



A Theoretical Model of Digital Innovation and its Impact on Commercial Behaviour Change

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ABSTRACT

Digital innovation has emerged as a transformative force reshaping modern commerce and consumer behavior. Technologies such as artificial intelligence, big data analytics, blockchain, Internet of Things (IoT), and digital platforms have fundamentally altered how consumers search, evaluate, purchase, and engage with products and services. This paper aims to develop a conceptual framework that explains the relationship between digital innovation and commerce behavior transformation. Drawing on existing literature, the study identifies key dimensions of digital innovation and maps their influence on consumer decision-making, engagement, trust, and loyalty in digital commerce ecosystems. The proposed framework provides theoretical insights for researchers and practical implications for businesses seeking to adapt to rapidly evolving digital markets.

Keywords: Digital Innovation, Consumer Behavior, Digital Commerce, E-commerce, Technology Adoption, Conceptual Framework.

1. INTRODUCTION

The rapid advancement of digital technologies has redefined the structure and functioning of modern commerce. Traditional brick-and-mortar transactions are increasingly supplemented or replaced by digital platforms that offer convenience, speed, personalization, and global reach. Digital innovation defined as the application of digital technologies to create new or improved business models, processes, and customer experiences has become a critical driver of competitive advantage in commerce.

Consumer behavior has undergone significant transformation as a result of digital innovation. Today's consumers are digitally empowered, information-rich, and highly interactive. They engage with brands across multiple digital touch points such as mobile applications, social media platforms, online marketplaces, and virtual environments. Understanding how digital innovation influences commerce behavior is therefore essential for both academics and practitioners.

This paper proposes a conceptual framework that explains how digital innovation dimensions influence commerce behavior transformation, offering a holistic perspective on modern digital commerce.

2. REVIEW OF LITERATURE

2.1 Digital Innovation in Commerce

Digital innovation encompasses technologies such as artificial intelligence (AI), machine learning, big data analytics, cloud computing, blockchain, and IoT. These technologies enable firms to automate processes, personalize offerings, enhance operational efficiency, and create new value propositions. Studies highlight that digital innovation shifts commerce from product-centric to customer-centric models.

2.2 Commerce Behaviour Transformation

Commerce behavior refers to the patterns of consumer actions related to searching, purchasing, using, and evaluating goods and services. Digital platforms have transformed consumer behavior by enabling:

- Instant access to information
- Price and product comparison
- Online reviews and social influence
- Seamless digital payment systems

Research indicates that convenience, trust, perceived usefulness, and user experience are key determinants of digital commerce adoption.

2.3 Technology and Consumer Decision-Making

Technology Acceptance Models (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), and consumer behavior theories emphasize that perceived ease of use, perceived usefulness, trust, and risk influence digital commerce behavior. Digital innovation strengthens these factors by offering intuitive interfaces, secure transactions, and personalized experiences.

3. RESEARCH OBJECTIVES

The objectives of this study are:

1. To identify key dimensions of digital innovation influencing commerce.
2. To analyze how digital innovation transforms consumer commerce behavior.
3. To propose a conceptual framework linking digital innovation and commerce behavior transformation.
4. To provide implications for future research and business practice.

4. METHODOLOGY

This study adopts a **conceptual and descriptive research design** based on an extensive review of secondary data. Relevant literature was collected from journals, books, conference proceedings, and credible online sources related to digital innovation, consumer behavior, and digital commerce. Based on synthesis and analysis, a conceptual framework was developed.

5. CONCEPTUAL FRAMEWORK: DIGITAL INNOVATION AND COMMERCE BEHAVIOUR TRANSFORMATION

5.1 Dimensions of Digital Innovation

The framework identifies the following key digital innovation dimensions:

- Artificial Intelligence and Automation
- Big Data and Analytics
- Digital Platforms and Marketplaces
- Mobile and Digital Payment Technologies
- Social Media and Interactive Technologies
- Blockchain and Security Technologies

5.2 Commerce Behaviour Transformation Variables

Digital innovation influences commerce behavior through:

- Information Search Behaviour
- Purchase Decision-Making
- Customer Engagement
- Trust and Perceived Security
- Post-Purchase Behaviour and Loyalty

5.3 Proposed Framework Explanation

Digital innovation acts as an independent variable influencing commerce behavior transformation. Advanced technologies enhance personalization, transparency, speed, and convenience, which reshape consumer attitudes and actions. Mediating factors such as trust, perceived value, and user experience strengthen this relationship, leading to outcomes such as increased adoption, satisfaction, and long-term loyalty.

6. DISCUSSION

The proposed conceptual framework highlights the interconnected nature of digital technologies and consumer behavior. Unlike traditional commerce, digital commerce is dynamic and interactive. Consumers are no longer passive buyers but active participants who co-create value through feedback, reviews, and social engagement. Digital innovation reduces information asymmetry, increases market efficiency, and empowers consumers, while simultaneously challenging businesses to continuously innovate.

7. IMPLICATIONS OF THE STUDY

7.1 Theoretical Implications

- Extends consumer behavior theory into the digital commerce context.
- Provides a holistic framework integrating multiple digital innovation dimensions.
- Serves as a foundation for empirical validation in future research.

7.2 Managerial Implications

- Helps businesses understand changing consumer expectations.
- Assists firms in designing customer-centric digital strategies.
- Supports policymakers in promoting inclusive and secure digital commerce ecosystems.

8. CONCLUSION

Digital innovation has become a cornerstone of modern commerce, fundamentally transforming consumer behavior. This paper proposes a conceptual framework that explains how digital technologies influence commerce behavior across the consumer journey. The framework offers valuable insights for researchers, practitioners, and policymakers seeking to understand and leverage digital innovation in commerce. Future studies may empirically test the framework across industries and regions to validate and extend its applicability.

9. SCOPE FOR FUTURE RESEARCH

- Empirical testing of the proposed framework using quantitative methods.
- Comparative studies across countries and sectors.
- Impact of emerging technologies such as metaverse and Web3 on commerce behavior.
- Role of digital innovation in sustainable and ethical commerce.

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