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Business Model Innovation under the Sharing Economy: A Comprehensive Review

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Abstract: This paper aims to provide a systematic review of business model innovation within the context of the sharing economy, focusing on five key areas: profit model innovation and operational strategies in shared office spaces; enhancing user retention through membership systems in shared mobility services; community management and user experience optimization on shared accommodation platforms; innovation in supply-demand matching algorithms within the shared equipment rental industry; and business model upgrading through data asset utilization in sharing economy enterprises. By reviewing recent literature, integrating theoretical frameworks with rich case studies, this study explores the current state of research, emerging trends, and key challenges in each domain. Furthermore, empirical analysis and data visualization techniques are employed to enhance the scientific rigor and persuasiveness of the findings, aiming to offer comprehensive insights and practical references for both researchers and practitioners in the field of the sharing economy.

1. Introduction

The sharing economy, as an emerging economic model, has experienced rapid global growth in recent years. At its core, it seeks to enhance resource utilization efficiency and generate both economic and social value by enabling the sharing of underutilized assets [1]. According to Allied Market Research, the market size of the sharing economy was approximately USD 387.1 billion in 2022 and is projected to reach USD 827.1 billion by 2032, with a compound annual growth rate (CAGR) of 7.7% [2], indicating substantial growth potential. As the sharing economy continues to expand, business model innovation has become a critical factor in enterprise competitiveness. Against this backdrop, this paper provides a systematic review of the current state of research on business model innovation within the sharing economy. It focuses on five key areas: profit model innovation and operational strategies in shared office spaces [3]; the use of membership systems to enhance user retention in shared mobility services [4]; community management and user experience optimization on shared accommodation platforms [1]; innovation in supply-demand matching algorithms in the shared equipment rental industry [5]; and business model upgrading through the strategic use of data assets in sharing economy enterprises [6].Furthermore, this study draws on the Diffusion of Innovation Theory [7] and the Resource-Based View (RBV) [8] to explore the

theoretical underpinnings of business model innovation, analyzing its driving forces and underlying mechanisms.

2. Business Model Innovation and Operational Strategies in Shared Office Spaces

2.1 Innovation in Profit Models

As a novel form of workspace, shared office spaces have witnessed rapid global development in recent years. Their profit model innovation and operational strategies have become focal points in both academic and practical discussions. From a theoretical perspective, based on the service-dominant logic [9], shared office spaces integrate resource sharing with value-added services to construct a diversified profit structure. Studies show that the profit models of co-working spaces are becoming increasingly diverse. In addition to traditional rental income, these spaces are generating revenue through value-added services such as office equipment leasing, business consulting, entrepreneurial support, and resource sharing, thereby increasing user stickiness and improving profitability [3].

For example, WeWork has publicly adopted a “Space-as-a-Service” strategy, which integrates physical space with value-added offerings—such as equipment rental, administrative services, and data analytics—to optimize its revenue model [10]. Furthermore, some co-working spaces have explored collaborative marketing partnerships with nearby businesses, expanding revenue streams through profit-sharing arrangements [11].

2.2 Operational Strategies

In terms of operations, shared office spaces place increasing emphasis on community building and brand development to attract and retain members. Drawing on social capital theory [12], a well-developed community atmosphere can enhance trust and collaboration among users, thereby fostering loyalty and long-term engagement. For instance, some co-working providers host regular events and offer both online and offline networking platforms to strengthen user interaction and stickiness [13].A notable example is Kr Space in China, which organizes weekly industry salons, entrepreneurial sharing sessions, and other events to encourage knowledge exchange and business collaboration among members, creating a vibrant and interactive co-working community. At the same time, brand development has emerged as a key strategic priority. By cultivating distinctive brand positioning and identity, co-working firms can establish a differentiated competitive edge in an increasingly saturated market [11].

3. Enhancing User Stickiness in Ride-Sharing Platforms through Membership Systems

3.1 Membership Program Design

Improving user stickiness through membership systems has become a central focus in the study of ride-sharing platforms. Research indicates that well-structured membership tiers, thoughtfully designed benefits, and points-based incentive mechanisms can significantly enhance both user loyalty and engagement [4]. For instance, platforms like Uber offer member-exclusive discounts and priority ride-hailing privileges to encourage more frequent usage of their services [14]. Similarly, Gojek in Indonesia has demonstrated through empirical studies that the quality of information, service, and system—as well as perceived value—significantly affect user satisfaction with its membership program. Furthermore, user attitudes, subjective norms, and perceived behavioral control also influence their loyalty to the platform [15].Tiered membership benefits have

become a common strategy. For example, Didi Chuxing's mileage-based V6/V7/V8 membership levels are integrated with Hilton Honors, allowing Didi users to enjoy Hilton Silver and Gold status benefits such as room upgrades, breakfast, and early check-in. Conversely, Hilton members can access Didi-specific benefits like discounts and priority ride-hailing. This cross-platform loyalty integration illustrates how tiered membership schemes can effectively enhance service experience, engagement, and user retention. Similar mechanisms are also found in Uber Rewards (Blue, Gold, Platinum, Diamond), where thresholds and benefits have been shown to significantly improve user loyalty and repeat usage [16][17].

3.2 Personalized Services

In addition to structural incentives, data-driven personalized services play a critical role in enhancing user experience and platform stickiness [1]. For example, the GoTogether system employs learning-to-rank techniques to build personalized recommendation models based on users' previous behavior (e.g., accepting or rejecting ride matches). These models analyze user preferences and behavioral data to improve ride-match success rates, thereby strengthening satisfaction and loyalty [18].Chinese platform CaoCao Mobility has introduced custom-designed vehicles such as the "CaoCao 60" and "Maple Leaf 80V," equipped with remote air conditioning, one-touch ventilation, and intelligent vehicle control systems. These features target high-frequency commuting and business scenarios, offering a standardized and comfortable travel experience to improve satisfaction and engagement [19]. While detailed information on personalized route or time preferences has not been disclosed, recent research suggests that CaoCao has begun integrating data analytics and machine learning into its service architecture to optimize operational efficiency and enable user-specific customization [20].Similarly, Grab has widely adopted big data and machine learning to analyze user history and preferences, offering curated vehicle options, optimized routing,and exclusive promotional services [21]. Uber and Gojek leverage points-based systems and algorithmic matching to recommend the most suitable vehicle types and travel times, encouraging repeat purchases and platform loyalty [22][23].These cases collectively demonstrate that ride-sharing platforms are increasingly evolving toward a "data-driven + intelligent recommendation" service model. This shift reflects a growing trend of transferring platform value toward enhancing user-side experience and satisfaction [24].

4. Community Operations and User Experience Optimization in Home-Sharing Platforms

4.1 Community Operations

Community operations and user experience optimization are key areas of focus in current research on home-sharing platforms. Studies indicate that effective community management can significantly strengthen trust and interaction among users, thereby enhancing the overall user experience [1]. For example, Airbnb fosters user communication and engagement by implementing a robust review system and offering localized service guides [3].In 2014, Airbnb also launched the "Superhost" certification program to incentivize hosts to provide high-quality service. The criteria include: maintaining an average rating of ≥4.8, hosting at least 10 stays in the past year, keeping cancellation rates below 1%, and responding to 90% of inquiries within 24 hours. These stringent requirements help build user trust and reward reliable hosts. Additionally, Airbnb organizes offline community events such as city exploration tours and cultural exchange gatherings to promote interaction between hosts and guests, fostering a warm and engaging community atmosphere [25][26].

4.2 Technology-Enabled Experience Optimization

Home-sharing platforms are also leveraging technology to improve the personalization and efficiency of the user experience. They continually refine search and recommendation algorithms to better address users' unique preferences and booking behaviors [13]. Recent research highlights the pivotal role of trust mechanisms and cultural congruence in influencing users' sense of belonging and willingness to participate on cross-national platforms [27].For instance, Tujia—one of China's leading home-sharing platforms—uses deep learning algorithms to integrate users' historical booking data, browsing behaviors, and review content to generate highly tailored property recommendations. This approach has reportedly led to a 20% increase in click-through rates for recommended listings, demonstrating the effectiveness of algorithm-driven personalization [28].These developments underscore how community-building strategies and AI-driven technologies are becoming critical tools for home-sharing platforms aiming to enhance user trust, satisfaction, and platform engagement.

5. Algorithmic Innovation in Demand–Supply Matching for Shared Equipment Rental

5.1 Algorithmic Innovation in Practice

In the shared equipment rental industry, innovation in demand–supply matching algorithms is a key driver of efficiency and user satisfaction. Existing studies have focused primarily on developing more accurate and dynamic algorithms to improve equipment utilization rates and customer satisfaction levels [5]. For example, by leveraging big data analytics and artificial intelligence, platforms can forecast user demand and equipment availability to facilitate more efficient resource allocation [6].A representative case is Xiaoxiong U-Zu, a Chinese equipment rental platform that has developed its own intelligent rental management system based on machine learning. This system analyzes historical rental records, regional demand patterns, and other contextual variables to predict equipment needs in specific areas. As a result, the company has successfully reduced equipment idle rates to below 10% [29].

5.2 Expansion of Collaborative Models

In addition to algorithmic advancements, shared equipment rental platforms are exploring extended collaborative models with manufacturers, maintenance providers, and supply chain partners to lower operational costs and enhance service quality [30]. Recent research shows that sharing data and marketing expenses with manufacturers can improve overall profitability and promote coordinated supply chain development [31].For instance, in terms of service chain optimization, the company Shanshouxia has established strategic partnerships with smartphone manufacturers. This collaboration ensures timely access to authentic spare parts, supporting services such as "24-hour parts delivery" and "4-hour on-site repair." These enhancements have significantly improved operational efficiency and customer satisfaction [32].Overall, the integration of intelligent algorithmic systems with strategic partnerships enables shared equipment platforms to optimize asset utilization while delivering faster and more reliable services—an essential step toward sustainable growth in the sector.

6. Commercial Model Upgrading of Shared Economy Enterprises through Data Assets

6.1 Data-Driven Innovation

Research on how shared economy enterprises leverage data assets to upgrade their business models has been gaining momentum. Data assets are increasingly viewed as a core competitive advantage, enabling companies to better understand user needs, optimize products and services, and design targeted marketing strategies through data mining and analysis [6]. For example, some shared economy platforms utilize user data for market segmentation to launch customized products and services, thereby achieving business model innovation [5]. Meituan Bike analyzes user riding times, area density, and frequency, directing bike deployment in peak-demand areas and launching time-limited promotions, resulting in year-over-year growth of 6% to 20% in ride frequency and duration in cities like Beijing and Shanghai [33].

6.2 Data Security and Governance

At the same time, data security and privacy protection have become critical research topics [14]. For instance, Uber collects extensive driver behavior data, but workers often lack transparency and control over the scope and degree of such tracking [34]. Increasing attention is being paid to the ethical dilemmas and governance strategies surrounding "data-driven business models," emphasizing that platform enterprises must balance data utilization efficiency with users' data rights protection [35]. The European Union's General Data Protection Regulation (GDPR) provides stringent rules for data security and privacy. Likewise, China has enacted the Data Security Law and Personal Information Protection Law to promote stronger data governance within the shared economy sector. These regulations standardize data processing practices, enhance the security management of cross-border data flows, and impose heavy penalties on violating entities [36][37][38].

7. Research Status and Challenges

A review of relevant literature from the past five years shows significant progress in business model innovation within shared economy sectors. However, challenges remain. For instance, the innovation of profit models in shared office spaces needs to further explore balancing core business and value-added services [3]; membership systems in shared mobility require more precise alignment with user needs [4]; community operations in shared accommodations must address trust and safety issues [1]; demand–supply matching algorithms in shared equipment rental should be optimized to improve resource utilization [5]; and data asset applications must strengthen data security and privacy protection [6].

From an empirical perspective, most current studies focus on case analyses and theoretical discussions, lacking large-scale quantitative research to verify the actual effects of business model innovations. Moreover, the adaptability and innovation pathways of shared economy business models in cross-cultural contexts remain underexplored. Thus, it is evident that for shared economy platforms to achieve sustainable long-term development, improvements are needed across multiple dimensions.

8. Conclusion and Outlook

Business model innovation in the shared economy is a focal point for both academia and industry. By systematically reviewing research on shared office spaces, shared mobility, shared

accommodations, shared equipment rentals, and data asset utilization, this paper reveals innovative practices, development trends, and existing challenges in each area. Future research should deepen the understanding of shared economy business model innovation and explore more effective strategies and practical pathways to promote sustainable development.

Looking ahead, quantitative studies using structural equation modeling, panel data analysis, and other methods could be strengthened to empirically test the relationships between innovation factors and firm performance. Additionally, attention should be paid to emerging technologies such as blockchain and the metaverse and their impacts on shared economy business model innovation to uncover new opportunities. Furthermore, enhancing international comparative research on differences and commonalities in shared economy business models across diverse cultural and institutional contexts will provide more universally applicable theoretical guidance and practical insights for the global development of the shared economy.

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