

The Challenges and Opportunities in China's Shared Accommodation Industry Amidst the COVID-19 Pandemic

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Abstract. In this study, the research delves into the impact of the COVID-19 pandemic on China's shared accommodation economy and the trends for post-pandemic development. Despite the significant challenges the pandemic posed to the shared accommodation market, recovery is gradually taking place with the widespread vaccination and lifting of travel restrictions. However, the pace of recovery varies across different platforms and regions. In the post-pandemic era, the shared accommodation economy faces new opportunities and challenges. The advancement of technology, particularly the application of big data and artificial intelligence, presents new possibilities for business models in shared accommodation. The pandemic has accelerated structural adjustments in the shared accommodation industry, with relevant enterprises beginning to adjust their property and service structures to meet changing consumer demands. Nevertheless, this study has its limitations; the depth and breadth of the research need further expansion. For future research directions, the study suggests focusing on the long-term development of the shared accommodation market, conducting in-depth studies on various factors influencing the market, and further investigating the impact of policies on the shared accommodation market and how to better adjust policies to promote the healthy development of the market.

1 Introduction

The sharing economy, an innovative economic model, has gained popularity due to its convenience, efficiency, and affordability, propelled by advancements in technology and societal progress. Statistical data estimates that the annual value of global sharing economy activities is expected to reach \$335 billion by 2025 [1]. Shared accommodation, a significant subset of the sharing economy, leverages online platforms to efficiently match property owners with idle spaces and tourists seeking non-traditional accommodation. It meets the demands of tourists for non-traditional accommodation, benefiting platforms, property owners, and tourists alike.

However, the outbreak of COVID-19 and subsequent lockdown measures have severely impacted the global economy and society, particularly the sharing economy and its related industries. This paper aims to explore the evolution and challenges of China's shared accommodation economy in the context of the COVID-19 pandemic. People will comprehensively examine the impact of the pandemic on China's shared accommodation economy and analyze the changes and developments in shared accommodation during and after the pandemic. The first half of this paper examines the evolution and challenges of shared accommodation during the COVID-19 outbreak, investigating the pandemic's impact on various aspects of the shared

accommodation market, such as market size, structure, and consumer behavior. The latter half explores the post-pandemic landscape of shared accommodation, considering the characteristics and potential issues that may arise as the pandemic is brought under control and life gradually returns to normal. Through this analysis, the paper aims to provide valuable insights for policymakers, market participants, and consumers, enhancing their understanding of China's shared accommodation economy under the COVID-19 pandemic and equipping them to better navigate future challenges and opportunities.

2 Literature review

Currently, the term "sharing economy" lacks a universally accepted definition. Existing research primarily focuses on three aspects: technological perspectives, property rights theory, and sociological analysis. Some studies suggest that the sharing economy involves actions and processes of giving personal items to others for use or taking something from others for self-use [2]. Other research broadly defines the sharing economy as a socio-economic system where private individuals share assets or services for free or at a cost via the internet [3]. In 2015, the term "sharing economy" formally appeared in the Oxford Dictionary, defined as an economic system in which assets or services are shared between private individuals, either for free or for

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a fee, typically through the internet [4]. Shared accommodation represents one of the fastest-growing sectors within the burgeoning sharing economy [5]. Shared accommodation, leveraging an internet-based business model, efficiently links property owners with available spaces and tourists seeking non-traditional accommodation through online transaction platforms. In this process, all parties involved - platforms, property owners, and tourists - reap benefits [6].

Short-term rental platforms in China predominantly operate under two models: Business-to-Customer (B2C) and Customer-to-Customer (C2C). The B2C model, exemplified by Tujia, involves properties primarily sourced from businesses and offered to customers on the platform, managed in a manner akin to traditional hotels. The C2C model, exemplified by Xiaozhu, involves properties primarily sourced from individual homeowners. These properties are listed on short-term rental platforms, facilitating efficient matching between landlords and tenants. As the market expands and resources become more diverse, the distinctions between similar platforms have become less clear. Users tend to select platforms with positive reviews and high-quality properties, while property providers often collaborate with platforms that optimize their profits [7].

Previous studies have investigated the economic impact of epidemics in China. Certain studies have employed cross-correlation functions to explore the temporal relationship between daily and monthly SARS cases and deaths in Beijing, and their impact on public transportation, tourism, household consumption patterns, and GDP growth. The conclusion was that leisure activities, local and international transportation, and tourism were most severely affected by SARS. Most consumption was merely postponed, but the unrecoverable loss to the tourism industry was estimated to be around \$1.4 billion. As shared accommodation is

intrinsically linked to tourism, it is anticipated that the COVID-19 outbreak would significantly impact this sector, a prediction confirmed by recent studies [8]. The conclusion of the research is that transportation and accommodation are the two industries in the sharing economy with the most daily users and income, and they are also the industry's most severely affected by the outbreak of COVID-19 [9].

While some research has investigated the impact of COVID-19 on the global shared accommodation economy, studies focusing specifically on China's shared accommodation economy remain relatively limited. At present, research on China's shared accommodation economy mainly focuses on its internal factors, such as the role of credit mechanisms, with few studies on the impact of external factors. Considering that China is the world's largest shared accommodation market, this research will specifically focus on the impact of COVID-19 on China's shared accommodation economy, hoping to provide some useful insights for China and other similar markets.

3 The shared accommodation in China during the COVID-19

3.1 The impact of the COVID-19 on the shared accommodation market

The COVID-19 outbreak, which began in Wuhan, Hubei Province, China in January 2020, quickly spread worldwide, significantly impacting the global shared accommodation market, including that of China. The impacts are seen across various dimensions such as demand, supply, market stability, and competitive landscape.

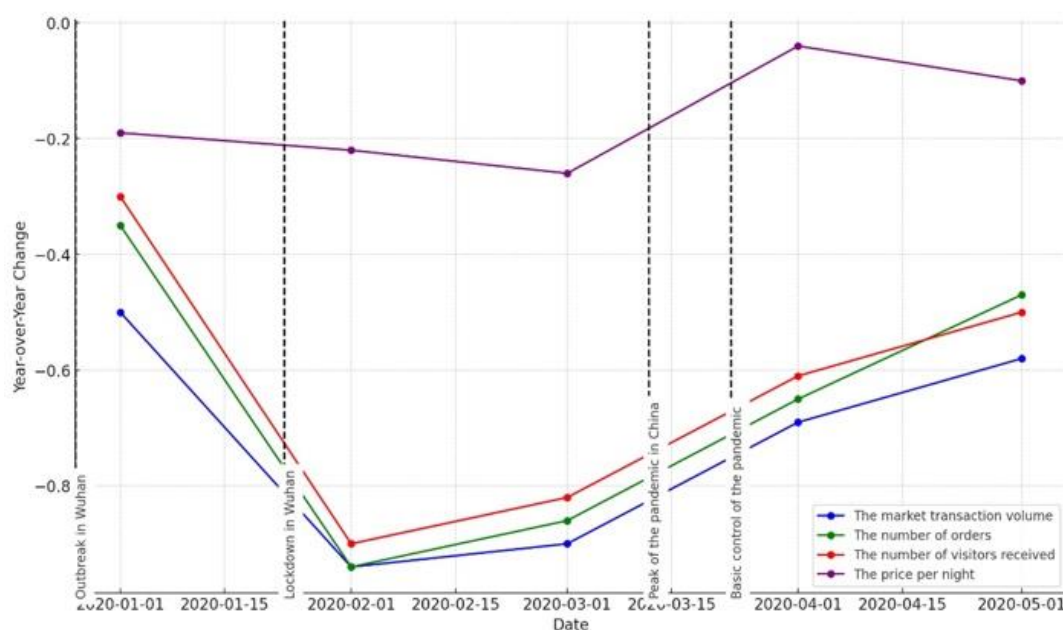


Fig. 1. Year-over-Year Change in Key Indicators for the Shared Accommodation Market in China (2020) (Photo credit: Original).

Firstly, during the COVID-19 outbreak, travel restrictions and public fear of interpersonal interactions led to a substantial decline in demand for shared accommodation, making the entire accommodation service industry one of the most affected sectors. Particularly in the first half of the year, as can be seen from Figure 1, the total order volume on major shared accommodation platforms in the first five months decreased by 65% year-on-year, the number of guests received dropped by 63%, the average nightly price decreased by about 16%, and the overall market turnover fell significantly by 72.1%. In 2020, the overall growth rate of the shared economy market slowed down dramatically, with varying degrees of imbalance in different sectors. Fields such as shared accommodation, shared office spaces, and transportation, which require offline activities to complete transactions, saw significant declines. The transaction volume of the shared economy market was only 15.8 billion RMB, a year-on-year decrease of 29.8% [10]. Even in mid-March, when the first wave of the epidemic centered in Wuhan, China had ended, the shared accommodation economy showed signs of recovery. However, in this environment full of uncertainties, many shared accommodation platforms had to shut down part of their operations and lay off employees globally to reduce fixed costs.

Secondly, the COVID-19 pandemic exacerbated the instability of the shared accommodation market, reflected in both fluctuating demand and supply-side disruptions. From a supply perspective, intensified epidemic prevention efforts across various regions brought commercial operations to a near standstill, resulting in an almost complete loss of operating income. However, these companies still had to bear fixed costs such as rent, property management fees, and employee salaries, while also investing additional funds in disinfection and other epidemic prevention measures, leading to immense financial pressure. The pandemic eroded the confidence of investors and landlords, prompting them to withdraw assets from the shared accommodation market in favor of more stable investment avenues. From the demand side, epidemic prevention measures limited people's mobility. Even with effective control of the epidemic in China, travel demand and willingness could not be restored in the short term. Moreover, to ensure the health and safety of landlords and tenants, shared accommodation platforms had to enhance cleanliness and sanitation standards for their listings, further increasing operational costs for landlords. The severe global epidemic situation has caused a major shock to the industry. As an important part of the tourism service industry, the shared accommodation sector has suffered a significant blow.

Furthermore, the pandemic has reshaped the competitive landscape of the shared accommodation market, with competition among shared accommodation platforms intensifying. Platforms are not only competing on price but are also providing better services to gain market share. Concurrently, competition between shared accommodation platforms and traditional accommodation service providers has also escalated.

During the pandemic, a preference for the reliability of hotel services over shared accommodation emerged among many consumers, diminishing the competitive edge of shared accommodation platforms.

3.2 Responses and changes of the shared accommodation

Amidst the impact of the COVID-19 pandemic, the shared accommodation economy had to undertake a series of response measures and undergo relevant changes to adapt to the new market environment. The primary responses and changes include platform empowerment for merchants, expansion of business scope, enhanced health and safety measures, and adjustments in pricing and strategies.

Platform companies are not merely mediators offering channels or middlemen providing opportunities; all stakeholders on the platform fundamentally have a symbiotic relationship. Major platforms support small and medium-sized merchants, which is a manifestation of the platform companies' social responsibilities, and also a strategic necessity for continuously optimizing and enriching the platform's ecology. The content of platform empowerment for merchants includes providing financial support and helping merchants transition. For instance, Airbnb has set up special funds for economic compensation to operators, refunding service fees to operators in the Hubei region; Tujia has introduced the "Anti-epidemic Warm-hearted Landlord" VIP status and benefits for landlords who reduce rents for platform operators during the epidemic, helping platform operators alleviate rental pressure. In terms of helping merchants' transition, Xiaozhu, in collaboration with Feizhu, launched a homestay live-streaming alliance, committing millions in traffic to support the recovery of the homestay industry, and strengthened cooperation with social e-commerce platforms, assisting operators in pre-sales of accommodations, sales of peripheral products, etc., aiding related practitioners in limiting losses and increasing revenue.

Accommodation operators use live-streaming and short video platforms to present their facilities, related services, and local cultural features and natural scenery to consumers. This live-streaming form creates a "what they see is what they get" consumer experience, effectively avoiding potential discrepancies between marketing materials and actual services or facilities, thereby enhancing consumers' trust in the product or service. For operators, the live-streaming form breaks the constraints of time and space, broadening their business scope and providing new sources of income, helping to alleviate cash flow problems.

In the context of the continued spread of COVID-19, shared accommodation platforms have placed greater emphasis on health and safety measures to ensure the safety of hosts and guests. Platforms require hosts to thoroughly clean and disinfect after each guest check-out, an important means to reduce the risk of epidemic transmission. Additionally, shared accommodation platforms have also promoted contactless modes, such as

keyless check-in and self-check-out, to minimize interpersonal contact as much as possible.

In the face of the market demand downturn caused by the pandemic, shared accommodation platforms and hosts have made corresponding adjustments in prices and strategies to attract more guests. Many platforms and hosts have chosen to lower prices in response to the market demand downturn caused by the pandemic. To alleviate guests' hesitations regarding the uncertainties brought by the pandemic when making reservations, shared accommodation platforms have introduced more flexible cancellation policies.

In addition to the efforts of the platforms themselves, the government has also strongly supported the development of the shared accommodation economy, creating a favourable policy environment. In July 2020, the "Opinions on Supporting the Healthy Development of New Forms and Models of Business to Activate the Consumer Market and Stimulate Employment Expansion" issued by 13 departments including the National Development and Reform Commission People's Republic of China for the first time incorporated shared accommodation into government documents.

3.3 China's shared accommodation industry during the post-pandemic

3.3.1 Market recovery

Under the influence of COVID-19, the shared accommodation market faced unprecedented challenges. However, with the gradual control of the pandemic and the step-by-step resumption of social life, the shared accommodation market is also slowly recovering. First, with the popularization of vaccines and the gradual lifting of travel restrictions, the demand for shared accommodations is beginning to rebound. The response measures taken by shared accommodation platforms during the pandemic, such as platform empowerment for merchants, expansion of the business scope, and the introduction of flexible cancellation policies, have also assisted the market's recovery. These measures have boosted consumer confidence, prompting them to choose shared accommodations again.

However, the recovery of the market is not balanced. Large shared accommodation platforms such as Airbnb and Xiaozhu, due to their strong financial and brand advantages, have recovered more quickly. In contrast, smaller shared accommodation platforms, especially those focusing on the business travel market, have recovered more slowly due to the significant impact of the pandemic on business travel. Overall, the shared accommodation market is gradually recovering, but the pace and extent of recovery vary by region and platform.

3.3.2 New market trends

In the post-pandemic era, China's shared accommodation economy is encountering new challenges and opportunities. Many people anticipate the emergence of new development trends across various fields, including

fashion, equipment, technology, and services. These trends aim to protect themselves as much as possible, to prevent virus transmission or mitigate the impact of cross-infections. Additionally, some trends will focus on reshaping human activities and remaining at the forefront of selective progress [11].

Firstly, the dominance of leading players is becoming more pronounced. Practitioners in the shared accommodation sector often exhibit characteristics of small-scale entities and decentralized operations. Small and medium-sized operators will further seek cooperation with industry-leading companies, hoping to expand their sources of guests by leveraging the advantages of large platform funds and traffic, which also provides leading companies in the industry with potential opportunities to expand the market at lower prices. Simultaneously, the pandemic has further strengthened people's consciousness of health, quality, and brand, and future consumption choices will favor choosing top companies that have formed brand effects. Therefore, the leading effect of industry-leading companies will be more pronounced.

Secondly, the business model of shared accommodation is evolving. Technological advancements are paving the way for innovative business models. The application of big data and artificial intelligence in the field of shared accommodation is becoming more and more common. They are used to optimize pricing, predict demand, and provide personalized services, aiming to improve the operational efficiency and user experience of shared accommodation. At the same time, contactless technologies such as keyless check-in and self-check-out developed rapidly during the pandemic, providing a safer and more convenient user experience, and may continue to be popular after the pandemic. Moreover, virtual and augmented reality technologies have also started to be applied in this field, providing 3D housing displays to help users understand the housing better before booking.

Furthermore, the pandemic has expedited the structural adjustment of the shared accommodation industry. During the outbreak phase, when the pandemic was relatively under control, demand for accommodations related to suburban travel, rural tourism, and intra-provincial travel saw the earliest recovery, with rural homestays bouncing back particularly quickly. For example, during the 2020 Dragon Boat Festival, 64% of the accommodation bookings during the holiday on the Xiaozhu platform were for in-province travel, and 53% for intra-city travel. This is because, although the pandemic was temporarily controlled, people were still concerned about the coronavirus, so most people chose to travel nearby. In the post-pandemic era, due to the milder symptoms of the prevalent Omicron variant infection and the effect of herd immunity, people gradually got used to coexisting with the virus, thus resuming the demand for long-distance, long-duration travel. In response to increasing demand, shared accommodation companies adjusted their housing structure, such as increasing housing in suburban cities, natural scenery areas, etc., to meet consumers' demand for leisure vacations. On the other hand, shared

accommodation companies also adjusted their service structure, such as adding entertainment, experience, and other services to increase the added value of their services.

Finally, the global economic recession has brought unprecedented impacts on the Chinese economy, and the challenges from both internal and external risks have increased significantly. More significant efforts are needed to return the economy to normal growth. As resident employment, income, and consumption are under considerable pressure, due to the non-rigid demand characteristics of service consumption such as tourism and accommodation, it could become a priority option for residents to cut back on consumption demand, which will further increase the uncertainty faced by the industry in the near-term development. The survival of the fittest in the industry will accelerate, and "survival" becomes the primary task for shared accommodation companies under the impact of the pandemic.

4 Suggestion and outlook

4.1 Policy measures

In the context of the emerging shared accommodation market, appropriate policies are necessary to stimulate robust development. Here, the paper propose several potential policy suggestions: 1. Authoritative bodies should establish comprehensive and clear policies and regulations for the shared accommodation industry. This includes defining shared accommodation and its operational guidelines, establishing industry standards, and formulating policies on data protection, user privacy, health, and safety. This would enhance market transparency and boost confidence among users and investors. 2. Through fiscal policies, such as tax incentives and subsidies, governments can stimulate innovation and growth in shared accommodation businesses. Entities that actively integrate innovative technologies such as big data and artificial intelligence to improve service levels should be encouraged and supported. 3. The governance of the shared accommodation market needs to be strengthened to curb illegal activities. Regions where problems and chaos frequently occur may face stricter penalties to guide the market towards orderly and healthy progress. 4. Shared accommodation businesses should be encouraged to deeply integrate with related industries such as tourism and culture, to promote the high-quality development of the tourism industry. Companies can be incentivized to develop accommodation services that combine local culture and customs, thereby enhancing the added value of tourism services.

Generally, China's shared accommodation market has enormous growth potential. After the pandemic, with the resurgence of travel and tourism demand, the market demand will gradually upgrade. Furthermore, with the advancement and application of technologies such as big data, artificial intelligence, and contactless technologies, shared accommodation services will become increasingly intelligent and convenient. However, the

growth of the shared accommodation market also faces challenges such as difficult market regulation and intense competition. Therefore, shared accommodation businesses should actively respond to market challenges and achieve a sustainable development model under the theoretical framework of the "triple bottom line" theory considering economic, social, and environmental factors.

4.2 Limitation and future research direction

While this study aims to provide a comprehensive analysis of the current status and trends of China's shared accommodation economy in the post-pandemic era, it is not without limitations. Firstly, due to data and information limitations, the complexity and diversity of the entire Chinese shared accommodation market might not be fully captured. For instance, this study primarily focuses on the recovery and development of large shared accommodation platforms, potentially resulting in an insufficient analysis of small and medium-sized shared accommodation platforms. Additionally, the study's predictions of future development trends in the shared accommodation market carry a degree of uncertainty, given their susceptibility to various factors such as policy environment, economic conditions, and technological advancements.

In light of these limitations, future research could delve deeper in the following directions: First, the development strategies and challenges of small and medium-sized shared accommodation platforms. These platforms may be relatively small in market scale and resources, but they might also have more flexibility and creativity. Researching them can help us better understand the diversity of the shared accommodation market. Second, the crossover impact of shared accommodation with other areas. For example, how shared accommodation affects urban planning and real estate markets, and how it synergizes with the tourism industry, cultural industries, etc. Third, the impact of policy on the shared accommodation market. This includes how the design and implementation of policies affect market behavior and development, and how to formulate effective policies to promote the healthy and sustainable development of the shared accommodation market. Fourth, the application and impact of technology in the shared accommodation market. For example, how big data, artificial intelligence, contactless technology, etc., change the business model and user experience of shared accommodation, and how these technologies can be better applied to the shared accommodation market.

5 Conclusion

This study reveals the profound impact of the COVID-19 pandemic on China's shared accommodation market. The pandemic led to a significant drop in demand for shared accommodation, as evidenced by noticeable decreases in the number of orders, guests, and transaction volume. Supply-side constraints resulted in financial strain and operational challenges for businesses. Additionally, the competitive landscape underwent changes, leading to

intensified competition between shared accommodation platforms and traditional accommodation service providers. To adapt to the new market environment, shared accommodation businesses implemented a series of countermeasures and adaptations. These included empowering merchants, expanding the scope of operations, enhancing health and safety measures, and adjusting pricing and strategies. These actions helped restore market confidence and facilitated a gradual market recovery. With the increase in vaccination rates and the gradual lifting of travel restrictions, the shared accommodation market began to show signs of recovery. While larger platforms experienced a faster recovery, smaller platforms and business travel markets lagged behind. The pace of recovery varied across different regions and platforms.

In the post-pandemic era, the shared accommodation market is encountering new development trends and opportunities. The prominence of leading players has increased, and the integration of shared accommodation businesses with technology has given rise to innovative business models and service methods. Market structure adjustments have accelerated, with demand gradually shifting from suburban trips and rural tourism to long-distance and extended trips. However, market development still faces challenges, such as difficulties in market regulation and the impact of economic recession.

In conclusion, this study reveals that during the COVID-19 pandemic, China's shared accommodation economy underwent a series of challenges and changes, while simultaneously encountering new opportunities and development trends. Further research and exploration are needed to gain a more comprehensive understanding of the dynamic changes in the shared accommodation market, which will provide valuable insights and guidance for its sustainable development.

Authors contribution

All the authors contributed equally and their names were listed in alphabetical order.

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