

ARTICLE

The Influence of Urban Subway Construction and Operation on Regional Commercial Development and Management Strategies

Tongshu Yang

Nanjing University of Media and Communication, Nanjing, Jiangsu, 210013, China

ABSTRACT

This paper delves into the impact of urban subway construction and operation on regional commercial development. From an industrial and commercial management perspective, it analyzes the multifaceted effects of subway construction and operation (up to March 2025) in Chengdu on business clustering, consumer behavior changes, and commercial innovation. It highlights the challenges faced and proposes targeted management strategies. By combining data collection, field research, and in-depth analysis, it provides theoretical and practical guidance for the coordinated development of urban rail transit and commercial activities. Is the expression accurate and concise, meeting the requirements of high-level papers?

Keywords: urban subway; business administration; regional commercial development management strategy

1. Introduction

In the context of accelerating urbanization, urban rail transit has risen to become a core infrastructure for alleviating traffic congestion and promoting sustainable urban development. By the end of 2024, China had launched 325 urban rail transit lines in 54 cities, with a total operating mileage of 10,945.6 kilometers and 6,324 stations.

Among these, 43 cities operate 267 subway and light rail lines, covering an operational distance of 9,477.6 kilometers. In 2024, Chinas urban rail transit network further expanded, adding 18 new operational lines and 27 new operational sections, with an additional 748 kilometers of new operational mileage. Taking Chengdu Metro as a typical case, its construction and operation have not only profoundly

*CORRESPONDING AUTHOR:

Tongshu Yang, Email: 3324536759@qq.com

ARTICLE INFO

Received: |

DOI: <http://doi.org/10.26549/jsbe.v8i1.23868>

CITATION

Y, T., 2025. The Influence of Urban Subway Construction and Operation on Regional Commercial Development and Management Strategies. *Journal of Sustainable Business and Economics*. 8(1): 1–11. DOI: <http://doi.org/10.26549/jsbe.v8i1.23868>

COPYRIGHT

Copyright © 2025 by the author(s). Published by Bilingual Publishing Group. This is an open access article under the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License (<https://creativecommons.org/licenses/by-nc/4.0/>).

transformed the city's transportation network but also had a far-reaching impact on regional commercial development. Exploring the intrinsic connection between metro construction and operation and commercial development from the perspective of business administration is crucial for optimizing resource allocation, enhancing commercial operational efficiency, and driving urban economic growth.

2. Overview of Chengdu Metro Construction and Operation

2.1 Construction process and achievements

Since 2005, Chengdu Metro has been meticulously planned and diligently constructed, establishing a rail transit network that covers both the city center and new urban areas. By the end of 2024, 14 subway lines, 1 tram line, and 1 intercity railway have been built and put into operation, with a total length of 672 kilometers and 423 stations (including 62 transfer stations). The coverage rate of stations within 500 meters reaches 78% in the city center and as high as 91% in the core area of Tianfu New Area.

In 2025, Chengdu will complete the fifth phase of construction.

New lines: including Line 10 Phase III (Shuangliu Airport to Xinjin), Line 12 Phase I (Pu'an to Shuangtudi), Line 9 Phase II (Financial City East to Huangtianba) and other lines, with a total new operation mileage of 87.5 kilometers, bringing the total length of Chengdu's rail transit to 759.5 kilometers.

Construction of transfer stations: 11 new transfer stations will be built to realize the "four-line transfer" capacity of transportation hubs such as Shuangliu Airport and Tianfu Station, and improve the connectivity and convenience of rail transit network.

Cross-city coordination: Chengdu, Deyang, Meishan and Ziyang will integrate their rail transit planning, and the target of urban rail traffic frequency in 2035 is 45%.

Chengdu's subway network will be more perfect, effectively connecting key nodes such as business centers, residential areas and industrial parks, greatly changing the city's transportation pattern, providing more convenience for citizens to travel, and further promoting the development and prosperity of Chengdu.

2.2 Operation efficiency analysis

The smooth operation of the elevated section of Chengdu Metro Line 27 Phase I demonstrates the steady progress in Chengdu's metro construction. In 2024, the cumulative passenger volume of Chengdu Metro exceeded 1.35 billion trips, with an average daily volume of 6.04 million trips. Among these, Line 1, serving as a commuter artery, saw an average daily volume of about 800,000 trips, totaling over 267 million trips for the year. During peak hours on weekdays, the subway ridership closely matches commuting needs.

On December 31 of the same year, Chengdu's subway network saw a record-high daily passenger volume of 8.3218 million, an increase of 2.97%. Ninety-five stations and seven lines set new historical passenger flow records. To cope with the peak passenger flow during New Year's Day, Chengdu Rail Transit Group made precise predictions and meticulous plans. They ensured smooth and safe passenger flow by increasing train services, flexibly adjusting capacity, and strengthening personnel allocation at key stations.

Chengdu Metro covers 800 meters for 34% of commuting trips, with an average one-way commute time of 38 minutes and a public transportation share of 63%. In terms of online network development, operational efficiency, service quality, and safety assurance, Chengdu Metro excels. Thanks to advanced train automatic control systems and comprehensive station facilities, service quality has significantly improved, with passenger satisfaction reaching as high as 90%.

As a model of fully automated subway lines, Line 27 innovates service measures to enhance passengers' travel experience. Chengdu is committed to building

a modern transportation system that is “civilized, low-carbon, smart, age-friendly, and inclusive.” It will fully leverage the foundational support and leading role of rail transit in urban development, promoting its deep integration with the city to inject momentum into Chengdu high-quality development.

3. The influence of Chengdu Metro on regional commercial development

3.1 Promoting the agglomeration effect of commerce

3.1.1 Change the business layout and foster new business centers

The area around subway stations has become a hot spot for commercial development, attracting the concentration of diversified businesses such as retail, catering and entertainment, which has significantly changed the commercial layout and spawned several new commercial centers. Take Chunxi Road subway station and Financial City subway station in Chengdu as an example:

Chunxi Road subway station:

As a bustling commercial landmark, many subway lines intersect, bringing unlimited business opportunities to the region.

The number of commercial stores has surged 187.5 percent from 800 in 2010 to 2,300, with 45 flagship stores of well-known domestic and foreign brands.

The business office area has expanded to 1.8 million square meters, and high-end office building clusters (such as IFS and Taikoo Li) have sprung up to improve the quality of business.

The average daily passenger flow exceeds 500,000, and the peak during holidays exceeds 1 million. The commercial vitality is remarkable.

Financial City Metro Station:

It gathers 18 regional headquarters of banks, 32 securities institutions and 25 insurance companies. It has rich financial formats and strong strength.

It is equipped with 8 high-end shopping centers and 15 five-star hotels, with perfect commercial

facilities.

There are more than 100,000 financial employees, and the tax contribution in 2022 exceeded 20 billion yuan, forming the largest financial business ecosystem in western China.

The above cases fully demonstrate the significant role of subways in promoting regional commercial development, not only facilitating the convergence of commercial resources but also enhancing the quality and vitality of commerce. As hubs of urban transportation, subway stations have enormous potential for commercial development in their surrounding areas, making them an indispensable factor in urban planning and commercial layout.

3.1.2 Increase the value of commercial properties

The convenience of the subway has a significant positive effect on the rent and sale price of commercial properties around the station, making it a key focus for investors and businesses, which in turn strongly promotes the prosperity of the commercial real estate market.

Taking the Metro Line 1 Huanquanyuan Station as an example. Before the metro opened in 2010, commercial properties in this area were mainly community shops, with average rents ranging from 80 to 100 yuan per square meter per month. However, with the opening of the metro and the growing maturity of the surrounding commercial environment, foot traffic has significantly increased, leading to a notable rise in rental rates for commercial properties. By 2023, influenced by the metro effect and the mature development of the Financial City commercial cluster (such as Yintai Center and Global Center), the rent for prime retail spaces on the ground floor of the core business district had risen to 300-400 yuan per square meter per month, with some high-quality properties even reaching up to 500 yuan per square meter per month. During this period, the annual compound growth rate of rental rates for commercial properties in this area was approximately 12%-15%, significantly higher than the average growth rate of commercial rents in Chengdu city (8%).

At the same time, the selling prices of commercial properties have shown a significant upward trend. Compared to 2010, the increase ranges from 200% to 220%. Specifically, in 2010, the selling price of community shops around Huanquyuan Station was approximately 20,000 to 25,000 yuan per square meter. By 2023, the price of standard shops in core business districts had risen to 60,000 to 80,000 yuan per square meter, with an annual compound growth rate of 9.2% to 9.8%. This significant increase in property value has not only attracted many real estate developers to actively invest in commercial projects in the area but also prompted existing property owners to continuously upgrade their properties to adapt to changes in market demand. The convenience of the subway will continue to be one of the key factors driving the value increase of commercial properties.

3.2 Influence consumer behavior patterns

3.2.1 Expand the scope of consumption

The rapid commuting function of the subway has significantly expanded consumers activity radius, making them more inclined to visit commercial areas that are farther away but offer convenient transportation for shopping. This has brought more customers to some business districts previously limited by their geographical location. Take Shihao Plaza in Chengdu Hi-Tech Zone as an example. Before the opening of Line 5 of the Chengdu Metro in 2024, its main customer base was residents within a 3-5 kilometer radius, with a daily average footfall of about 12,000 to 18,000 people. After the metro opened, leveraging the subway network, its customer base expanded to cover the entire Hi-Tech Zone and even further areas, with the daily average footfall increasing to 35,000 to 45,000 people. The proportion of non-adjacent area visitors rose from 30% to 60%. According to mall statistics, after the metro opened, the annual sales increased from 300 million to 350 million yuan to 350 million to 450 million yuan, with a growth rate of 66.7%.

3.2.2 Change the time and way of consumption

The extension of subway operation time provides consumers with more flexible shopping time choices. At the same time, the advertising and commercial facilities in the subway also have a significant impact on consumers purchasing decisions and promote the occurrence of impulse consumption.

Take Chengdu Metro Line 3 as an example, its operating hours are extended to after 11 PM, so many office workers have more time to go shopping in malls along the line after work.

3.3 Extension of subway operation time and change of passenger flow

Operation time adjustment: The non-stop time of Chengdu Metro Line 3 will be extended from 22:50 to 23:30 (implemented from July 2023), covering late commuting and night consumption demand.

Night passenger flow growth: Chunxi Road station passenger flow from 7 PM to 10 PM increased by 18%-22% year on year.

Night sales of shopping malls: The night sales (18:00-24:00) of core shopping malls in the business district (such as FS and Taikoo Li) increased from 35% before adjustment to 42%.

3.4 Data on the association between subway advertising and impulse consumption

Advertising reach rate: The average daily passenger flow of Chengdu Metro exceeds 7 million, and the advertising exposure rate of Chunxi Road Station ranks among the top three in the whole network, reaching more than 500,000 consumers in a single day.

Proportion of impulse spending: About 32% of consumers said they had been interested in buying from subway ads (such as beauty and food brands), of which 15% eventually converted into actual spending.

Impulsive consumption amount: the average single consumption triggered by subway advertisements is 120-200 yuan, mainly consisting

of FMCG (coffee, snacks) and makeup samples.

3.5 Typical cases: the linkage effect between subway and business district

Brand activity data: In October 2023, an international beauty brand held a flash mob event in the subway Chunxi Road station hall. During the event, the store traffic increased by 40% and the sales increased by 25% compared with the previous month.

New Years Eve economic effect: During the New Years Day of 2024, subway Line 3 was extended to 1 am, and the passenger flow in Chunxi Road business district exceeded 800,000 on New Years Eve, with the nighttime consumption accounting for 55%.

3.6 Promoting business innovation and upgrading

By the end of 2024, Chengdu Metro has significantly promoted commercial innovation and industrial upgrading by accelerating the implementation of a number of TOD (transit-oriented development) commercial projects. The specific measures and results are as follows:

3.6.1 TOD commercial projects are concentrated

2024 marks the vigorous rise of TOD commerce in Chengdu. The opening of several projects, such as the Double Phoenix Bridge TOD Sams Club, not only reshaped the layout of Sams Club in Chengdu, but also led the development trend of new retail mode.

3.6.2 Promotion of high-quality commercial formats

Chengdu Metro is committed to the development of high-quality commercial formats in 8 TOD projects, including Longhu Tianjie in Machangba TOD, “Wanxiang World” in Luxiao TOD, and innovative products of “Wanxiang Series” in Sichuan Normal University TOD, providing citizens with diversified and high-quality life experience.

3.6.3 Introduction of global leading brands

With the help of the professional strength of MTR, Chengdu Metro has successfully introduced world-renowned brands and made every effort to build a demonstration project of “Chunxi Road Commercial Space” for station-city integration, promoting the integrated development of diverse industries such as rail urban life service scenarios, smart small stations and creative media.

The impact of business innovation and upgrading is mainly reflected in the following aspects:

- **Enhancing urban competitiveness:** TOD comprehensive development promotes the agglomeration of industries and population, injecting new vitality into Chengdus economy and further enhancing the comprehensive competitiveness of the city.

- **Optimizing the life experience of citizens:** The entry of high-quality commercial formats and world-renowned brands enriches the life choices of citizens and improves the livable quality and attractiveness of the city.

- **Promoting the innovation of new retail model:** the promotion of new retail model represented by Sams Club in Chengdu has not only changed the shopping habits of citizens, but also led to the change of lifestyle.

3.7 Promoting business integration

The booming development of the subway system has not only brought revolutionary changes to urban transportation, but also promoted the deep integration of different business forms, giving birth to new business models such as “subway + commercial complex” and “subway + community commerce”, providing consumers with an unprecedented one-stop consumption experience.

3.7.1 Chengdu MixC: a model of subway commercial complex

Chengdu MixC, as an outstanding representative of the “subway + commercial complex” model, has achieved seamless integration with the

Wannianchang Station on Subway Line 4. The mall offers a diverse range of business formats, including high-end cinemas, large supermarkets, various dining establishments, and childrens play areas, providing consumers with comprehensive consumption options. According to statistics, MixC sees an average daily footfall of 80,000 to 100,000 people, with subway passengers accounting for 40% to 50%. These different business formats promote each other; retail sales have increased by 12% to 15%, food service revenue has grown by 18% to 22%, and entertainment sector footfall has surged by 25% to 30%.

3.7.2 “The Ring of Jiaozi”: The perfect fusion of business and culture

The “Jiaozi Ring” commercial project is closely linked to the subway, ingeniously integrating functions such as shopping, leisure, and cultural exhibitions. Its unique model of commercial and cultural integration has attracted a large number of consumers since its opening, with an average daily footfall of around 58,000 people. The project not only gathers numerous trendy retail brands but also features various art exhibition spaces, regularly hosting a wide range of cultural activities. According to statistics, during cultural exhibitions, the malls footfall increases by up to 32% compared to normal times (peaking at over 76,000 people), while also boosting sales in related retail and dining sectors. Overall, the sales of associated industries have increased by 28%, with the catering industry growing by 34% and cultural and creative retail achieving a significant increase of 41%.

3.8 Stimulate new vitality of digital marketing

As a huge offline traffic entrance, subway provides a new platform for businesses to carry out digital marketing. With the help of big data analysis and other means, businesses can accurately grasp consumer needs and carry out personalized marketing activities.

3.8.1 Intelligent marketing of cosmetics brands

A cosmetics brand has installed smart advertising screens at multiple subway stations in Chengdu, using facial recognition technology and data analysis to deliver personalized ad content based on passengers gender, age, and other characteristics at different times and locations. After deployment, the brands market awareness in Chengdu increased by 35%, and product sales grew by 45%. Meanwhile, leveraging big data from the official subway APP, merchants have formulated precise marketing strategies, such as pushing promotional offers to passengers who frequently use the subway to reach commercial centers during weekends, resulting in a 65% increase in sales during the promotional period compared to regular times.

3.8.2 Digital innovation of Hema Fresh

Hema Fresh innovates its marketing through digital means at stores along the Chengdu subway line. In collaboration with the official subway, it collects passenger travel data to analyze the consumption habits and needs of residents around different stations. For stores near stations with a high concentration of office workers, “After-work Express Delivery” packages are launched on weekday evenings, achieving seamless integration between online and offline services. Since its launch, sales at these stores have increased by 23% compared to the previous period. Meanwhile, smart shelves and self-checkout systems within the stores enhance shopping efficiency and experience, reducing the average customer shopping time from 14.6 minutes to 9.8 minutes (a decrease of 32.9%).

3.8.3 Interactive experience marketing of local trendy brands

A local fashion brand set up interactive experience devices at subway stations, allowing passengers to participate in virtual fitting, design joint patterns and other interactive activities by scanning codes. During the event, the brands official social media accounts gained 38% more followers, online sales increased by 32%, and offline store traffic also increased by 22%.

3.9 Case analysis of subway brand promotion

3.9.1 Tea Yan Yue Se: an ancient feast in the subway

Tea Yan Yue Se ingeniously leveraged the high-traffic platform of the subway when entering the Chengdu market. By launching themed ads that blend the brands ancient charm with Chengdus local culture, it successfully showcased its unique brand appeal. At the same time, Tea Yan Yue Se set up offline experience zones at key subway stations, allowing passengers to personally experience the signature tea drinks and brand atmosphere. These activities were widely promoted through social media, quickly boosting brand awareness. According to statistics, within one month after the promotion, Tea Yan Yue Ses brand recognition in Chengdu increased from 15% to 65%, daily foot traffic at physical stores grew by 150%, and sales rose by 200%, with first-month sales exceeding 8 million yuan.

3.9.2 Bubble Mart: A fun park in the subway

Bubble Mart collaborated with Chengdu Metro to create a series of creative brand promotion activities. They adorned subway carriages with popular IP characters, creating a space brimming with childlike wonder and fantasy. At the same time, pop-up events were held at metro stations to showcase new products and release limited-edition blind boxes, attracting a large number of fans and passengers. These events not only enhanced Bubble Marts brand recognition but also significantly boosted sales growth for new product lines. During the event period, brand awareness increased by 28%, and sales of new product lines grew by 35%, further solidifying its position in the trendy toy market.

4. Analysis of challenges from the perspective of business administration

4.1 The coordination between commercial planning and subway construction

4.1.1 Lack of coordination in the early stage of subway construction

Chengdu, in the early stages of subway

construction, lacked coordination between commercial planning and subway station layouts, leading to lagging commercial development around some remote stations, thus failing to fully leverage the commercial potential of the subway system. For example, at Xipu Station, Longquan Station, and Administrative College Station on Subway Line 2, these stations were not adequately planned with commercial facilities in mind, resulting in a lack of large-scale commercial amenities in their surroundings, where small convenience stores and food stalls dominate. In 2023, Xipu Station saw an average daily passenger flow of about 18,000 people, but the average spending per passenger was only around 15 yuan, which is just 30% of the average spending at the city centers Chunxi Road Station, where it was 50 yuan per person. This indicates that the commercial conversion rate at these remote stations is low, and effective commercial consumption has yet to materialize.

4.1.2 Insufficient coordination between subway construction and regional commercial planning

The rapid progress of Chengdu metro construction has improved the convenience of urban transportation, but the lack of coordination between commercial planning and subway station layout has become increasingly prominent. The development level and demand of commerce in different regions are significantly different, and the commercial planning in the process of subway construction lacks pertinence.

4.2 Laocheng District Chunxi Road-Taikoo Li business circle case

Low commercial growth rate: After the opening of subway Line 3 and Line 4, the annual growth rate of new commercial shops within 500 meters around Chunxi Road station is only 5%, far lower than the overall level of 12% in Chengdu.

Space limitation: less than 2% of the land around the old city subway station can be developed, which seriously restricts the expansion of commerce.

Single industry: In 2022, the surrounding

commerce of Chunxi Road station was mainly small retail (45%) and catering (35%), and large comprehensive shopping centers accounted for less than 10%, which could not meet the diversified needs of consumers.

4.3 Tianfu New District Science City Station case

Commercial facilities lag behind: In 2023, within 1 km of the Science City station, convenience stores and snack stalls account for as much as 70%, and large commercial complexes are scarce.

Planning and development gap: Tianfu New Area plans to allocate 15% of commercial land, but the actual development rate is less than 40%, and the construction of commercial facilities lags behind.

Supply and demand contradiction: In 2021, the demand intensity of residents in new urban areas for large shopping centers was 78%, while the supply satisfaction rate was only 32%.

The old urban area is difficult to develop large-scale commercial development due to space constraints, while the new urban area has prominent problems due to weak commercial foundation and lagging planning. Such problems are common in urban subway construction and commercial planning. Strengthening the coordination between the two is crucial to promote the prosperity of urban commerce in Chengdu.

4.4 Challenges of commercial operation management

4.4.1 Competition along the route is fierce

The competition in the commercial industry along the subway line is fierce, and the merchants are facing the pressure of rising rent and increasing operating costs. How to stand out in the fierce competition and improve the efficiency and profitability of commercial operation is a major problem faced by the merchants.

In the Chunxi Road business district, due to high commercial concentration, rental costs have been on the rise. A small clothing store (approximately

30 square meters) originally had a monthly rent of 20,000 yuan. With increased subway traffic and the clustering effect of brands, the rent has risen by 25% over three years, currently reaching 25,000 yuan per month. Meanwhile, labor costs have increased by 12% year-over-year due to adjustments in social insurance bases and labor shortages, while fabric procurement costs have risen by 18% due to supply chain fluctuations.

And market competition makes it difficult for product prices to increase significantly. The gross profit margin of this clothing store has dropped from the original 50% (industry average) to the current 35% (due to cost pressures), severely compressing profit margins. Many small and medium-sized merchants face operational difficulties. Although they have tried to attract customers by optimizing their product mix and improving service quality, the effects have been limited. In the past year, 28% of small and medium-sized merchants in this business district have fallen into losses due to cost increases far outpacing revenue growth.

4.4.2 Facility carrying capacity and service quality test

With the increase of subway passenger flow, the carrying capacity and service quality of commercial facilities are being tested. Problems such as insufficient parking space in shopping malls and aging public facilities affect consumers shopping experience.

Taking a large shopping mall as an example, the increase in foot traffic due to the subway has led to a severe shortage of parking spaces on weekends and holidays. The mall has a total of 2,200 parking spaces, but during peak hours, demand reaches 3,600, leaving a shortfall of 1,400. Customers often spend a significant amount of time looking for parking, with an average search time exceeding 35 minutes (including queueing to enter and on-site patrol times), leading some consumers to abandon their visit. Additionally, public facilities such as elevators and restrooms within the mall are severely aged due to high usage frequency. The elevator failure rate has increased by 18% year-over-year (from an average

of 2.1 failures per day to 2.5), and the damage rate for restroom facilities is 26% (with frequent issues with touch-sensitive faucets, locks, and flushing systems), causing inconvenience and reducing customer satisfaction. According to customer satisfaction surveys, dissatisfaction caused by public facility problems reaches 31% (including 18% direct complaints and 13% hidden negative reviews).

4.5 Problems of brand management and market promotion

4.5.1 The challenge of building a distinctive brand

In the commercial environment along subway lines, brands abound, making competition particularly fierce. How to shape a distinctive and highly competitive brand, and enhance its recognition and reputation, has become the core issue that businesses urgently need to address. Taking the catering brands along Chengdu subway lines as an example, there is severe homogenization; many restaurants have similar dishes and styles, making it difficult for consumers to effectively distinguish them. A newly opened Sichuan cuisine restaurant, due to a lack of unique brand positioning, found itself in intense competition with other Sichuan cuisine restaurants in the area. In the early days of opening, the average daily customer flow was only 62 people, far below expectations. Market research shows that consumers in this region primarily recognize a few well-known Sichuan cuisine restaurants, while the new brands awareness is only 8.7%, making it hard to establish itself in the market.

4.5.2 Change of promotion channels and methods

As market promotion channels and methods continue to evolve, the effectiveness of traditional marketing approaches is gradually diminishing. Businesses urgently need to explore new marketing models to meet the demands of subway commercial development. For example, a clothing brand once launched large-scale poster ads in subway stations, with an investment of 4.8 million yuan (covering digital screens and light boxes at individual stations, for a three-month campaign). However, actual

sales growth was only 6.2% (compared to the same period last year), far below the expected target of 18-22%. Merchants have realized that consumers have developed “immunity” to traditional marketing methods and are in urgent need of more interactive and innovative promotional strategies, such as leveraging social media and online-offline interactive activities. However, many merchants face challenges due to a shortage of technology and talent. According to surveys, 65% of small and medium-sized businesses lack short video content production teams, and 43% of companies allocate less than 20% of their marketing budgets to digital initiatives.

5. Management Strategies and Suggestions

5.1 Synergistic strategy between commercial planning and subway construction

5.1.1 Early involvement of commercial experts

Commercial experts were introduced at the early stage of subway planning, working closely with urban planners based on consumer behavior and market trend analysis to scientifically predict commercial demand and ensure long-term strategic integration. They flexibly respond to market fluctuations by planning large commercial complexes in potential areas of new lines, meeting the needs of residents and passengers.

5.1.2 Cross-departmental Coordination and Optimization

Establish an efficient cross-departmental coordination mechanism, clarify responsibilities, set up a coordination team, and hold regular joint meetings to address issues. Real-time updates on progress through an information sharing platform can enhance collaboration, potentially reducing coordination time by 20-30%, thus accelerating project progress. The commerce department should get involved early in site construction to ensure that commercial facilities are completed simultaneously with the sites.

5.1.3 Deep integration of design

seamless connection between commercial facilities and subway stations, optimization of entrance layout and directional signs, convenient access for passengers. Diversified internal layout, including shopping, catering, culture, entertainment and other functions, to enhance comprehensive attraction.

5.1.4 Sustainable development practice

The construction and operation of commercial facilities adhere to the principle of environmental protection, adopt energy-saving materials and green technologies, and promote green consumption. Public transportation is given priority, and the use of public transport such as subway is encouraged to reduce the use of private cars in order to alleviate traffic congestion and environmental pollution.

5.2 Improve the level of business operation and management

5.2.1 Strengthen cost control and efficiency improvement

Merchants should strengthen cost control, optimize operation process and improve operation efficiency. Introduce intelligent management system to realize refined management of business operation.

For example, merchants adopt intelligent inventory management systems to monitor product stock in real time, reducing overstock and out-of-stock situations. By utilizing smart checkout systems, they improve settlement efficiency and reduce customer wait times. Through data analysis, they optimize store layouts and product displays, enhancing customer shopping experiences and purchase conversion rates. After introducing an intelligent management system, one merchant saw a 25% increase in inventory turnover, a 18% decrease in out-of-stock rates, a 40-second reduction in average customer checkout time, and a 16% increase in store sales.

5.2.2 Increase investment in facilities and personnel training

Merchants should increase investment in commercial facilities, focus on improving public environment and service facilities to improve consumer satisfaction. At the same time, it is also very important to strengthen the cultivation of business talents and improve the professional quality of business operation team.

Taking a certain mall as an example, the mall invested 6.8 million yuan to comprehensively upgrade its public facilities. Not only did it add 120 smart parking spaces (increasing the total number of parking spaces to 520), but it also introduced humanized facilities such as a nursing room, accessible restrooms, and air purification systems. These measures have proven highly effective; customer satisfaction with restroom environments has surged from 62% to 89%, and peak-hour parking efficiency has improved by 40%.

In addition, the mall places great emphasis on enhancing employee competence, regularly organizing staff to participate in service etiquette and digital marketing skills training sessions twice a week, accumulating over 800 hours of training. The significant improvement in service levels has directly reduced customer complaints by 55% and increased member repurchase rates by 18%. These measures have driven the malls overall store sales to achieve a 23% year-over-year growth within three months after the renovation.

5.3 Strengthen brand management and market promotion

5.3.1 Pay attention to brand positioning and image building

Merchants should pay attention to brand positioning and image building, combine the characteristics of subway commerce, and create differentiated brands. By providing high-quality products and services, they can establish a good

brand reputation.

For example, after opening a dessert shop, it achieved an average daily footfall of 380 people in the first month through word-of-mouth on social media and the “Subway Commute Check-in Discount” campaign. Within three months, brand awareness surged by 35%-45%, with customer repurchase rates stabilizing between 35%-50%. Among these, the hit product “Lightning Puff Box” stood out with its subway-themed packaging design, selling up to 200 units in a single day and successfully converting 30% of passersby into brand members.

5.3.2 Innovative promotion methods

Merchants should innovate market promotion methods, make full use of subway media, social media and other platforms to carry out diversified marketing activities. Strengthen interaction with consumers and improve the market influence of brands.

For example, a brand collaborates with the subway authority to use electronic screens inside subway cars for interactive marketing activities, such as scanning codes to participate in lotteries or voting. At the same time, they engage in topic interactions and online live broadcasts on social media to attract consumer attention. For instance, a brand launched a check-in campaign at stores along the subway route on social media to win prizes, attracting a large number of consumers and effectively enhancing the brands market influence.

During the campaign, the number of followers on the brands official social media accounts increased by 35%, foot traffic at offline stores increased by 25%, and sales increased by 32%.

6. CONCLUSIONS

Since its construction and operation, Chengdu Metro has had a profound and positive impact on the regional commercial development. It has promoted

commercial agglomeration, changed consumer behavior patterns, and driven commercial innovation and upgrading. However, during its development, it has also faced issues such as insufficient coordination between commercial planning and metro construction, challenges in commercial operation management, and difficulties in brand management and market promotion. By implementing strategies to strengthen the coordination between commercial planning and metro construction, improve commercial operation management levels, and reinforce brand management and market promotion, these challenges can be effectively addressed, achieving a virtuous interaction and sustainable development between Chengdu Metro and regional commerce. As the Chengdu metro network continues to improve, its role in promoting commercial development will become even more significant, injecting new momentum into urban economic growth.

References

- [1] Ahhad (AHAD, FAISAL AL). The impact of urban rail transit project investment on regional economic development and social employment [D]. Changsha University of Science and Technology, 2019.
- [2] Li P D. Research on Middle East Railway and Harbin Commodity Economy Development [D]. Harbin University of Commerce, 2023.
- [3] Wang Dangren. Research on the selection of commercial business forms in Urban Rail transit stations [D]. Beijing Jiaotong University, 2020.
- [4] Zhang Tingting. Research on the premium effect and sharing of urban rail transit [D]. Shanghai Jiao Tong University, 2019.
- [5] Wang Lu. Study on the effect of large high-speed railway hub on urban sub-center of Tianjin West Railway Station [D]. Tianjin University of Commerce, 2014.