021). Gellweiler and Krishnamurthi (2022) highlight that while both organizational and customer value stem from IT resources, prior research has been disproportionately focused on the direct, internal, and often non-monetary aspects of IT's contribution to firm performance, overlooking the indirect yet financially decisive customer perspective. They emphasize that since a firm's performance ultimately depends on the cash flow generated from serving customers, customer value should serve as the ultimate standard for evaluating returns on IT investments. In practical terms, this means that a firm implementing an advanced customer analytics platform should assess not only internal process efficiencies but also the extent to which IT-driven insights enhance customer engagement, loyalty, and willingness to pay. Firms achieve competitive advantage when IT capabilities simultaneously elevate customers' perceived value and reduce the substitutability of their offerings (Christensen, 2010; Gellweiler & Krishnamurthi, 2022; Oberholzer-Gee, 2021). Given its flexibility, scalability, and innovation potential, IT uniquely enables such differentiation by

personalizing experiences, optimizing interactions, and fostering long-term trust (Ives & Learmonth, 1984; Masli et al., 2011; Schweikl & Obermaier, 2023). Consequently, an exclusive focus on the internal organizational perspective of IT business value represents an incomplete conceptualization of the ITBV construct. As Gellweiler and Krishnamurthi (2022, p. 364) aptly assert, "customer value from IT directly impacts firm performance, whereas organizational value is non-monetary and a precondition to the creation of customer value."

Conclusions

The literature demonstrates that existing ITBV research remains constrained by its predominant focus on firm-level performance indicators, overlooking the customer-driven dimensions that increasingly define business success in the digital era. While IT's contributions to efficiency, cost reduction, and process improvement are well documented, its indirect yet critical role in shaping customer perceptions, satisfaction, and willingness to pay has been insufficiently explored (Christensen, 2010; Masli et al., 2011). This oversight limits the field's ability to explain the full spectrum of IT's impact, especially in service-oriented contexts where customer experience and relational value often outweigh internal efficiencies (Oberholzer-Gee, 2021; Schweikl & Obermaier, 2023).

Therefore, a comprehensive understanding of IT business value must integrate both organizational and customer perspectives within a unified analytical framework. The findings underscore the need to view ITBV as a socio-technical construct wherein technological, managerial, and experiential dimensions interact dynamically to produce both operational and market-based outcomes (Gellweiler & Krishnamurthi, 2022; Bayer et al., 2020). By adopting this integrated perspective, researchers and practitioners can more accurately assess IT's role in creating sustainable, customer-centered value in rapidly evolving digital environments.

Recommendations for Future Research

Future research should employ qualitative methodologies that capture the complexity and contextual nuances of IT value creation across both firm and customer domains. A Qualitative Case Study design is particularly well-suited for investigating how specific IT capabilities, such as analytics, CRM systems, or AI-driven platforms, contribute to customer-perceived value within real-world organizational contexts. Case-based inquiry would provide rich, contextualized insights into how IT investments translate into tangible market outcomes, enabling the development of theory grounded in practice (Collis, 1994; Ives & Learmonth, 1984). Alternatively, Action Research could facilitate collaborative experimentation between researchers and practitioners to iteratively design, implement, and evaluate IT-based interventions that enhance customer experience and value realization.

In addition, a Modified Delphi Study could be used to develop expert consensus on the constructs, dimensions, and metrics that best capture the dual nature of ITBV. This method would enable the systematic integration of perspectives from academia and industry, ensuring conceptual rigor and practical relevance (Treacy & Wiersema, 1993). Each of these qualitative approaches would help address the current theoretical and empirical gaps by revealing how IT's contribution to value creation operates through both internal organizational processes and external customer interactions. Collectively, such studies would enrich ITBV scholarship and provide actionable guidance for aligning IT investments with customer-driven business performance.

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