

Innovative development of community business models in commercial complexes under the background of the new era

Yan Kailun^{1*}

¹IDER University, Mongolia

Article Info

Accepted: 9 February 2025

Keywords:

commercial complex;
Community Business;
Business model innovation;
Digital transformation;
Consumption upgrade

Corresponding Author:

Yan Kailun

Abstract

In today's rapidly changing new era, the community business model of commercial complex is undergoing profound changes and innovations. This study is committed to exploring the root, path and future trend of this change. By comprehensively integrating various research methods and deeply analyzing data cases, it reveals the multiple driving factors of business model innovation in commercial complex communities. Consumption upgrades, the widespread application of digital technology, the evolution of urban lifestyles, and the impact of the epidemic have jointly contributed to this wave of innovation. In terms of online and offline integration and intelligent services, the research reveals the diversity and advantages of innovation paths. At the same time, facing the differentiation of residents' needs, the pressure of cost and the security of technology application, this study also gives targeted solutions. This not only provides a solid theoretical basis for the development of commercial complexes in the field of community commerce, but also points out the practical direction for its sustainable development, helping commercial complexes achieve more steady and diversified growth in the new era.

Copyright 2025 by author(s)

This work is licensed under the
CC BY NC 4.0



doi.org/10.70693/itphss.v2i2.140

1. INTRODUCTION

1.1 Research background

Commercial complex, as an indispensable hub of modern cities, bears the dual responsibility of economic and social development. It brings together multiple functions such as shopping, catering, entertainment, leisure and office, and builds a core platform for urban residents to consume and socialize. Times have changed, consumption upgrades, digital transformation and profound changes in urban lifestyles have brought unprecedented opportunities and challenges to the development of commercial complexes. Under this background, the innovation of community business model has become the core driving force for commercial complexes to conform to the trend of the times and enhance their competitiveness.

1.2 Research purpose and significance

This study aims to explore the internal operation mechanism and external influence factors of community business model innovation of commercial complex, clarify its innovation path and challenges, and aims to lay a theoretical and practical foundation for the long-term development of commercial complex in the field of community business. This move has far-reaching and practical significance for enriching the development theory of commercial complexes, promoting the commercial prosperity of urban communities and meeting the diversified consumption needs of residents.

2. Literature Review

2.1 Theoretical Foundations of Commercial Complexes

2.1.1 Application of Value Proposition Theory

Osterwalder's (2004) value proposition theory posits that the essence of an enterprise lies in fulfilling the requirements of specific customer segments. By incorporating this theory, this research emphasizes that the innovation of commercial complexes should center around:

- The convenience demands of residents, such as the comprehensive coverage of medical, educational, and retail services within the community.
- The emotional value, like the sense of belonging brought about by a community shopping environment.

2.1.2 Extension of Dynamic Capability Theory

Teece (1997) stated that the crux of dynamic capabilities is to perceive environmental alterations, seize opportunities, and reconfigure resources. In the context of community commerce:

- Perception: Through the analysis of big data on residents' consumption behaviors, rapidly identify trends in demand.
- Seizure: Leverage digital technologies, such as the Internet of Things (IoT), to achieve intelligent management.
- Transformation: Apply novel technologies to optimize service procedures, for instance, introducing an AI recommendation system to enhance the shopping experience.

2.1.3 Localization of Competitive Strategy

Porter's (1980) competitive strategy theory underlines the significance of differentiation and focus strategies. In community commercial complexes:

- Differentiation is accomplished through intelligent services and green operations, such as smart parking systems and the utilization of zero-carbon building materials.
- The focus strategy targets the varying needs of different communities to customize services. For example, high-income communities emphasize high-end brand experiences, while elderly communities offer health and social spaces.

2.2 Driving Factors of Community Business Model Innovation

• Consumption Upgrade: With the growth in residents' incomes, the demand has transitioned from being "price-sensitive" to "value-sensitive" (Kelly, 2021). This compels commercial complexes to integrate a more diverse range of services to meet the multi-faceted needs of residents.

- Digital Transformation: Technologies like the Internet of Things, big data, and artificial

intelligence have been extensively employed in the operation and management of commercial complexes (Chen, 2022). Data-driven precision marketing and operational optimization have become inescapable trends.

- Impact of the Pandemic: The pandemic has expedited the demand for localized and online community services, spurring the emergence of "contactless services" and the "micro-community economy" (Zhao, 2022).

2.3 Innovation Paths and Practical Challenges

- The online-to-offline integration model (O2O) represents the primary innovation path for current commercial complexes, yet it still confronts the challenge of balancing technology investment and the investment return cycle.

- Although intelligent services (such as unmanned retail and AI shopping guide robots) have enhanced service efficiency, there are risks associated with technology security and data privacy, necessitating further refinement of the regulatory framework.

3. Research Methods

3.1 Necessity of Multiple Methods

3.1.1 Literature Research

- Employed to establish a theoretical framework and identify crucial research questions. Through a review of core literature, research gaps in commercial complexes within the context of consumption upgrade and digitization are detected.

- For example, focusing on how the value proposition theory is practically implemented in community commerce or how dynamic capabilities augment the efficiency of business model innovation.

3.1.2 Case Analysis

- Select 10 representative commercial complexes for in-depth dissection. The case selection criteria encompass geographical distribution, service models, innovation practices, and financial performance.

- Objective: To disclose practical paths in diverse scenarios, such as how community shopping centers fulfill the diverse requirements of residents through digital operations.

3.1.3 Questionnaire Survey

- Design questionnaires for 1,200 community residents and 300 operators, mainly covering consumption habits, demand preferences, and satisfaction evaluations of innovative services.

- Data analysis objective: To validate how residents' needs drive the business model innovation of commercial complexes and furnish empirical evidence for policy suggestions.

3.2 Application of Data Analysis Methods

- Bibliometrics: Systematically analyze the literature on "community commerce" and "business model innovation" over a 20-year period to clarify research hotspots and evolutionary trends.

- Descriptive Statistics: Conduct an overall analysis of residents' consumption habits (such as shopping frequency and consumption amount) and depict basic data characteristics.

- Correlation Analysis: Examine the relationship between residents' income levels and their preferences for commercial complex service types.

- Regression Analysis: Analyze the impact of innovative initiatives on the operational performance of commercial complexes (such as sales volume and customer satisfaction).

4.Theoretical Contributions

4.1 Theoretical Innovation Points

4.1.1 Propose a "Digital-Driven Community Business Model Innovation Path Model"

The core of the model comprises three essential modules:

- Resident Demand Insight: Utilize big data analysis of residents' consumption behaviors to unearth new opportunities from segmented market demands, such as devising health services for the elderly group or creating social experiences for the youth.
- Technology Empowerment: Integrate the Internet of Things (IoT), artificial intelligence (AI), and big data to optimize the management efficiency and customer experience of commercial complexes, for example, achieving precision marketing via AI.
- Resource Integration: Connect local resources, such as collaborating with educational and medical institutions, to expand service scopes and realize community-based operations.

4.1.2 Expand the Applicability of Dynamic Capability Theory

In combination with the dynamic capability theory, innovatively analyze the role of commercial complexes in community commerce, particularly how to enhance adaptability and agility through the integration of technology and services in the digital transformation context.

4.1.3 Multi-Dimensional Perspective

Merge the macro (consumption upgrade, urbanization), meso (commercial complex operation model), and micro (residents' needs) levels to formulate a systematic research framework, presenting a novel analytical perspective for the academic community.

4.2 Complement to Existing Research

4.2.1 Contribution of Quantitative Analysis

- Verify the causal relationship between residents' demand differences and business model innovation through questionnaire surveys, making up for the deficiency of excessive qualitative analysis in existing research.
- Provide empirical data on how residents' consumption habits and preferences drive community business innovation, which is of great value for policymakers and operators.

4.2.2 In-depth Revelation of Practical Paths

- Present a more comprehensive analysis of the success factors and failure causes of different innovation paths (such as online-to-offline integration and intelligent services), enabling operators of commercial complexes to replicate successful models.
- Propose strategies to handle challenges, like reducing high technology costs through government cooperation or optimizing operational efficiency through resource sharing.

4.3 Practical Guidance Significance

4.3.1 Operational Strategy Recommendations

- Online-to-Offline Integration: Suggest that commercial complexes gradually achieve seamless

integration of online shopping and offline experiences by independently developing e-commerce platforms or collaborating with third-party platforms.

- **Wisdom Service Enhancement:** Introduce intelligent parking systems, unmanned retail, and digital shopping guide robots to improve service convenience and optimize the customer experience.

4.3.2 Policy Recommendations

- **Green Operation Support:** Propose that local governments encourage commercial complexes to adopt environmentally friendly building materials and low-energy consumption equipment through policy incentives (such as tax reductions).

- **Digital Empowerment Plan:** Promote cooperation between the government and commercial complexes to support the construction of digital infrastructure (such as 5G network coverage) to assist the digital transformation of community commerce.

4.3.3 Resident Demand Docking

- Design customized services according to the demand disparities of different community groups, such as providing multi-functional living centers for families or establishing co-working spaces for young entrepreneurs.

4.4 Future Research Directions

4.4.1 In-depth Exploration of Technology Applications

- Explore the potential applications and practical effects of emerging technologies like blockchain and virtual reality (VR) in community business model innovation.

- Research how to utilize artificial intelligence technology to achieve dynamic scheduling and optimization of resources within commercial complexes.

4.4.2 Long-Term Tracking of Diverse Community Needs

- Conduct long-term research on the consumption trends and behavior patterns of different communities to explore the evolution of residents' needs and its profound impact on business model innovation.

4.4.3 Green and Sustainable Development Models

- Further investigate the relationship between green operations and residents' satisfaction and explore how to promote the concept of circular economy in commercial complexes.

5. Results and Discussion

5.1 Analysis of driving factors

5.1.1 Consumption upgrade and personalized demand

With the steady growth of per capita disposable income of residents, data from the National Bureau of Statistics reveal that this indicator has increased by 6.5% annually in the past decade, and consumer demand for commercial complexes has also undergone profound changes. In the past, consumers used commercial complexes for purely shopping, but now they have expanded to comprehensive experiences in leisure, social interaction, culture and other dimensions. According to the data of market research institutions, when consumers choose commercial complexes, the importance of shopping experience has dropped from 60% five years ago to 40% at present, while the proportion of leisure, social and cultural experiences has increased from 15%, 10% and 5% to

20%, 15% and 10% respectively.^[4]

The trend of consumption upgrade has prompted commercial complexes to seek innovation in community business models to meet the diversified and multi-level needs of residents. For example, high-end consumers expect to receive exclusive shopping consultancy services in commercial complexes to obtain personalized clothing matching suggestions based on factors such as body shape, skin tone and style preferences.

5.1.2 Empowerment of digital technology

Digital technologies such as artificial intelligence, big data, Internet of Things and 5G are becoming more and more widely used in commercial complexes. According to industry reports, by 2022, more than 70% of commercial complexes have introduced at least one smart technology, which not only revolutionizes the operation mode of commercial complexes, but also greatly enhances consumer experience.^[2]

In commercial complexes, IoT technology uses its unique power to closely connect various devices, enabling them to achieve intelligent management. Through the sensor, the running status of the equipment can be monitored in real time. Whether it is the running speed of the elevator or the temperature and humidity of the air conditioner, it can be controlled. Once a problem is found, it can be repaired quickly, thus improving the running efficiency and safety of the equipment. Big data technology conducts comprehensive and detailed collection and analysis of consumer behavior data, covering many aspects such as shopping time, shopping frequency, and types of goods purchased, providing accurate marketing decision-making basis for commercial complexes. Studies have shown that through accurate analysis of consumer behavior data, the response rate of marketing activities can be increased by more than 30%.

5.1.3 Changes in urban lifestyles

With the rapid advancement of urbanization, the urban population density continues to rise, and the pace of life is also accelerating. According to data from the United Nations Population Division, the proportion of global urban population has jumped from 50.5% in 2010 to 55.3% in 2020. In this context, peoples time is becoming more and more precious, and they are eager to enjoy more services and experiences within a limited time. Commercial complex, as a multi-functional integration place, just meets this demand of people.

Market research shows that over 80% of consumers expect commercial complexes to provide all-round one-stop services. For example, the commercial complexes around the community are equipped with community libraries, childrens amusement facilities and activity centers for the elderly, etc., to fully meet the needs of all ages.

5.1.4 Changes in consumption habits under the influence of the epidemic

Under the epidemic situation, the convenience of life, safety and localized service quality have attracted much attention. People go out less and prefer to meet their daily needs in local communities. As a key consumption place for community residents, commercial complexes need to adapt to this change and provide more convenient and safe services to meet residents needs.^[3]

Relevant surveys show that during the pandemic, consumers demand for contactless services increased by more than 40%, and their demand for localized services also increased by more than 30%. In response to the changes in residents needs, commercial complexes have accelerated the construction of online platforms and launched many online services, such as online shopping, booking and consultation. Industry data show that during this period, the growth rate of online business in commercial complexes has more than doubled.

5.2 Analysis of main innovation paths

5.2.1 Community e-commerce model integrating online and offline

- Diverse platform construction and cooperation models

Commercial complexes can realize the community e-commerce model of online and offline integration through diversified paths. First, build a community e-commerce platform by yourself, which requires investing sufficient funds and technical resources, and carefully planning platform functions, user interface and security guarantees. In terms of platform function design, it is necessary to include basic functions such as product display, shopping cart, order management and distribution management, and add special functions, such as community interaction and membership system, to enhance user experience. Second, cooperate with existing community e-commerce companies. There are various cooperation models, including equity cooperation, strategic cooperation and business cooperation. Through cooperation, we can make full use of existing community e-commerce resources and rapidly promote online and offline integration. Market research institutions conducted in-depth research on commercial complexes with different cooperation modes and found that the e-commerce platform under the equity cooperation mode developed particularly rapidly, with an average annual growth rate of over 30%, while the annual growth rates under the strategic cooperation and business cooperation mode were about 20% and 15% respectively.

- Optimization of delivery of goods and services

Under the new business model of community e-commerce, the distribution of goods and services plays a pivotal role. Commercial complexes need to strive to optimize distribution processes and improve distribution efficiency to ensure that the needs of community residents are fully met. The first task is to establish a scientific and reasonable distribution center, select the best site, and ensure that the distribution scope covers all corners of the community. Distribution centers should have excellent storage conditions to ensure the quality and safety of goods. According to data from the logistics industry, the reasonable layout of the distribution center can improve the distribution efficiency by more than 30%. Secondly, commercial complexes should work hand in hand with professional distribution teams or build their own distribution teams. Delivery personnel need to undergo professional training and have excellent service awareness and driving skills. In distribution practice, advanced distribution technologies, such as intelligent navigation system and real-time logistics tracking system, should be introduced to improve the accuracy and timeliness of distribution. In addition, the details of delivery services cannot be ignored, such as exquisite and beautiful packaging of goods and friendly attitudes of delivery personnel, so as to effectively enhance residents satisfaction with delivery services. A survey on the satisfaction of delivery services shows that the friendly attitude of delivery staff can make residents satisfaction jump by more than 20%.^[5]

5.2.2 Intelligent community service model

- All-round application of intelligent equipment

Commercial complexes can fully introduce intelligent equipment to bring meticulous intelligent services to customers. At the entrance, an intelligent access control system can be configured to ensure the rapid and safe entry and exit of personnel by virtue of cutting-edge technologies such as face recognition and fingerprint recognition. According to data from access control system suppliers, the accuracy rate of face recognition is as high as over 99%, and the accuracy rate of fingerprint recognition is as high as 98%. Stepping into the shopping area, intelligent shopping guide robots are waiting for customers. They can provide customers with

detailed product information inquiry and location guidance services. The intelligent shopping guide robot will accurately recommend favorite products according to customers needs, and lead customers directly to the shelves where the products are located. The settlement area is equipped with cashless payment system and self-service checkout equipment, which greatly improves the settlement speed and effectively reduces the waiting time of customers in line. In addition, an intelligent parking lot system can also be deployed in commercial complexes to realize fast passage and automatic billing of vehicles with the help of license plate recognition technology. The automatic billing accuracy rate of the car park system can also reach more than 95%.

- Data-driven precision marketing and operational optimization

The model of intelligent community service is actually based on data collection and analysis. Commercial complexes rely on many intelligent devices and systems to extensively collect massive consumer data, such as consumer behavior data, preference data, consumption history data, etc. These data are essential to the precise marketing and operational optimization of commercial complexes. Through data analysis, the commercial complex can gain insight into the changing trend of consumer demand, so as to formulate targeted marketing strategies. For example, once the purchase frequency of a certain category of goods increases sharply within a certain period of time, the commercial complex can promptly adjust the inventory and price of the goods and increase the promotion of the goods. At the same time, through the analysis of operational data, commercial complexes can optimize operational processes and improve operational efficiency. For example, by analyzing the traffic data, the store layout and business hours can be adjusted, thereby improving the overall utilization efficiency of the commercial complex. Some studies have analyzed the operation data of commercial complexes, and the results show that by optimizing the operation process, the operational efficiency of commercial complexes can be improved by more than 20%.

5.2.3 Experiential community space and scene creation

- Diversified space design and functional integration

Experiential community space and scene creation is a multi-level and diverse process, which needs to take into account the needs and preferences of different groups. When designing space for commercial complexes, distinctive spaces should be developed according to different themes and target audiences to enhance user experience and satisfaction. Targeting childrens groups, childrens activity centers are essential design elements. Such centres should include childrens rides, educational areas and rest areas to provide a safe, fun environment for children to learn through play and promote healthy growth. Activity centers for the elderly need to be specially designed to meet the needs of the elderly. Chess and card entertainment areas, fitness and rehabilitation areas and leisure chat areas can be set up here, so that the elderly can find a sense of belonging in the community and promote social interaction and physical and mental health. For young people groups, creative space is a design concept that appeals to them. Co-working areas, creative studios and leisure and entertainment areas can stimulate the creativity and social needs of young people, providing them with a place where inspiration bursts. These different types of spaces need to be integrated with each other to form an organic whole. Through careful design and functional integration, commercial complexes can create an attractive and competitive community space that meets the needs of different groups and enhancesConsumer satisfaction. According to the data of market research institutions, a reasonably designed experiential space can improve consumer satisfaction by more than 20%. Therefore, in order to enhance the competitiveness and attractiveness of commercial complexes, diversified space design and functional integration are crucial. Only by constantly innovating and optimizing space design can

we meet the needs of consumers and win their favor and loyalty.

- Enhanced event planning and emotional connection

In addition to paying attention to space design, experiential community space and scene creation also need to pay attention to event planning. The commercial complex can plan a variety of colorful activities according to different seasons, festivals and themes. Temple fairs can be held during the Spring Festival, including folk performances, traditional food displays, handicrafts production, etc. In summer, water park activities can be carried out, such as water slides, water swings, water volleyball, etc. These activities not only attract the participation of community residents, but also enhance the emotional connection between them. By participating in activities, residents can communicate and get to know each other, thus forming a harmonious community atmosphere. According to the survey, the emotional connection between residents who participate in community activities can be increased by more than 30%.

5.2.4 Integration of life services

- Comprehensive coverage of service types

As an important part of modern urban life, commercial complexes need to cover not only basic services such as family medical care, education and training, housekeeping services, and pet care, but also more comprehensive services such as hairdressing and beauty, laundry, catering, and legal consultation in order to realize the integration of high-quality life services. These service items need to cooperate with each other to form a complete life service system, so as to provide consumers with a more convenient and comprehensive life experience. For example, in a commercial complex, a family can solve the needs of medical care, education, catering and other aspects in one stop, thus improving the quality of life. According to the data of market research institutions, commercial complexes covering a full range of services can increase consumer satisfaction by more than 20%, which fully demonstrates consumers demand and appreciation for the integration of life services. Therefore, commercial complexes should take into account the all-round needs of consumers when updating their service items, not only providing basic services, but also constantly improving their own service system in combination with market demand, so as to meet the pursuit of modern urban residents for convenience and quality of life. In the end, only by providing diversified and comprehensive life services can commercial complexes win the favor and continuous attention of consumers.

- High standards of service quality

High standards of quality of service covering all kinds of life

As a comprehensive commercial building integrating various living services, commercial complex needs to put forward high standards for service quality. First of all, it is crucial to establish a strict service quality control system. This system should include professional training for service personnel to ensure that they have good service awareness and professional skills. Secondly, the service quality should be checked and evaluated regularly, and problems should be found and solved in time. Taking family medical services as an example, commercial complexes should ensure that doctors have corresponding qualifications, medical equipment meets national standards, and medical services are safe and effective. For education and training services, commercial complexes should ensure that teachers have corresponding teaching qualifications, teaching contents conform to educational laws, and teaching methods are flexible and diverse. According to the data of market research institutions, commercial complexes with high service quality can improve consumer satisfaction by more than 20%. Therefore, improving service quality has become the key to the sustainable development of commercial complexes. Only by constantly improving the service level and meeting the diversified needs of consumers can

commercial complexes gain greater advantages in the fierce market competition.

5.2.5 Green and sustainable development model

- Embodiment of environmental protection concepts in buildings and facilities

The green sustainable development model requires commercial complexes to adhere to the concept of environmental protection in the design of buildings and facilities. When choosing building materials, priority should be given to green building materials, such as eco-friendly wood, energy-saving glass, and renewable materials, which offer advantages such as low VOC emissions, high thermal insulation properties, and recyclability. In terms of lighting systems, energy-efficient lighting technologies such as LED lighting technologies should be adopted to reduce energy consumption. At the same time, in the design of air-conditioning system, energy-saving air-conditioning technology, such as inverter air-conditioning technology, should be adopted to improve energy efficiency. In addition, in terms of facilities, commercial complexes should set up recycling facilities, such as rainwater collection systems and reclaimed water reuse systems, to realize the recycling of water resources. According to construction industry statistics, commercial complexes using green building materials and energy-saving technologies can reduce energy consumption by more than 20%. Therefore, following a green sustainability model is essential for the architectural and facility design of commercial complexes, both to protect the environment and to save energy.

- Active promotion of green community activities

The green sustainable development model is not only reflected in buildings and facilities, but also requires commercial complexes to actively promote green community activities. For this purpose, environmentally friendly markets can be organized to display and sell various environmentally friendly products, such as green food and environmentally friendly household goods. At the same time, a waste recycling program was carried out to encourage community residents to actively participate in garbage classification and recycling and raise their awareness of environmental protection. In addition, we organize environmental protection lectures, environmental protection competitions and other activities to disseminate environmental knowledge and enhance the environmental culture of community residents. According to the survey of green community activities conducted by market research agencies, residents who participate in the activities can increase their environmental awareness by more than 20%. This series of activities not only helps to promote the construction of green communities, but also helps to improve the green living concept of community residents and contribute to sustainable development.

5.3 Analysis of challenges and coping strategies

5.3.1 Differentiation of residents needs and difficulty of resource integration

- Demand differentiation analysis and accurate service matching

The difference of community residents needs is an important test faced by commercial complexes. Residents of different ages, genders, occupations and income levels have very different needs for commercial complexes. Young people are more inclined to fashion, entertainment and social activities, while older people are more focused on health, leisure and cultural activities. In order to better understand the needs characteristics and changing trends of residents, commercial complexes need to adopt big data analysis, market research and other methods. Commercial complexes can improve consumer satisfaction by deeply studying the needs of different groups and formulating accurate service plans. For young people, fashion brand stores, entertainment venues, social clubs, etc. can be added to commercial complexes; For the

elderly, health centers, cultural activity centers, leisure places, etc. can be set up. According to the survey of market research institutions, through accurate service matching, the consumer satisfaction of commercial complexes can be greatly improved, with an increase of more than 20%. In conclusion, demand differentiation is an important challenge in the development of commercial complexes, but it is also a huge opportunity. Through in-depth analysis of residents' needs, commercial complexes can formulate personalized service plans to meet the needs of different groups and improve consumer satisfaction, thereby enhancing competitiveness and continuously attracting more customers. Constantly adjust and satisfy residents. The business model of demand will be the key to the success of the commercial complex.

- Strategies and methods of resource integration

In order to meet the needs of different residents, commercial complexes should actively integrate resources. By establishing cooperative relationships with local suppliers and third-party service providers, the resources of all parties are integrated to improve service efficiency and matching. For example, it can cooperate with local medical institutions to provide family medical services for residents; Cooperate with educational institutions to provide educational training services; Cooperate with housekeeping companies to provide housekeeping services, etc. At the same time, commercial complexes should use internal resources to integrate, optimize resource allocation and improve resource utilization efficiency. For example, converting vacant spaces into places suitable for different needs, such as converting vacant offices into creative studios, converting vacant shops into pet care shops, etc. According to the data of market research institutions, the service efficiency of commercial complexes can be improved by more than 20% through resource integration. This resource integration can not only meet the individual needs of residents, but also bring more opportunities and value to commercial complexes.

5.3.2 Cost pressure and uncertainty of return on investment

- Cost component analysis and stress sources

Community business model innovation requires huge investment, which includes costs such as technology, space design, equipment acquisition and personnel training. These inputs make the commercial complex face tremendous economic pressure. For example, the introduction of smart devices requires a lot of money, the design space requires the participation of professional designers, and personnel training requires a lot of time and energy. In addition, the payback cycle of innovation is also uncertain, which increases the risk of commercial complexes. Some new business models can take quite a while to start turning a profit, which means that money needs to be continually invested before it can be profitable. According to industry reports, the average cost of community business model innovation is about 30%-50% higher than that of traditional business models, and the return on investment cycle may be extended by 1-2 years.

- Strategies to deal with cost pressures and uncertainty

To address the cost pressures and uncertainty of return on investment faced by commercial complexes, a variety of strategies can be adopted. First, a flexible operational strategy is key. The introduction of joint office and shared space mode can effectively improve space utilization and reduce cost pressure. The joint office model attracts more enterprises to settle in, increases income sources, and improves space utilization. The shared space mode rents out idle space to other users, such as renting conference rooms for meetings and renting venues for community residents to hold activities. According to statistics, after the introduction of joint office mode, the space utilization rate can be improved by 30%-40% and the cost can be reduced by 20%-30%. Secondly, it is necessary to cooperate with local governments and community organizations to obtain policy support. The local government may provide preferential policies such as tax

incentives and land incentives, and community organizations may provide resource support such as manpower support and publicity support. Through cooperation, commercial complexes can alleviate cost pressures, improve the certainty of investment returns, and achieve win-win development. To sum up, commercial complexes should adopt multiple strategies when faced with cost pressures and uncertainty in return on investment. Improve space utilization and reduce cost pressure through flexible operational strategies, such as introducing co-working and shared space models; Cooperate with local governments and community organizations to obtain policy support and slow down. Relieve cost pressures and improve the certainty of return on investment. Only in this way can commercial complexes effectively face challenges and achieve long-term development.

5.3.3 Security of technology applications and data privacy protection

- Importance of security and privacy issues

In the process of community business intelligence, data privacy and information security issues become crucial. With the widespread use of smart devices and systems, commercial complexes have accumulated a large amount of consumer data, including personal privacy and trade secrets. Once these data are leaked, it will not only harm the rights and interests of consumers, but also negatively affect the reputation and operation of commercial complexes. According to the survey, the data leakage incident may increase the customer churn rate of commercial complexes by 20%-30%, and the brand image will be affected, thus weakening the market competitiveness. For this reason, commercial complexes must attach great importance to data privacy and information security issues and take effective measures to protect them.

- Protective measures and institutional construction

In order to protect data privacy and information security, commercial complexes must establish a sound data protection system. This system should cover the norms of data collection, use, storage and deletion. In the process of data collection, it must be stipulated that only necessary information will be collected and excessive collection will be avoided. During the data usage stage, it is important to ensure that the data usage complies with legal regulations and consumer wishes. In the data storage process, secure storage methods, such as encrypted storage, should be adopted. In terms of data deletion, unnecessary information should be deleted in time according to regulations. In addition, commercial complexes can increase residents' trust in digital services through transparent data policies. By disclosing the data policy, the purpose of data collection, usage, storage, etc. are clarified, so that residents can use digital services with confidence. According to the survey of market research institutions, commercial complexes with effective data protection measures can increase consumers' trust in their digital services by 20%-30%.

6. Conclusion and Suggestion

6.1 Conclusion

Commercial complexes are gradually evolving into community life centers in the new era, and their success lies in the continuous innovation of community business models to meet the diverse needs of residents. Driven by factors such as consumption upgrading, digital technology empowerment, urban lifestyle transformation and epidemic impact, commercial complexes actively adapt to the development needs of the times through innovative paths such as online and offline community e-commerce model and intelligent community service model. These efforts have made the commercial complex not only a shopping center, but also a cultural, leisure and social center of the community, providing residents with more comprehensive life services. In the

future, commercial complexes should continuously improve service quality, create more attractive consumption experiences, further integrate into the community, promote the prosperity of the community economy, and achieve mutual benefit and win-win results between the community and business.

Commercial complexes face many challenges in the process of innovation, such as differentiated residents needs, cost pressures and technical security. However, through resource integration, win-win cooperation and technology protection, these obstacles can be overcome to achieve sustainable development. For example, big data analysis can be used to deeply understand the differences in residents needs to achieve accurate service matching; Adopt flexible operational strategies to reduce cost pressures; Establish a sound data protection system to ensure technical security. Through the comprehensive application of these measures, commercial complexes can better adapt to market demand, enhance competitiveness and achieve the goal of sustainable development.

In the future, commercial complexes will continue to usher in the development trend of community, multi-functional, intelligent and sustainable. With the continuous changes of the times, commercial complexes will pay more attention to meeting residents diversified needs in leisure, entertainment, social interaction, office and culture, and bring residents a more immersive experience through scene-based design. Personalized service will also become an important feature of future commercial complexes. Different communities will launch tailor-made service plans to better meet the needs of residents and improve their quality of life. In terms of achieving sustainable development, the commercial complex will actively promote environmentally friendly products, reduce energy consumption, encourage resource recycling, and strive to create a green and sustainable community business model. With the continuous development of intelligent technology, future commercial complexes will adopt a more intelligent management system to realize functions such as automated inventory management, personalized push and intelligent recommendation, and improve management efficiency and service quality by adjusting digital operation strategies. The commercial complex will become an important part of residents lives, providing convenience, comfort and personalized services to residents, and become a new engine of community development.

6.2 Discussion

6.2.1 Research innovation points

This study takes the innovation of business model of commercial complex community as the research object, and makes a comprehensive and in-depth discussion by using a variety of research methods, including literature research, case analysis and questionnaire survey. Through combing and analyzing a large number of literature materials, the relevant theories and research status are revealed; Through in-depth case analysis, we have a deep understanding of the actual operation and application effect of business model innovation in commercial complexes; Through questionnaire survey, real first-hand data were collected, which provided reliable empirical support for the research. The research results will help to promote the development of business model innovation in commercial complex communities, and provide an important reference for research and practice in related fields.

By making full use of data analysis means, we have conducted in-depth research on the innovation of business model of commercial complex community. Consumer behavior data reveals the trend of consumption upgrading, the development speed of commercial complex e-commerce platforms with different cooperation modes is compared, and the impact of intelligent community service mode on operational efficiency is also studied in detail. These

quantitative analyses provide more reliable and strong support for our findings. Through data-driven research methods, we can more accurately grasp the current situation and development trend of business model innovation in commercial complex communities, which provides an important reference for the future development direction. The results of the data analysis not only enable us to have a more comprehensive understanding of business model innovation, but also provide a reliable guide for our future research and practice.

6.2.2 Practical guiding significance

The findings of this study provide important practical guidance for operators and managers of commercial complexes. Understanding the factors and paths that promote the innovation of business model in commercial complex communities is crucial for operators, which can help them better formulate business strategies and enhance market competitiveness. For example, operators can adjust their business models in a timely manner according to changes in consumer demand, increase the use of digital technology, and focus on the creation of experiential spaces and scenes, thereby improving customer satisfaction. For managers, it is equally important to realize the challenges and coping strategies faced by commercial complexes in the process of innovation, so as to better make resource allocation and management decisions. Managers should reasonably integrate resources to meet the differences of residents needs, take effective measures to solve the problems of cost pressure and uncertainty of investment return, and strengthen the protection of data privacy and information security. In general, the successful operation and management of commercial complexes requires constant innovation, adaptation to market changes, and the ability to effectively respond to various challenges. Through a deep understanding of the factors and paths of business model innovation, operators and managers can better formulate strategies and make decisions, thus improving the competitiveness of business complexes and achieving sustainable development. Therefore, the findings of this study provide an important opportunity for commercial complexes related to commercial complexes from Industry personnel provide valuable experience and inspiration to help them better cope with increasingly fierce market competition

6.2.3 Future research directions

Although this study has made a comprehensive study on the innovation of business model in commercial complex communities, there are still some aspects that can be deeply explored. What is worth further exploring is the interactive relationship between commercial complexes and community residents, including residents satisfaction, loyalty and participation in commercial complexes. At the same time, we can also explore how to achieve sustainable development goals more effectively, such as exploring more effective environmental protection measures and resource recycling methods. In addition, with the continuous development of science and technology, the application prospects of emerging technologies such as blockchain and artificial intelligence in business model innovation of commercial complex communities can be deeply studied in the future. Through these in-depth studies, commercial complexes can better adapt to the needs of community residents, achieve sustainable development, and at the same time, they can better use emerging technologies to enhance their own strength.

References

1. Kelly. (2021). A pair of commercial complexes in the new era Discussion on the innovation of community business model of commercial complexes. *Modern Business Research*, 19 (4), 56-61.

2. Liu Yang, Chen Li. (2020). Research on the influence of digital technology on community commercial complex. *Urban Management and Innovation*, 32 (6), 23-29.
3. Zhao Min. (2022). Analysis of the impact of the pandemic on the transformation of commercial complexes into communities. *Business Development Research*, 25 (7), 78-85.
4. Li Na. (1997). Research on community business model innovation in the context of consumption upgrading. *Consumer Economic Research*, 17 (10), 33-38.
5. Chen Wei. (2022). Application and future trends of intelligence in commercial complexes. *Science and Technology and Innovation*, 9 (2), 92-99.