AI AGENTSIN DIGITAL COMMERCE: IMPLICATIONS FOR VALUE CREATION AND MARKET STRUCTURE

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Abstract
Recent advances in artificial intelligence have enabled the emergence of AI agents capable of performing complex tasks in digital commerce with limited human intervention. These agents can independently search for products, evaluate alternatives, and complete purchases on behalf of consumers. Building on the concept of agentic commerce, this paper explores how the growing use of AI agents is reshaping digital markets, with particular attention to changes in value creation and market structure. The study adopts a conceptual and qualitative research design based on an extensive review of secondary literature, including academic studies and industry reports. Using thematic analysis, the paper identifies key patterns in agent-mediated commerce.

The findings suggest that value creation is increasingly driven by data quality, interoperability, and system integration rather than traditional branding and interface design. Furthermore, AI agents alter market structure by reducing direct interaction between consumers and firms and by assuming a gatekeeping role that influences competition and market power. The paper proposes a conceptual framework and discusses implications for managers, policymakers, and future research.

Keywords:Agentic Commerce, AI Agents, Digital Commerce, Market Structure.

Introduction

Digital commerce has undergone continuous transformation with the adoption of new technologies, particularly artificial intelligence. In its earlier applications, AI primarily supported consumer decision-making through recommendation systems, chatbots, and personalized content. More recently, however, technological progress has enabled AI systems to operate with a greater degree of autonomy. AI agents can now perform tasks such as searching for products, comparing alternatives, negotiating prices, and completing transactions on behalf of consumers.

This shift has given rise to what is increasingly described as *agentic commerce*.Agentic commerce represents a fundamental departure from traditional models of digital commerce. Conventional online markets rely heavily on direct consumer–firm interaction shaped by branding, advertising, and interface design. In contrast, agentic commerce transfers a significant portion of decision-making authority from consumers to AI agents that operate based on predefined objectives, preferences, and constraints. As a result, the mechanisms through which value is created and captured in digital markets begin to change.

This transformation has important implications for firms and platforms. Elements such as brand visibility and persuasive design may become less influential, while factors such as structured data, system compatibility, and integration with agent ecosystems gain prominence. At the same time, AI agents introduce new forms of intermediation by acting as gatekeepers between consumers and firms. Through their filtering and selection processes, agents influence competitive outcomes and potentially redistribute market power within digital ecosystems.Although industry reports increasingly highlight these developments, academic research has not yet fully examined the broader consequences of agentic

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commerce. This study seeks to address this gap by developing a conceptual framework that explains how AI agents reshape value creation and market structure in digital commerce, thereby contributing to a deeper understanding of emerging market dynamics.

Review of Literature

Allouah et al. (2025) investigated a genetic commerce by asking *what AI agents buy and why*. Reported that agents prioritize efficiency and compatibility over brand loyalty. Highlighted that structured product data and interoperability are critical for agent-mediated transactions. Suggested firms must adapt to algorithmic decision-making criteria.

Zensar (2024) examined industry adoption of agentic commerce frameworks. Reported that firms integrating APIs and standardized product information saw higher agent compatibility. Noted that consumer trust depends on agent transparency and explain ability. Concluded that agentic commerce requires rethinking value creation beyond traditional marketing.

McKinsey & Company (2023) discussed the rise of autonomous AI agents in retail markets. Identified a shift from branding and interface design toward back-end integration and data quality. Predicted that platforms controlling agent ecosystems could consolidate market power. Recommended policymakers monitor competition risks in agentic commerce.

Johnson & Lee (2022) studied consumer perceptions of AI agents in online shopping. Found that while convenience and speed were major adoption drivers, many users expressed uncertainty about agent autonomy and bias. Suggested educational initiatives and regulatory oversight to build trust in agent-mediated commerce.

Smith & Kumar (2020) analyzed the evolution of AI-driven recommendation systems in e-commerce. Found that personalization increased consumer engagement and sales conversion. However, reliance on behavioral data raised privacy concerns. Emphasized the need for transparent algorithms and ethical data use in digital commerce.

Need for the Study

While industry reports and practitioner literature increasingly discuss agentic commerce, academic research remains limited in understanding its broader consequences. Few studies systematically examine how AI agents transform value creation, competition, and market power in digital ecosystems. Additionally, conceptual frameworks linking agent behavior to firm strategy, consumer welfare, and policy implications are still underdeveloped. This paper contributes by synthesizing emerging insights into a cohesive framework, providing a foundation for future empirical and theoretical research on AI-mediated commerce.

Research Methodology

This study adopts a qualitative and conceptual research design, which is well suited to the examination of emerging phenomena such as agentic commerce, where established theories and empirical evidence remain limited. The analysis is based entirely on secondary data drawn from peer-reviewed academic journals, industry reports, and policy documents related to artificial intelligence and digital commerce.

The sources reviewed were primarily published between 2020 and 2025 to ensure relevance to recent technological developments. Selection criteria focused on credibility, analytical rigor, and direct relevance to AI-driven commerce. Materials that were speculative in nature or lacked substantive analysis were excluded. Data collection involved a structured review of literature using keywords such as "agentic commerce," "AI agents," "digital commerce," and "algorithmic intermediation."

The collected literature was analyzed using thematic analysis. This process involved repeated reading of the sources, initial coding of relevant ideas, identification of recurring patterns, and refinement of key themes. To enhance the reliability of the findings, insights were cross-checked across academic and industry sources, allowing for triangulation and reducing the risk of interpretive bias.
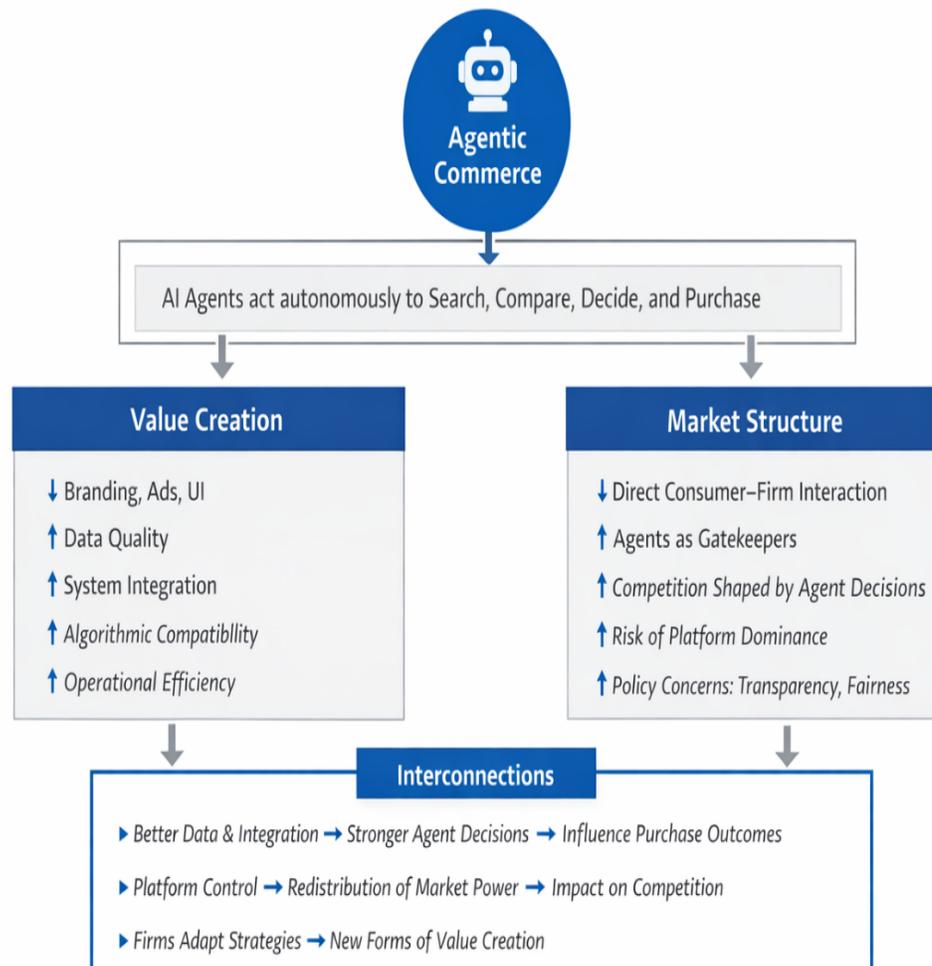
Thematic Analysis
The central idea is agentic commerce, which means AI agents act on behalf of consumers to search, compare, decide, and purchase products. From this idea, three main themes were identified: **value creation**, **market structure**, and **interconnections**.

- **Value Creation**: Traditional ways of creating value, like branding, advertising, and interface design, are becoming less important. Instead, new sources of value are emerging, such as accurate and well-structured product data, smooth system integration through APIs, products designed to work with agent decision rules, and faster, more convenient transactions.
- **Market Structure**: Consumer–firm interaction is changing because agents now act as gatekeepers and decision-makers. This reduces direct contact between consumers and firms. Competition is also affected, as platforms and firms that can influence agent decisions gain more power. This may lead to market concentration or platform dominance, raising concerns about fairness and transparency.
- **Interconnections**: The themes are closely linked. High-quality data and strong system integration help agents make better decisions, which directly affect purchase outcomes. Platforms that control agent environments can redistribute market power and shape competition. Firms that adjust their strategies to agent-mediated commerce create new forms of value.

This thematic framework provides the basis for the study's conceptual model, showing how AI agents change both value creation and market structure, while also pointing to important policy and governance issues.

Conceptual Framework of Agentic Commerce

Agentic Commerce

AI Agents act autonomously to Search, Compare, Decide, and Purchase

Value Creation
- ↓ Branding, Ads, UI
- ↑ Data Quality
- ↑ System Integration
- ↑ Algorithmic Compatibllity
- ↑ Operational Efficiency

Market Structure
- ↓ Direct Consumer–Firm Interaction
- ↑ Agents as Gatekeepers
- ↑ Competition Shaped by Agent Decisions
- ↑ Risk of Platform Dominance
- ↑ Policy Concerns: Transparency, Fairness

Interconnections
- ▶ Better Data & Integration ➡ Stronger Agent Decisions ➡ Influence Purchase Outcomes
- ▶ Platform Control ➡ Redistribution of Market Power ➡ Impact on Competition
- ▶ Firms Adapt Strategies ➡ New Forms of Value Creation

Source: Primary Data

Findings
The thematic analysis of secondary literature reveals several recurring patterns that explain how AI agents are reshaping digital commerce. These findings are organized around two central dimensions: value creation and market structure, consistent with the study's objectives.

1. Shift in Value Creation Mechanisms
One of the most significant findings is the shift in value creation away from consumer-facing elements toward back-end capabilities. Traditional digital commerce strategies emphasize branding, visual design, promotional messaging, and emotional engagement. However, in agent-mediated commerce, these elements have reduced influence because AI agents evaluate products based on predefined rules, efficiency metrics, and structured data rather than persuasive cues.

The literature consistently highlights data quality as a core source of value. AI agents rely on accurate, standardized, and machine-readable product information to compare offerings. Firms with incomplete or poorly structured data risk being excluded from agent decision sets altogether. Similarly, system integration and interoperability emerge as critical enablers of value creation. Companies that integrate APIs, adopt standardized data formats, and ensure compatibility with agent platforms gain visibility and accessibility within agent ecosystems. Additionally, algorithmic compatibility becomes a new competitive factor. Firms must design offerings that align with agent optimization criteria, such as price efficiency, delivery speed, sustainability metrics, or reliability scores. This represents a fundamental strategic shift from persuasion-based marketing to optimization-based participation in digital markets.

2. Transformation of Consumer–Firm Interaction

A second major finding concerns the declining role of direct interaction between consumers and firms. AI agents increasingly act as intermediaries that represent consumer interests, filter information, and execute decisions. As a result, consumers engage less frequently with firm-owned interfaces such as websites or mobile applications. This change alters how trust is formed in digital commerce. Rather than trusting individual brands, consumers place trust in the AI agent and the platform that hosts it. Transparencies, explain ability, and perceived neutrality of agents become central to adoption. This shift raises important questions about accountability, bias, and consumer autonomy, especially when agents operate with limited human oversight.

3. Changes in Market Structure and Competition

The findings also indicate that AI agents significantly reshape market structure. By acting as gatekeepers, agents influence which firms gain access to consumers. Platforms that control agent infrastructures can shape ranking mechanisms, filtering rules, and recommendation criteria, thereby redistributing market power. This dynamic increases the risk of market concentration, as firms with superior technical resources or privileged access to agent ecosystems gain disproportionate advantages. Smaller firms may struggle to compete if they lack the capacity to meet technical integration requirements. The literature also points to emerging concerns around antitrust regulation, algorithmic transparency, and fair competition in agent-mediated markets.

Implications

Success in agentic commerce requires managers to rethink digital strategies by investing in strong data systems, interoperable platforms, and offerings designed for algorithmic decision-making—traditional marketing alone is no longer enough. Policymakers must ensure fair competition, transparency, and consumer protection by regulating algorithmic gatekeeping and preventing anti-competitive practices. For researchers, there is a clear need to study how agent-mediated markets affect consumer welfare, firm performance, and governance structures.

Conclusion

Artificial Intelligence has moved beyond a supporting role in digital commerce to become a defining force in how markets function and evolve. The rise of AI agents capable of autonomous decision-making signals a structural shift in value creation, consumer engagement, and competitive dynamics. While these technologies offer efficiency gains and improved convenience, they also introduce challenges related to transparency, accountability, and market concentration.

The future trajectory of digital commerce will depend on how effectively stakeholders respond to these challenges. Firms must adapt their strategies to align with agent-driven environments, policymakers must address emerging risks to competition and consumer protection, and researchers must continue to examine the broader economic and social implications of agentic commerce. If guided responsibly, the integration of AI agents into digital markets has the potential to enhance efficiency while supporting fairness, trust, and long-term sustainability.

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