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BUSINESS MODEL INNOVATION BASED ON DISRUPTIVE TECHNOLOGIES: A CRITICAL SUCCESS FACTORS CATEGORIZATION

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ABSTRACT

Business model innovation (BMI) holds significant importance in today's digital landscape, empowering enterprises to leverage disruptive technology for value creation and competitive advantage. However, the rapid evolution of these technologies presents various challenges, including uncertain market conditions, potential financial risks during the initial phases, employee resistance, and the risk of distraction from core responsibilities. This research aimed to identify the characteristics essential for the successful implementation of BMI through effective utilization of disruptive technologies. This was accomplished through a thorough review of existing literature, organizing critical success factors into the business model canvas framework, and applying a framework for identifying and classifying digital technologies based on demand. The findings underscored the importance of trust, efficiency, and adaptability across various BMI components. Technologies like Artificial Intelligence enhance objective alignment and personalized client experiences, while blockchain technology fosters trust and transparency. Cloud computing, on the other hand, enhances resource accessibility and flexibility. To achieve optimal BMI in today's digital landscape, it is important for organisations to proactively integrate these technologies into their operations, while fostering adaptability and engaging stakeholders.

KEYWORDS

Critical success factors, business model innovation, disruptive technologies, checklist

1. INTRODUCTION

Business models indicate how enterprises are related to different stakeholders (Wang & Chebo, 2021). Employees, customers, investors, and the community greatly impact the value of disruptive technology. They shape technical breakthroughs by their ideas and input, benefit from such advancements, and play an important role in the acceptance and implementation of modern technologies. Their participation and acceptance are critical drivers of the value that disruptive technologies can provide (Garmulewicz et al., 2018).

The business landscape is being transformed by disruptive technology (ref). Enterprises that fail to adapt to the risks associated with obsolescence are faced with a pressing need to comprehend the key success factors (CSFs) of business model innovation. Critical Success Factors (CSFs) are essential elements that determine the success or failure of a company in attaining its objectives (ref). Ensuring a competitive edge is achieved by aligning tactics with these Critical Success Factors (CSFs). This research study investigates the impact of critical success factors (CSFs) on enterprise's performance, with a particular focus on disruptive technology. From the research problem presented, the following research question is identified: What are the key determinants of success for business model innovation within the framework of disruptive technologies? The purpose of this study is to analyze and examine the essential elements of effective business model innovation in the face of disruptive technological environments. The significance of this phenomenon resides in its ability to provide guidance to businesses as they navigate technological transformations and contribute to the academic literature on the subject. The paper is organized in an introductory section that provides contextual information, a section that outlines the motivation for the study, a comprehensive description of the methodology employed, a presentation of the findings, a presentation of the implications and interpretations of the results, and a concluding section.

2. BACKGROUND

The transformative impact of disruptive technology on the business environment is accentuated by scholarly research (Lipsmeier et al., 2018). Enterprises confronted with the threat of obsolescence must consider the factors underpinning successful business model innovation. These factors, known as Critical Success Factors (CSFs), are important determinants shaping an organization's ability to achieve its objectives and to maintain a competitive advantage.

2.1 Business Model Innovation Amidst Disruptive Technology

Business model innovation focuses on new methods of creating and extracting value; innovative business models try to develop new market propositions by altering how businesses and customers interact (Spyropoulos, 2020). The use of disruptive technologies promotes the development of flexible and linked enterprise systems. Disruptive technologies have the potential to radically disrupt a sector or a segment of the market, determining the digital revolution of enterprises and transforming their processes and business models. Disruptive technologies have encouraged businesses to make innovative decisions and attract high-technology-skilled employees to ensure that the business succeeds (Scuotto et al., 2022). Enterprises can gain a competitive advantage through business model innovation driven by disruptive technologies. Understanding client demands, adapting to changing market conditions, and establishing a continual learning and experimentation culture are all critical success elements (Budler et al., 2021). Enterprises can discover new revenue streams and provide unparalleled value by leveraging these technologies, establishing themselves as industry leaders and fortifying themselves against future difficulties (Cheng & Wang, 2022).

Despite the numerous benefits, enterprises transforming frequently need help in digitally innovating their business model. This is because digital innovation varies from traditional forms of strategic change in that digital technologies accelerate the rate of change, resulting in much

greater environmental complexity, volatility, and unpredictability (ref). Business Model Innovation (BMI) is a challenging topic due to the high technological, product, and market uncertainty levels. The focus of enterprises has shifted to business model innovation due to competitive pressure, digital transformation, adverse economic conditions, and resource scarcity (Spyropoulos, 2018a). The risk of misjudging client readiness, which can lead to early investments and market misalignment, is one of the most critical concerns. Internal resistance is also risky, as employees may be apprehensive of changes that disrupt established workflows or jeopardize job security. Furthermore, a hyper-focus on innovation can often lead to an enterprise neglecting its core business, diluting its brand and losing loyal customers. These problems, if not managed with forethought, might outweigh the benefits of innovation, resulting in financial failures and loss of market position (Chen et al., 2022). Poor management can result in enterprise resistance, misaligned corporate processes, squandered resources, and potential failure to meet customer expectations. As a result, for successful integration of disruptive technologies, the deployment process must be methodically planned and implemented, and risks must be proactively addressed (Wang, 2022).

To ensure the continued successful administration of people, the business model should be aligned with strategy, taking into account changes in the external environment and business processes (Spyropoulos & Varsakelis, 2023). A business model defines how an enterprise creates and delivers value to its customers (Spyropoulos, 2018a). Business Model innovation is crucial, particularly for radical and disruptive innovation. Agility, stakeholder engagement, an innovative culture, and strategic foresight are critical success elements for business model innovation to exploit disruptive technologies. Successful implementation can lead to market leadership, better profitability, and a competitive advantage owing to improved customer experience and operational efficiency (Chen et al., 2022).

2.2 Business Model Canvas and Digital Technologies

The Business Model Canvas, first conceptualized by Alexander Osterwalder and Yves Pigneur, provides a comprehensive perspective of an enterprise's business model, which is systematically divided into nine fundamental components (Osterwalder & Pigneur, 2010). The components encompassed inside the business model are Customer Segments, which serve the purpose of identifying the diverse groups that the enterprise endeavors to cater to. Value propositions refer to the distinctive value that is provided to customers. Channels refer to the various channels via which a enterprise delivers value to its customers. client relationships refer to the manner in which a enterprise engages with its various client segments. Revenue streams refer to the specific sources from which a business generates its income. Key Resources refer to the essential assets that are fundamental to the business model, whereas Key Activities encompass the vital processes that are necessary for the successful functioning of the model. The Key Partnerships component of the business model emphasizes the external enterprises or allies that provide complementary support to the enterprise. Additionally, the Cost Structure element outlines the primary expenses and costs connected with the operation of the business. Collectively, these blocks offer a comprehensive overview, facilitating enterprises in the visualization, analysis, and innovation of their strategies with efficiency (Osterwalder & Pigneur, 2010).

Digital technology significantly influences economic and social development across various sectors. It's important for organizations to recognize the value of adapting their existing business models through digital innovation. Consequently, within the digital landscape, the business

model serves as a key instrument for facilitating the creation of new products, innovations, and services (Pahaisuk & Tubtiang, 2019). The ongoing digital transformation is reshaping the way companies operate. At the core of this transformation lies the utilization and commercialization of digital technologies, which are essential for companies' future sustainability and success (Ghosh et al., 2022). Despite their growing importance, some organizations are hesitant to integrate digital technologies into their existing value creation systems and improve their market performance. This reluctance stems from a lack of understanding of how to effectively navigate the digital transformation (Saarikko et al., 2020). It poses a significant challenge for them to properly identify, organize, and evaluate "digital technologies" for implementation in the industrial sector. To address this challenge, Lipsmeier et al. (2018) developed a framework comprising including the classification of digital technologies into demand-oriented classes namely, Application, Interaction, Creation, Processing and Transferring. By ensuring that digital technologies are not implemented in isolation, organizations may realise business model innovation (Saarikko et al., 2020).

3. RESEARCH METHOD

The research method applied in this study, is a systematic literature review (SLR) through which the critical success factors of business model innovation in disruptive technologies, were investigated. A SLR is a methodically prepared review that employs a rigorous and explicit approach to recognize, choose, and critically analyze the outcomes of the research studies included in the literature review (Rother, 2007). The SLR method entailed searching relevant databases using targeted keywords and filtering results to obtain a suitable sample of articles. Each article was then assessed based on inclusion and exclusion criteria, and their abstracts were examined to ensure alignment with the research question (Rother, 2007). The following keywords were used to find results in google scholar: disruptive technologies, business model innovation and critical success factors.

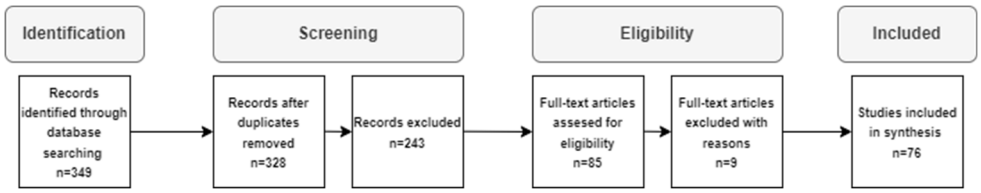

Figure 1. Total papers identified and analyzed

Following screening, a dataset of 349 papers was obtained, and 76 papers were subjected to a comprehensive examination. The initial phase started with 349 articles and two more records from library catalogues, accumulating 351 articles. In the second step, 23 duplicate articles were eliminated, resulting in a total of 328 items. During the third phase, the abstracts of the 328 articles were scrutinized to assess their relevance to the research question. This led to the exclusion of 252 papers, narrowing down the dataset for analysis to 76 articles. These 76 articles underwent a thorough reading and quality evaluation in the final stage. Figure 1 depicts the procedure for this selection process.

4. DATA ANALYSIS AND FINDINGS

The objective of this study was to investigate and categorise the critical success factors of business model innovation that are required for harnessing disruptive technology. A comprehensive investigation yielded 44 key success criteria (sub-themes), each with its own sub-factor related to disruptive technology (Success Criteria Technology). These were subdivided into 9 overarching themes related to business model features (Osterwalder and Pigneur, 2010). This can be found in Table 1.

The Business Model Canvas, developed by Osterwalder and Pigneur, presents a comprehensive framework that delineates the nine fundamental components crucial for formulating an effective business plan. Firstly, Key Partners consist of 7 sub-themes and refer to the strategic alliances and collaborative relationships that an enterprise forms with the objective of optimizing operational efficiency, mitigating risks, and acquiring essential resources. Next, the business model encompasses Key Activities, which serve as the fundamental processes ranging from production to problem-solving. Key resources are essential assets and instruments that are necessary for a enterprise to operate and deliver its products or services. At the core of the concept lies the Value Proposition, which encompasses the distinctive features that set a company apart from its competitors, so providing customers with unique value (Osterwalder & Pigneur, 2010).

The Customer Relationships main theme relates to the manner in which enterprises establish and maintain connections with their consumers, encompassing considerations such as the level of engagement, customization, and approach to customer support. Channels, however, serve as the means by which a enterprise conveys its value proposition to clients, encompassing various sales outlets and online platforms. Customer segments are utilized to categorise and delineate the many groups that a enterprise caters to, with the aim of comprehending their distinct demands and preferences (Osterwalder & Pigneur, 2010).

Table 1. CSFs and the impact of disruptive technologies on key business model components

Main-Theme	**Sub-Theme (Critical Success Factors)**	**Success Criteria Technoloy (Disruptive Technologies)**	**References**
Key Partners	Alignment of objectives	Artificial Intelligence	(Rashed, 2021); (Coulson-Thomas, 2018); (Chen et al., 2022); (Mariani & Borghi, 2019); (Chowdhury et al., 2022); (Trkman et al.); (Gómez & Vargas)
	Trust and transparency	Blockchain	(Turienzo et al., 2023); (Koch, 2022); (Nwaiwu et al., 2019); (Kamers, 2018); (Khan et al., 2023);(Tawaststjerna, 2020); (Timmer, 2019)
	Regular Communication	Augmented Reality	(Spyropoulos, 2019); (Mokoena et al., 2023); (Da Silva et al.); (Martínez-Olvera, 2022); (Murmura et al., 2021);(van der Meer & Track, 2019)

Main-Theme	Sub-Theme (Critical Success Factors)	Success Criteria Technoloy (Disruptive Technologies)	References
	Flexibility	Cloud Computing	(Koch, 2022); (Coulson-Thomas, 2018); (Athanasopoulou et al., 2019); (Oluleye et al., 2023);(Hämäläinen, 2014)
	Clear Contractual Agreements	Smart Contracts	(Allahar, 2019); (Mokoena et al., 2023);(Timmer, 2019)
	Mutual Benefits	Big Data and Analytics	(Koch, 2022); (Coulson-Thomas, 2018); (Allahar, 2019); (Chen et al., 2022);(Gómez & Vargas)
	Identification and Selection	Artificial Intelligence	(Rashed, 2021); (Kafando, 2020); (Savastano et al., 2019);(Di Vaio et al., 2022); (Chowdhury et al., 2022);(Tawaststjerna, 2020)
Key Activities	Prioritisation	AI-Driven Project Management Tools	(Kafando, 2020); (Bouwer, 2017); (Chowdhury et al., 2022)
	Efficiency	Robotic Process Automation	(Velu, 2016); (Kafando, 2020); (Koch, 2022); (Jabbour et al., 2019); (HARBO, 2023);(Kraus et al., 2022)
	Adaptability	Cloud Computing	(Allahar, 2019); (Bouwer, 2017); (Mariani & Borghi, 2019);(Hämäläinen, 2014)
	Skill and Expertise	Augmented Reality Training	(Spyropoulos, 2019); (Di Vaio et al., 2022); (Murmura et al., 2021);(Tawaststjerna, 2020)
	Technology Integration	API Management Platforms	(Budler et al., 2021); (Spyropoulos & Varsakelis, 2023); (Jabbour et al., 2019); (HARBO, 2023);(Floerecke & Lehner, 2018)
	Continuous Improvement	Machine Learning	(Rashed, 2021); (Spyropoulos, 2019); (Spyropoulos & Varsakelis, 2023); (Wang & Chebo, 2021)
Key Resources	Resource Allocation	AI-powered resource management systems	(Rashed, 2021); (Zubizarreta et al., 2020);(Tawaststjerna, 2020);(Bartoloni et al., 2022); (Malik et al., 2022)
	Maintenance and upgrades	Predictive Maintenance Technologies	(Allahar, 2019);(Tawaststjerna, 2020); (Byers, 2011)
	Accessibility	Cloud Computing	(Pereira et al., 2020); (Rashed, 2021); (Budler et al., 2021); (Bouwer, 2017); (Manfreda, 2018)

Main-Theme	**Sub-Theme (Critical Success Factors)**	**Success Criteria Technoloy (Disruptive Technologies)**	**References**
	Protection and security	Blockchain	(Turienzo et al., 2023); (Barichello, 2020); (Kamers, 2018); (Kamers, 2018); (Khan et al., 2023)
	Efficient Utilization	Edge Computing	(de Reuver & Haaker); (HARBO, 2023);(Floerecke & Lehner, 2018);(Tran-Dang & Kim, 2021)
	Sustainability	Smart Grid Technology	(Spyropoulos, 2019); (Kafando, 2020)
Customer Relationships	Personalisation	Machine learning	(Rashed, 2021); (Spyropoulos & Varsakelis, 2023); (Byers, 2011)
	Engagement	Augmented Reality	(Brailey & Bunduchi, 2017); (Wang & Chebo, 2021);(Murmura et al., 2021)
	Feedback Mechanism	Blockchain	(Kafando, 2020);(Murmura et al., 2021);(Qin & van der Rhee, 2021)
	Customer Support	Chatbots	(Brailey & Bunduchi, 2017); (Mokoena et al., 2023);(Badrinas Ardèvol, 2016)
	Trust Building	Blockchain	(Turienzo et al., 2023); (Spyropoulos, 2018a);(Bartoloni et al., 2022);(Özkanlısoy & Bulutlar, 2022)
Value Proposition	Relevance	Big Data Analytics	(Pereira et al., 2020);(Coulson-Thomas, 2018); (Nwaiwu et al., 2019); (Kamers, 2018);(Barichello, 2020)
	Differentiation	Blockchain	(Turienzo et al., 2023); (Pereira et al., 2020); (Kafando, 2020); (Jabbour et al., 2019); (Guranda, 2021)
	Perceived Value	Internet of Things	(Pereira et al., 2020); (von Rosing et al., 2015); (Kafando, 2020); (Koch, 2022); (Barichello, 2020); (Athanasopoulou et al., 2019);(van der Meer & Track, 2019)
	Clarity	Natural Language Processing	(Rashed, 2021); (Kafando, 2020);(Vorholzer & Meyer, 2021)
	Consistency	Cloud computing	(Pereira et al., 2020); (Rashed, 2021); (Scuotto et al., 2022); (Manfreda, 2018); (Guranda, 2021)
Channels	Accessibility	Cloud Computing	(Pereira et al., 2020); (Shang et al., 2019); (Rashed, 2021); (Scuotto et

Main-Theme	Sub-Theme (Critical Success Factors)	Success Criteria Technoloy (Disruptive Technologies)	References
			al., 2022);(Ahmad & Van Looy, 2020);(Hehle);
	Efficiency	Artificial Intelligence	(Rashed, 2021); (Zubizarreta et al., 2020); (Ahmad & Van Looy, 2020); (Savastano et al., 2019)
	Cost-effectiveness	3D Printing	(Garmulewicz et al., 2018); (Holzmann et al., 2018);(Özkanlısoy & Bulutlar, 2022);(Caviggioli & Ughetto, 2019)
	Integration	Blockchain	(Turienzo et al., 2023); (Nwaiwu et al., 2019); (Khan et al., 2023); (Shakhour et al., 2021)
	Adaptability	Digital Twin	(Athanasopoulou et al., 2019); (Spyropoulos, 2018b); (Ziegler & Abdelkafi, 2022);(Trapani, 2018)
Cost Structure	Cost Control	Robotic Process Automation	(Kafando, 2020); (Koch, 2022);(Mokgohloa, 2023);(Muraro, 2019)
	Alignment with business strategy	Business Intelligence tools	(Rashed, 2021); (Brailey & Bunduchi, 2017); (Wang, 2022); (Weisshuhn, 2019);(Shakhour et al., 2021)
	Scalability	Serverless Computing	(de Reuver & Haaker); (Spyropoulos, 2018b);(Hehle); (CHIK, 2016)
	Flexibility	Cloud Solutions	(Velu, 2016); (Dulal & Binkele, 2021);(Scuotto et al., 2022); (Oluleye et al., 2023);(Hehle);(Trapani, 2018);(Samuel, 2017)
	Investment in key areas	Machine Learning	(Rashed, 2021); (Dulal & Binkele, 2021); (Spyropoulos & Varsakelis, 2023)
Revenue Stream	Diversification	Blockchain	(Turienzo et al., 2023); (Da Silva et al.); (Khan et al., 2023)
	Alignment with Value Proposition	Internet of Things	(Kafando, 2020); (Wang, 2022); (Weisshuhn, 2019); (Müller et al., 2018);(CHIK, 2016)
	Pricing Strategy	Big Data Analytics	(Pereira et al., 2020); (Koch, 2022); (Coulson-Thomas, 2018);(Scuotto et al., 2022)

Main-Theme	**Sub-Theme (Critical Success Factors)**	**Success Criteria Technoloy (Disruptive Technologies)**	**References**
	Sustainability	Internet of Things	(Kafando, 2020); (Koch, 2022); (Barichello, 2020); (Wang, 2022); (Scuotto et al., 2022); (Oluleye et al., 2023);(Müller et al., 2018)
Customer Segments	Segment Identification and Specification	Artificial Intelligence	(von Rosing et al., 2015); (Dulal & Binkele, 2021); (Zubizarreta et al., 2020); (Tawaststjerna, 2020);(Byers, 2011)
	Alignment with Other Elements	APIs	(von Rosing et al., 2015); (Rashed, 2021);(Mokgohloa, 2023)
	Measurement and Analysis	Business Intelligence Tools	(Rashed, 2021); (Brailey & Bunduchi, 2017);(Weisshuhn, 2019);(Shakhour et al., 2021)
	Inclusivity	Natural Language Processing	(Rashed, 2021); (Kafando, 2020);(Wang & Chebo, 2021);(Vorholzer & Meyer, 2021)

5. OPERATIONALISING DISRUPTIVE TECHNOLOGIES CLASSIFICATION AND BUSINESS MODEL INNOVATION

The Business Model Canvas (BMC) is a useful tool that provides a comprehensive view of the business model of an enterprise. In order to operationalize the findings from this study, the Business Model Canvass was applied to categorise the findings. At its foundation, an enterprise's operational and strategic structure is shaped by fundamental components. This begins with "Key Partners," which denotes external entities or people vital to the operation of a business. This is supplemented by "Key Activities," which are the primary duties an enterprise performs to develop and deliver its product or service. Similarly, "Key Resources" highlights the essential physical, intellectual, and human assets required to operate the business (Osterwalder & Pigneur, 2010).

"Customer Segments" define the various groups of individuals or entities that the business services. There are "Channels" – the methods used to convey the value proposition – and "Customer Relationships" that define how the enterprise interacts with its customers in order to serve them. The "Value Proposition" is central to the BMC, signifying the unique value a product or service provides to customers. All of these elements have financial ramifications, which are outlined in "Cost Structure" and "Revenue Streams" respectively. These components,

collectively, offer a comprehensive overview of a enterprise's business model (Osterwalder & Pigneur, 2010). The essential success factors and the role of disruptive technologies extracted from the SLR (Table 1), were applied to each aspect of the Business Model Canvas by categorizing the findings according to the Business Model Canvas integral components. The categorization of findings is presented in detail in the next sections.

The critical success factors and disruptive technologies pertinent to business models identified in the thematic analysis of the referenced papers (refer to Table 1) were integrated with the proposed business model framework to synergize disruptive technologies and critical success factors presented in Table 2.

Table 2 depicts the critical success factors and disruptive technologies affiliated with each business model component. This visualization equips enterprises with a comprehensive road map that facilitates the incorporation of these success factors and technologies into their operations. This not only facilitates a more nuanced comprehension of where and how disruptive technologies can be harnessed, but also pinpoints areas crucial for achieving business objectives (von Rosing et al., 2015). With this knowledge, enterprises can improve their strategic planning processes, ensuring that their projects and initiatives are aligned with critical success factors and capitalize on relevant disruptive technologies. This targeted approach ensures that resources are effectively utilized, risks associated with technological disruptions are minimized, and the company remains agile and adaptable in a constantly changing business environment.

Futhermore, to ensure that digital technologies are not implemented in isolation, we categorised the digital technologies with the framework for the identification and demand-orientated classification of digital technologies (Saarikko et al., 2020). By categorizing these technologies, organizations can gain clarity on their digital landscape, understanding the purpose and functionality of each solution. This approach ensures that digital initiatives are not implemented standalone, but rather integrated strategically into the broader organizational context. By aligning digital tools with specific business needs and objectives, organizations can optimize resource allocation, minimize redundancies, and maximize the impact of their digital transformation efforts. Ultimately, this systematic approach empowers organizations to harness the full potential of digital technologies, driving innovation, agility, and competitive advantage in today's dynamic marketplace.

Table 2. Operationalizing disruptive technologies and business model innovation

			Demand-orientated classification of digital technologies				
MainTheme	**Sub-Theme (Critical Success Factors)**	**Success Criteria Technology (Disruptive Technology Aspects)**	**Application**	**Interaction**	**Creation**	**Processing**	**Transferring**
Key Partners	Alignment of objectives	Artificial Intelligence	x				
	Trust and transparency	Blockchain	x				
	Regular Communication	Augmented Reality		x			
	Flexibility	Cloud Computing	x				
	Clear Contractual Agreements	Smart Contracts	x				
	Mutual Benefits	Big Data and Analytics				x	
	Identification and Selection	Artificial Intelligence	x				
Key Activities	Prioritization	AI-Driven Project Management Tools			x		
	Efficiency	Robotic Process Automation				x	
	Adaptability	Cloud Computing	x				
	Skill and Expertise	Augmented Reality Training					x
	Technology Integration	API Management Platforms					x
	Continuous Improvement	Machine Learning	x				

MainTheme	Sub-Theme (Critical Success Factors)	Success Criteria Technology (Disruptive Technology Aspects)	Application	Interaction	Creation	Processing	Transferring
Key Resources	Resource Allocation	AI-powered resource management systems			x		
	Maintenance and upgrades	Predictive Maintenance Technologies				x	
	Accessibility	Cloud Computing	x				
	Protection and security	Blockchain	x				
	Efficient Utilization	Edge Computing	x				
	Sustainability	Smart Grid Technology			x		
Customer Relationships	Personalization	Machine learning	x				
	Engagement	Augmented Reality					x
	Feedback Mechanism	Blockchain	x				
	Customer Support	Chatbots					x
	Trust Building	Blockchain	x				
Value Proposition	Relevance	Big Data Analytics				x	
	Differentiation	Blockchain	x				
	Perceived Value	Internet of Things			x		
	Clarity	Natural Language Processing	x				
	Consistency	Cloud computing	x				
Channels	Accessibility	Cloud Computing	x				
	Efficiency	Artificial Intelligence	x				
	Cost-effectiveness	3D Printing	x				
	Integration	Blockchain	x				
	Adaptability	Digital Twin					x
Cost Structure	Cost Control	Robotic Process Automation				x	
	Alignment with business strategy	Business Intelligence tools				x	
	Scalability	Serverless Computing			x		
	Flexibility	Cloud Solutions	x				
	Investment in key areas	Machine Learning	x				
Revenue Stream	Diversification	Blockchain	x				
	Alignment with Value Proposition	Internet of Things			x		
	Pricing Strategy	Big Data Analytics				x	
	Sustainability	Internet of Things			x		
Customer Segments	Segment Identification and Specification	Artificial Intelligence	x				
	Alignment with Other Elements	APIs					x
	Measurement and Analysis	Business Intelligence Tools					x
	Inclusivity	Natural Language Processing	x				

6. CONCLUSION

This study's primary objective was to investigate into the complexities of BMI and determine the crucial role disruptive technologies play in enhancing and optimizing it. The research endeavoured to map the relationship between key BMI components and technological advancements such as Artificial Intelligence, Blockchain, and Cloud Computing by conducting a systematic literature review and a meticulous thematic analysis. The aim is to provide an exhaustive guide for businesses navigating the digital transformation, highlighting both the challenges and opportunities inherent to this journey. By highlighting the critical success factors and their technological counterparts, the study hopes to equip businesses with a strategic road map for maximizing the potential of BMI in the current volatile technological environment.

The study investigated the complex relationship between Business Model Innovation (BMI) and its capacity to capitalize on disruptive technologies' dynamism. By systematically examining a vast body of scholarly literature, the aim is not only to comprehend but also to map the foundational pillars supporting successful BMI integrations. Through the rigorous examination, the goal was to identify recurrent methodologies and nuances central to BMI's success, particularly when juxtaposed with rapid technological shifts. Using the power of thematic analysis, these findings have been condensed into a structured framework that provides businesses with a strategic compass for navigating the treacherous waters of digital transformation. In addition to providing theoretical insights, the research sheds light on real-world case studies that illustrate the tangible effects and potential pitfalls of BMI. Ultimately, this investigation serves as a beacon for enterprises ensuring that they remain adaptable, knowledgeable, and ahead of the curve in a digital era that is perpetually transforming.

The integration of critical success factors and disruptive technologies with a proposed business model framework provides organizations with a comprehensive roadmap for incorporating these elements into their operations, facilitating strategic alignment and resource optimization. This approach not only enhances understanding of how disruptive technologies can be utilized, but also highlights areas crucial for achieving business objectives. By improving strategic planning processes, organizations can ensure alignment with critical success factors and capitalize on relevant disruptive technologies, minimizing risks associated with technological disruptions. Furthermore, categorizing digital technologies ensures they are strategically integrated into the organizational context, optimizing resource allocation and maximizing the impact of digital transformation efforts. Ultimately, this systematic approach empowers organizations to drive innovation, agility, and competitive advantage in today's dynamic marketplace.

The practical implementation of the business model canvas infused with the critical success factors identified in this study represents a promising avenue for future research. While the research has established the theoretical groundwork, there is an urgent need to test and validate this improved business model canvas in actual industry settings. This would entail collaborating with diverse businesses, ranging from startups to established enterprises, across various sectors to assess the applicability, robustness, and adaptability of the canvas. These empirical studies can provide invaluable insights into potential refinements and nuances that are tailored to the requirements of a particular industry. In addition, investigating the canvas's scalability and efficacy under varying market conditions and technological landscapes can strengthen its practical utility. Future research can transform the business model canvas from a conceptual tool to an indispensable instrument for industry-wide innovation and success by bridging the distance between theory and practice.

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