



Business Model Innovation and Corporate Competitive Advantages in the Digital Economy Era

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DOI: 10.32629/memf.v3i6.2266

Abstract: In the digital economy era, enterprises face unprecedented challenges and opportunities driven by the rapid advancement of digital technologies. To thrive in this dynamic environment, enterprises must continuously innovate their business models to create and capture value in new ways. This paper explores the relationship between business model innovation and corporate competitive advantage in the context of digital transformation. Drawing on the resource-based view, dynamic capabilities framework, and other theoretical perspectives, this paper examines the characteristics, mechanisms, and strategies of business model innovation in the digital age. Through a comprehensive literature review and analysis of representative cases, we identify three key trends shaping business model innovation: digitalization, platformization, and intelligentization. We argue that enterprises need to leverage these trends to design customer-centric value propositions, build digital capabilities, construct open and collaborative value networks, and foster an agile and innovative organizational culture. Our findings highlight the importance of value creation, value capture, and value network effects in driving competitive advantage through business model innovation. We propose a framework that integrates these mechanisms with the core components of business models, providing a holistic and systemic view of business model innovation in the digital economy. We also discuss the implications of our research for theory and practice, emphasizing the need for further studies on the dynamics and outcomes of business model innovation in different contexts and industries. This paper contributes to the growing literature on business model innovation and competitive strategy in the digital age. By bridging the gaps between different theoretical perspectives and providing actionable insights for practitioners, we aim to advance the understanding and application of business model innovation as a key driver of corporate competitive advantage. Our research suggests that enterprises that can effectively align their business models with the evolving digital landscape will be better positioned to create and sustain superior performance in the face of increasing complexity and uncertainty.

Keywords: business model innovation, competitive advantage, digital economy, digital transformation, value creation, value capture, value networks, platform business models, ecosystem strategy, dynamic capabilities, resource-based view, digitalization

1. Introduction

In the era of the digital economy, the rapid development of digital technologies such as big data, cloud computing, artificial intelligence, and mobile Internet has profoundly reshaped the business environment. Enterprises are facing unprecedented opportunities and challenges, and traditional business models are undergoing disruptive changes. In this context, business model innovation has become a crucial strategic choice for enterprises to adapt to the digital economy and gain competitive advantages. Business model innovation refers to the process of fundamentally rethinking and redesigning the value creation, delivery, and capture mechanisms of an enterprise, aiming to achieve breakthroughs in customer value proposition, market segmentation, revenue models, and partnership networks. It is not only a key driver of enterprise growth and transformation but also a fundamental way to build and sustain competitive advantages in the digital age.

This paper aims to explore the relationship between business model innovation and corporate competitive advantage in the digital economy era. Specifically, it seeks to address the following research questions: (1) What are the characteristics and trends of business model innovation in the digital economy? (2) How does business model innovation help enterprises create and capture value? (3) What are the mechanisms through which business model innovation drives corporate competitive advantage? (4) What strategies and practices can enterprises adopt to effectively innovate their business models and enhance their competitiveness? To answer these questions, this paper draws upon relevant theories and literature on business models, innovation, competitive strategy, and digital transformation and conducts a systematic analysis of representative cases and empirical evidence. The research findings are expected to enrich the theoretical understanding of business model innovation and provide practical insights for enterprise managers to navigate the challenges and opportunities of the digital economy.

2. Theoretical basis and literature review

2.1 The Connotation and Innovation of Business Models

A business model is the fundamental logic of how an enterprise creates, delivers, and captures value. Osterwalder and Pigneur (2010) proposed the widely-applied Business Model Canvas framework, which includes nine elements: value proposition, customer segments, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure. Teece (2010) pointed out that a business model reflects management's hypotheses about customer needs, their willingness to pay, and how an enterprise can organize to best meet those needs and get paid for doing so. Zott and Amit (2010) emphasized that a business model is an activity system that describes the content, structure, and governance of transactions designed to create value through the exploitation of business opportunities. As the external environment and market demands change, enterprises need to examine and adjust their existing business models. Chesbrough (2010) argued that business model innovation is key for enterprises to self-renew in response to disruptive changes, involving a systematic reconfiguration of the value proposition, market segmentation, value chain, cost structure, profit potential, value network, and competitive strategy. Business model innovation has become an imperative for enterprises to explore new value creation logic and achieve sustainable development. Foss and Saebi's (2017) literature review showed that research on business model innovation has evolved from conceptual clarification to deeper theoretical discussions on process analysis, antecedents, and performance evaluation.

2.2 The Sources of Corporate Competitive Advantage

Competitive advantage is the foundation for enterprises to obtain excess profits and sustainable development in market competition. Porter's (1985) value chain analysis revealed that an enterprise's competitive advantage comes from two basic strategies: low cost or differentiation. The optimization and configuration of value activities are key to building competitive advantage. Starting from the resource-based view, Barney (1991) believed that the scarce, inimitable, and non-substitutable resources possessed by an enterprise are the decisive factors in forming a sustainable competitive advantage. Peteraf (1993) further pointed out that resource heterogeneity, ex-ante limits to competition, ex-post limits to competition, and imperfect resource mobility are the four cornerstones for enterprises to establish competitive advantage based on resources. Teece et al. (1997) proposed the dynamic capabilities theory, emphasizing that in a rapidly changing environment, enterprises need to gain competitive advantage by sensing, seizing, and reconfiguring internal and external resources. The ability to dynamically integrate resources is more important than resource endowments themselves. Grant (1996) argued that knowledge is the most important resource for modern enterprises. From the knowledge-based view, the core of competitive advantage lies in an enterprise's ability to integrate internal and external knowledge and create new knowledge. New theoretical perspectives have expanded the understanding of the sources of corporate competitive advantage.

2.3 The Relationship between Business Model Innovation and Competitive Advantage

Business model innovation is an important driving force for the formation and sustainability of corporate competitive advantage. Amit and Zott (2012) pointed out that by designing business models along the three dimensions of content, structure, and governance, enterprises can achieve new efficiencies, new complementarities, new lock-ins, and new novelties, thus realizing cost advantages and differentiation advantages. Bock et al. (2012) found that corporate culture and organizational structure affect strategic flexibility during business model innovation, which in turn influences innovation performance and the acquisition of competitive advantage. Using Naturhouse as a case study, Sosna et al. (2010) analyzed the path through which business model innovation helps enterprises overcome competitive disadvantages and reshape sustainable competitiveness via trial-and-error learning, leadership change, and organizational restructuring. Casadesus-Masanell and Zhu (2013) found that introducing sponsor-based business models can help enterprises cope with imitation by competitors and achieve competitive advantage through differentiation. Wirtz et al. (2010) argued that the innovation of Internet business models in the Web 2.0 era, especially the characteristics of open user participation and social network interaction, can bring enterprises new sources of competitive advantage, such as user stickiness, network effects, and data resources. The relationship between business model innovation and corporate competitive advantage has received increasing attention from academia and practitioners.

3. Characteristics of Business Model Innovation in the Digital Economy Era

3.1 Changes in the Business Environment Driven by the Digital Economy

The advent of the digital economy has brought about profound changes in the business environment. The rapid development and widespread application of digital technologies such as big data, cloud computing, artificial intelligence,

and the Internet of Things have reshaped the way businesses operate and compete. Manyika et al. (2016) pointed out that digitalization has led to the emergence of new business models, the transformation of traditional industries, and the blurring of industry boundaries. In this context, enterprises face both opportunities for innovation and growth and challenges from increased complexity and uncertainty. Bharadwaj et al. (2013) argued that digital technologies have become the key drivers of business strategy and innovation, and enterprises need to develop digital business strategies that align with their overall goals and capabilities. The digital economy has also altered the competitive landscape, with platform-based businesses and digital ecosystems gaining prominence. Enterprises must adapt to the new rules of competition and collaboration in the digital age. Parker et al. (2016) emphasized that the rise of platform businesses has disrupted traditional linear value chains and enabled new forms of value creation and capture through network effects and data-driven insights. The changing business environment in the digital economy necessitates a fundamental rethinking of business models and strategies.

3.2 Trends of Digitalization, Platformization, and Intelligentization in Business Models

The digital economy has given rise to several key trends in business model innovation. Firstly, digitalization has become a core feature of modern business models. Weill and Woerner (2015) argued that enterprises need to digitalize their customer engagements, internal operations, and business ecosystems to remain competitive. Digitalization enables enterprises to enhance customer experiences, streamline processes, and create new revenue streams through the collection, analysis, and monetization of data. Secondly, platformization has emerged as a dominant trend in business model innovation. Platform business models, such as those of Alibaba, Amazon, and Uber, leverage digital technologies to create value by facilitating interactions and transactions between multiple stakeholder groups. Van Alstyne et al. (2016) highlighted that platform businesses can achieve rapid growth and scale through network effects, where the value of the platform increases with the number of users and complementors. Enterprises need to develop platform thinking and build digital ecosystems to harness the power of platforms. Thirdly, intelligentization is transforming business models through the application of artificial intelligence and machine learning. Davenport and Ronanki (2018) identified three main types of AI-driven business model innovation: process automation, cognitive insights, and cognitive engagement. Intelligent business models can enable enterprises to optimize decision-making, personalize offerings, and create new products and services. The trends of digitalization, platformization, and intelligentization are interrelated and mutually reinforcing, driving the evolution of business models in the digital economy.

4. The Mechanisms of Business Model Innovation Driving Corporate Competitive Advantage

4.1 Value Creation Mechanisms of Business Model Innovation

Business model innovation drives corporate competitive advantage by creating new value for customers and the enterprise. Amit and Zott (2001) identified four key value drivers of business model innovation: efficiency, complementarities, lock-in, and novelty. Efficiency-centered business model innovations aim to reduce transaction costs and enhance productivity through streamlined processes and resource optimization. Complementarities-focused innovations create value by bundling products, services, or technologies that together provide more value than the sum of their parts. Lock-in oriented innovations increase switching costs and enhance customer retention through loyalty programs, personalization, and network effects. Novelty-based innovations introduce new ways of conducting transactions, connecting stakeholders, or monetizing offerings. Lindgardt et al. (2009) further emphasized that business model innovation creates value by aligning the core elements of the business model, such as the value proposition, target market, value chain, and revenue model, in unique and complementary ways. Successful business model innovations often involve a holistic reconfiguration of multiple elements rather than a change in a single component. The value creation mechanisms of business model innovation are diverse and context-dependent, requiring enterprises to identify and leverage the most relevant drivers for their specific industry and market.

4.2 Value Capture Mechanisms of Business Model Innovation

In addition to creating value, business model innovation also enables enterprises to capture a larger share of the value created. Teece (2010) argued that the essence of a business model lies in defining the manner by which the enterprise delivers value to customers, entices customers to pay for value, and converts those payments into profit. Business model innovations can enhance value capture by introducing new revenue models, pricing strategies, and cost structures. For example, freemium business models, popularized by digital companies such as Spotify and Dropbox, capture value by offering a basic version of the product for free while charging for premium features or services. Pay-per-use or subscription-based revenue models, enabled by digital technologies, allow enterprises to generate recurring revenue streams and improve customer

lifetime value. Value capture mechanisms also involve the allocation of costs and benefits among different stakeholders in the business model. Casadesus-Masanell and Zhu (2013) highlighted that business model innovations can help enterprises capture value by reducing competition, increasing bargaining power, or creating new markets. Enterprises need to align their value capture mechanisms with their value creation activities and continuously adapt them to changing market conditions and customer preferences.

4.3 Value Network Effects of Business Model Innovation

Business model innovation can drive corporate competitive advantage by leveraging value network effects. A value network refers to the complex web of relationships and interactions among the various stakeholders involved in creating, delivering, and capturing value, such as customers, suppliers, partners, and competitors. Zott and Amit (2013) emphasized that business model innovation often involves the reconfiguration of the value network, altering the roles and relationships of different actors. Platform-based business models, in particular, rely on value network effects to achieve rapid growth and market dominance. As more users join the platform, the value of the platform increases for all participants, creating a self-reinforcing cycle of growth. This attracts more complementors, such as app developers or service providers, to the platform, further enhancing its value proposition. Gawer and Cusumano (2014) argued that platform leaders need to strategically manage the value network by providing core infrastructure, setting governance rules, and stimulating complementary innovation. Business model innovations that successfully orchestrate value networks can create powerful ecosystem-based competitive advantages that are difficult for rivals to imitate. Enterprises need to identify the key players in their value networks, understand their motivations and incentives, and design business models that align the interests of all stakeholders.

5. Strategies for Business Model Innovation in the Digital Era

5.1 Shaping Customer-Centric Value Propositions

In the digital age, enterprises need to place customers at the center of their business model innovations. Osterwalder et al. (2014) argued that a strong value proposition is the cornerstone of a successful business model, and enterprises should focus on creating, delivering, and communicating value to their target customers. To shape customer-centric value propositions, enterprises must deeply understand their customers' needs, preferences, and behaviors. Digital technologies such as big data analytics, social media monitoring, and customer relationship management systems can help enterprises gain granular insights into customer segments and personalize their offerings accordingly. Enterprises should also engage customers in the value creation process through co-creation, user-generated content, and feedback loops. Chesbrough and Crowther (2006) highlighted the importance of open innovation in business model design, leveraging external ideas and knowledge to enhance the value proposition. Customer-centric value propositions not only address functional needs but also emotional and social dimensions of value. Enterprises need to continuously iterate and adapt their value propositions based on changing customer expectations and market dynamics.

5.2 Building Digital Technology-Based Core Competencies

Digital technologies are key enablers of business model innovation in the digital era. Enterprises need to build and leverage digital capabilities to create and capture value in new ways. Bharadwaj et al. (2013) emphasized that digital business strategies require the integration of IT strategy and business strategy, aligning digital investments with business goals and priorities. Enterprises should identify the digital technologies that are most relevant to their industry and business model, such as cloud computing, artificial intelligence, blockchain, or the Internet of Things, and develop competencies in these areas. This may involve acquiring new talent, partnering with technology providers, or investing in research and development. El Sawy et al. (2016) introduced the concept of digital ecodynamics, highlighting the need for enterprises to sense, respond, and adapt to the rapidly changing digital landscape. Enterprises should cultivate a digital mindset and culture, encouraging experimentation, agility, and continuous learning. Digital capabilities should be embedded throughout the organization, from product development to marketing and operations, to drive business model innovation.

5.3 Constructing Open and Collaborative Value Networks

Business model innovation in the digital era often involves the orchestration of complex value networks. Enterprises need to move beyond traditional industry boundaries and linear value chains to create and capture value through open and collaborative ecosystems. Adner (2017) introduced the concept of ecosystem strategy, emphasizing the importance of aligning the activities and interests of multiple stakeholders to create a coherent and compelling value proposition. Enterprises should identify the key players in their value networks, such as customers, suppliers, partners, and complementors, and define their roles and relationships. Digital platforms can facilitate the coordination and collaboration among ecosystem

participants, providing a shared infrastructure and governance mechanisms. Parker et al. (2016) argued that platform leaders need to cultivate a vibrant ecosystem by providing tools, resources, and incentives for complementors to innovate and create value. Open interfaces, modular architectures, and data sharing can enhance the flexibility and scalability of the value network. Enterprises should also engage in co-opetition, collaborating with competitors when it creates mutual benefits while competing in other areas.

5.4 Fostering an Agile and Innovative Organizational Culture

Organizational culture plays a critical role in enabling and sustaining business model innovation. In the fast-paced digital environment, enterprises need to foster an agile and innovative culture that embraces change, experimentation, and continuous improvement. Rigby et al. (2016) highlighted the importance of agile methodologies, such as scrum and lean startup, in driving business model innovation. Agile approaches emphasize iterative development, cross-functional collaboration, and rapid feedback loops, allowing enterprises to quickly test and refine new business model ideas. Leaders should empower teams to take ownership of their work, make data-driven decisions, and learn from failures. A culture of innovation also requires a tolerance for risk and ambiguity, as well as a willingness to challenge the status quo. Tushman and O'Reilly (1996) introduced the concept of organizational ambidexterity, the ability to simultaneously explore new opportunities and exploit existing capabilities. Enterprises need to balance the tensions between efficiency and flexibility, short-term performance and long-term growth, and incremental and radical innovation. This requires a supportive leadership style, adaptive organizational structures, and aligned incentive systems that reward both execution and exploration.

6. Conclusion

In conclusion, this paper has explored the critical role of business model innovation in driving corporate competitive advantage in the digital economy era. The rapid advancement and widespread adoption of digital technologies have fundamentally reshaped the business landscape, creating both opportunities and challenges for enterprises. To thrive in this dynamic environment, enterprises must continuously innovate their business models to create and capture value in new ways. The literature review has revealed the evolving nature of business model research, from early conceptualizations to more recent examinations of the antecedents, processes, and outcomes of business model innovation. The resource-based view, dynamic capabilities framework, and other theoretical perspectives have provided valuable insights into the sources and mechanisms of competitive advantage. However, the digital economy has also introduced new dimensions and complexities to the study of business models and competitive strategy. The analysis of the characteristics and trends of business model innovation in the digital era has highlighted the importance of digitalization, platformization, and intelligentization. Enterprises need to leverage digital technologies to transform their operations, offerings, and customer experiences. Platform-based business models have emerged as a dominant design, enabling enterprises to create and capture value through network effects and ecosystem orchestration. Artificial intelligence and other advanced technologies are also creating new possibilities for business model innovation. The examination of the mechanisms through which business model innovation drives competitive advantage has emphasized the importance of value creation, value capture, and value network effects. Enterprises need to design business models that deliver compelling value propositions to customers while also capturing a fair share of the value created. Business model innovation often involves the reconfiguration of the value network, aligning the interests and activities of multiple stakeholders to create win-win outcomes.

To successfully innovate their business models in the digital age, enterprises need to adopt a customer-centric approach, build digital capabilities, construct open and collaborative value networks, and foster an agile and innovative organizational culture. These strategies require a holistic and systemic perspective on business model innovation, considering the complex interdependencies and feedback loops among different components and stakeholders. In summary, this paper has provided a comprehensive overview of the relationship between business model innovation and competitive advantage in the digital economy era. The findings have important implications for both theory and practice, highlighting the need for further research on the dynamics and outcomes of business model innovation in different contexts and industries. As the digital landscape continues to evolve, enterprises that can effectively innovate their business models will be better positioned to create and sustain competitive advantages in the face of increasing complexity and uncertainty.

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