

# Digital Empowerment for Optimizing Consumer Experience in Small Street-Side Retail Stores

Yuan Xie<sup>1,a,\*</sup>, Donghong Leng<sup>1,b</sup>

<sup>1</sup>*Xianda School of Economics and Humanities, Shanghai International Studies University, Shanghai, China*

<sup>a</sup>2311056@xdsisu.edu.cn, <sup>b</sup>lengdonghong@126.com

\*Corresponding author

**Abstract:** Due to the lack of resources of "congenital deficiency, acquired fatigue", small street-side retail stores restrict the improvement of consumer experience and affect their survival and development. To this end, we can optimize the consumption experience of small stores through digital means. In terms of specific strategies, we can optimize the shopping process to enhance convenience, build personalized services to enhance the sense of belonging, introduce interactive technology to enrich the experience dimension, and carry out refined community operations to enhance user stickiness. Practice shows that digital empowerment can effectively help small stores break through physical and resource constraints, realize the transformation from "trading place" to "experience connection point", and provide a feasible direction for the innovation and upgrading of small store economy.

**Keywords:** Small street-side retail stores; Digital empowerment; Consumption experience optimization; Small store economy; Community operation

## 1. Background: Poor Consumption Experience Restricts the Development of Small Street-side Retail Stores

Small street-side retail stores refer to those located on both sides of the street, facing the street, with retail as the main business, with an area of less than 300 square meters<sup>[1]</sup>, and the nature of individual businesses and micro-enterprises<sup>[2]</sup>. Although the relevant shops are small in scale, they are the core units of the "small shop economy" and play an important role in promoting public employment and serving the people's livelihood.

Data show that the number of small stores in China, including Small street-side retail stores, is about 100 million, which has led to nearly 300 million jobs. 90% of stores have a daily revenue of less than 30,000 yuan, but as the "capillary" of the consumer market, it plays an irreplaceable role in facilitating people's lives and driving diversified consumption<sup>[3]</sup>. The executive meeting of the State Council has clearly emphasized that "more targeted policies and measures should be taken to develop the" small stores economy "<sup>[4]</sup>.

In recent years, small retail shops on the street have suffered from business crisis, and the tide of closure has spread. According to the statistics of Dianping, Gaode and other platforms, in the period from July 2024 to June 2025, closure rates for toy, bedding, footwear, flower, and bubble tea shops all exceeded 20%, with the rates for flower and bubble tea shops particularly surpassing two-thirds.<sup>[5]</sup>.

One of the reasons for the crisis is that the external environment squeezes the living space, such as the competition of e-commerce platforms, rising rents, human costs and so on. Second, the lag of internal business model aggravates the predicament, in which the lack of consumer experience has become the core shortcoming restricting its survival and development. According to the 2024 survey, 32.5% of consumers believe that offline experience directly affects their consumption decisions, and 24.8% of customers pay attention to the sense of enjoyment in the shopping process<sup>[6]</sup>, which indicates that the motivation of consumers to come to the store has turned to "seeking experience", which is significantly different from the selling mode of most small stores.

## 2. Problems: Inadequate Internal and External Resources Lead to a Subpar In-store Experience for Street-side Stores

Small street-side retail stores have the characteristics of congenital deficiency and lack of resources of acquired fatigue in shaping consumption experience. The so-called "congenital deficiency" refers to the problem of small shop area and isolated islands along the street; the so-called acquired fatigue refers to the problem of weak capital and homogeneous competition.

### 2.1. The Stores Lack Adequate Space, Which is Crucial for Curating a Positive In-store Experience

The actual area of small street-side retail stores is usually less than 50 square meters <sup>[7]</sup>, which leads to three types of experience problems.

First of all, the experience facilities are difficult to place. Due to the lack of sufficient space, rest areas, fitting rooms, interactive devices, etc., are difficult to set up, and consumers can only achieve basic transactions. In small retail stores, because the space is cramped and the goods are disorderly, customers need to pass sideways, and the experience perception is further reduced.

Secondly, social stress affects experience. In small stores, consumers are under the close gaze of shop assistants, which is easy to produce a "sense of being monitored". For social phobia groups or young customers, this environment will inhibit their desire to stay.

Third, businesses lack the motivation to enhance experience. Limited space leads to low carrying capacity of passenger flow. In order to serve more customers, businesses lack the willingness to create an environment and extend the stay time of customers.

### 2.2. Due to Their Isolated, Standalone Operations, Street-side Small Stores Restrict the Formation of Synergistic User Experiences

Compared with centralized formats such as shopping malls, small street-side retail stores are characterized by isolation, which limits the ability to enhance consumer experience through collaboration.

First, there is a lack of large-scale infrastructure and supporting services. It is difficult for a single shop to independently bear the construction and maintenance costs of large facilities such as parking lots, customer rest areas and interactive experience devices, and consumers often face experience problems such as parking inconvenience and lack of rest space.

Second, there is a lack of holistic marketing promotion and passenger flow attraction. Small street-side retail stores can not take advantage of the stable and huge passenger flow brought by the unified brand promotion and large-scale theme activities of shopping malls like the shops in shopping malls.

Third, there is a lack of refined operational empowerment based on data. Shopping centers can build a shared membership system, integrate full-court consumption data, analyze customer portraits and consumption trends, provide business advice for on-site merchants, and even achieve cross-store membership rights and interests exchange. However, isolated shops along the street lack the above resources and are at a natural disadvantage in providing personalized and forward-looking services.

### 2.3. Due to Insufficient Funds, Street-side Small Stores are Constrained in Their Ability to Invest in User Experience Enhancements

Small street-side retail stores have low income and low profit, which restricts their investment in experience.

First of all, in-store hardware often falls behind, as it's difficult to keep it updated to the latest standard.. On the one hand, it is difficult for small stores to design and decorate their stores according to high standards. On the other hand, it is difficult to bear the cost of advanced technology tools such as smart shelves and AR fitting.

Secondly, the service ability of shop assistants is insufficient. Except for chain stores, shop assistants are generally not trained, often because of lack of product knowledge or communication skills, causing customer dissatisfaction. According to the survey, 38.4% of consumers reduce their purchase intention after experiencing dissatisfaction <sup>[6]</sup>.

Third, differentiated services are difficult to provide. Small stores generally lack membership

management systems and data analysis capabilities, unable to track consumer preferences, and achieve customized recommendations based on purchase history, thereby improving the repurchase rate.

#### **2.4. Competition among Small Storefronts is Largely Homogeneous, and as a Result, They Often Fail to Deliver a Unique Customer Experience**

Small street-side retail stores are highly similar in decoration, commodity combination and display, resulting in a lack of customer experience. For example, community convenience stores generally use standardized shelves and fluorescent lighting, lacking brand recognition. Consumers regard small stores as homogeneous "undifferentiated places" and lack of stickiness.

In marketing, most stores rely on conventional models such as price war, rather than personalized space with "stories and temperatures", and consumers tend to turn to online channels or other alternatives.

### **3. Objective: Strengthen Digital Empowerment, Break Through Resource Constraints, and Optimize Consumption Experience**

Small street-side retail stores can break through the bottleneck of consumption experience through lightweight, low-cost and high-flexibility digital resources under strict constraints of space, collaboration, capital, services and other resources.

First of all, maximize the experience in the limited physical space. In view of the physical limitation of the small store area, we can improve the experience by optimizing the efficiency of space utilization. For example, use digital signage to manage information release in a unified way, display more commodities and promotional content in a limited wall space with dynamic and vivid pictures, replace the traditional time-consuming poster posting <sup>[8]</sup>; support mobile payment, scanning code purchase and other "soft" tools, reduce queuing, alleviate in-store congestion, and create a more relaxed and convenient shopping process <sup>[9]</sup>.

Second, break through the isolated island of resources and integrate into a broader digital experience space ecology. Under the background that it is difficult for small street-side retail stores to obtain the support of resources in shopping malls, the "virtual synergy" effect <sup>[10]</sup> can be created through digitalization. This includes helping small stores to expand their service radius from 1-2 km to 5-10 km through real-time retail platforms (such as Meituan), breaking through geographical restrictions, and using the tools and applications provided by the platforms to manage orders and inventory and carry out precision marketing <sup>[11]</sup>.

Third, data-driven personalized services. Faced with the pain point of weak service capability, we collect and analyze consumption data through lightweight digital tools to achieve low-cost insight into customer preferences, and implement simple and effective personalized interaction <sup>[12]</sup> such as precise coupon push and membership bonus.

### **4. Strategy: Consolidate the Foundation and Achieve Expansion in Three Dimensions**

Based on the above objectives, this paper argues that small street-side retail stores need to optimize the basic shopping process to make consumers "no dissatisfaction", and then through the three-dimensional expansion to make consumers experience "satisfaction".

#### **4.1. Foundation: Optimize the Shopping Process and Improve Convenience**

Digitally reshape the shopping process of small street-side retail stores, create convenient experience for consumers by optimizing payment, settlement, performance and other links, help small stores break through physical restrictions, improve operational efficiency and customer satisfaction.

First, the payment process is extremely simplified. Digital technologies such as aggregate payment, one-code payment for members and senseless payment are introduced to achieve minimalist payment. For example, the aggregate payment integrates multiple payment channels into one QR Code; the "one-code payment for membership" technology allows consumers to show their membership codes once, and then they can synchronously complete the accumulation of membership points and payment deduction, which merges the original two-step operation into a one-step operation, significantly reducing the waiting time and operational complexity of customers.

Moreover, self-service relieves the pressure of space and manpower. Customers can scan barcode of goods through smart devices or their own mobile phones to achieve self-service inquiry and settlement, which not only reduces the queuing phenomenon, dredges the narrow space in the store, but also enables shop assistants to focus more on the links that can enhance the user experience, such as commodity introduction and tally.

Lastly, online services extend the service radius. By entering the instant retail platform, small stores can provide "online pre-order, in-store pick-up" and "instant delivery" services. As a result, it not only saves users' shopping time, but also expands the service radius of small stores from 1-2 kilometers to 5-10 kilometers, breaking the limitation of geographical islands, reaching a wider range of customers, and realizing "small stores also have a big market" [13].

#### **4.2. Expansion Priority 1: Creating Interactive Experiences and Enhancing Richness**

Lightweight digital applications such as live interaction, NFC touch stickers and smart devices are used to break through physical space constraints at a lower cost and enhance customers' sense of participation, reality and interest, so that consumers can get more types of experience [14].

Firstly, live interaction enhances the sense of reality and trust. Through live broadcasting, physical retail stores can present the commodity arrangement, production process or shopkeeper's explanation in the background of the store to the online audience in real time, eliminate the information asymmetry of online shopping, and at the same time, guide online traffic to the store, so as to realize the closed-loop of "online gathering, offline experience" [15].

Secondly, deploy lightweight interactive touchpoints (e.g., NFC tags) to drive foot traffic.. The cost of touch stickers based on NFC technology is low (only about 1 yuan per sticker), and customers can quickly jump to the preset page with a touch of their mobile phone, and achieve word-of-mouth fission through social sharing. For example, fashion clothing stores paste touch stickers on hangers, and customers can watch videos of models wearing them and share them on social platforms with one click after touching them; milk tea stores set touch stickers on desktops to guide customers to automatically unlock "buy one, get one free" benefits after punching in and collecting them.

Thirdly, deepen the experience value through smart devices. When resources permit, stores can introduce lightweight smart devices, such as AR makeup mirrors, self-service inquiry screens or voice robots. For example, beauty stores use AR mirrors to let customers try different color lipsticks virtually and generate effect maps for sharing, which can not only prolong customers' stay time, but also provide personalized recommendations based on interactive data (such as color preferences) to make up for the shortcomings of small stores' service capabilities.

#### **4.3. Expansion Priority 2: Create Personalized Service and Enhance the Sense of Belonging**

The use of lightweight digital tools, through the construction of membership system and the implementation of precision marketing, helps small street-side retail stores to provide customized interaction based on consumer behavior under resource constraints, transforms the transaction relationship into emotional connection with temperature, and enhances the sense of belonging and loyalty of customers.

To begin with, the membership system is the basis of personalized service. Small stores can quickly set up a membership system via SaaS applications and QR codes, to record customers' consumption frequency, category preferences and other data. The system automatically classifies membership levels and allocates differentiated benefits, so that customers can change from "anonymous consumers" to "individual members" and enhance their sense of belonging [16].

Then, precision marketing transforms data into personalized interaction. By analyzing member portraits, stores can design targeting strategies for different groups to achieve precise push. For example, discount coupons for diapers are offered to customers who buy maternal and infant products frequently. For sleeping members, the "exclusive wake-up" discount code will be automatically sent with caring greetings; for students with the characteristics of concentrated consumption after evening self-study, the "second half price" activity will be precisely pushed after 20:00. Avoid the cost waste of traditional broad-brush marketing, especially suitable for small stores with limited funds, and activate customer value with minimum investment.

#### 4.4. Expansion Priority 3: Fine Community Operation to Improve Synergy

With the help of low-cost digital social tools, scattered pedestrian customers will be transformed into "neighborhood members" with sustainable interaction and loyalty, effectively solving the core pain points faced by small street-side retail stores, such as isolated islands of experience resources, lack of user stickiness and homogenization of marketing.

First of all, foster a relational private ecosystem. Small stores can guide offline passenger flow to online community or enterprise WeChat through low-threshold and high-value incentives such as "scanning code into the group to get exclusive preferences" or "adding shopkeeper enterprise WeChat to obtain local life information".

Next, cultivate a sense of community trust. For example, the owner of a community fruit shop can create a "knowledgeable buyer" to share fruit selection skills and videos of new products in the group; convenience stores can become "community information stations" to release practical information such as water and power cuts, weather reminders and so on. This can sublimate the cold trading relationship into a warm emotional connection and enhance the sense of trust.

Finally, design and push activities to realize value transformation. includes online interactive promotions, such as hosting regular events like "Wednesday Flash Sales," "Share-to-Win" campaigns, and "Q&A Lucky Draws" to generate buzz and boost engagement. Offline linkage drainage, such as organizing "community members' exclusive tasting meeting" and "weekend parent-child DIY activities", will guide online traffic back to offline stores and create experience scenarios. Stratified rights and interests of members, stratified community members according to consumption data, provide more in-depth services for high-value customers, such as new product priority experience, one-to-one housekeeping services, and achieve precise operation.

### 5. Conclusion and Prospect

Through digital empowerment, small stores can be upgraded from "trading places" to "experience connection points" to achieve service value-added and efficiency improvement. The first is to optimize the process, reduce the queuing time, expand the service radius, and enhance the convenience of shopping; the second is to enhance the sense of belonging of customers through personalized service; the third is to enhance the shopping interest and brand memory through interactive experience innovation; the fourth is to solve the problem of isolation of small stores through community operation.

With a view to the future, the optimization of digital experience of small street-side retail stores is expected to present two major trends. First, deep integration of technology and intelligent upgrading. With the cost of artificial intelligence and Internet of Things technology decreasing, small stores can further apply AI shopping guide, intelligent selection algorithm and other tools. Secondly, digitalization promotes ecological synergy, further actively accesses the "virtual collaborative network" enabled by regional business alliances or platforms, simulates the cluster effect of shopping malls, realizes cross-store membership rights and interests exchange, joint marketing activities, etc., and breaks through the single store resource island dilemma<sup>[17]</sup>.

### Acknowledgement

2025 University-level Scientific Research Project of Xianda School of Economics and Humanities, Shanghai International Studies University (A3106.25.1801.2548).

### References

- [1] Xiamen Fire Rescue Detachment. *How much do you know about "Nine Small Places"?* [EB/OL]. (2025-03-04) [2025-10-15]. [https://m.thepaper.cn/newsDetail\\_forward\\_30300264](https://m.thepaper.cn/newsDetail_forward_30300264).
- [2] National Bureau of Statistics. *Classification of Large, Medium and Small Micro Enterprises in Statistics* (2017): Guo Tong Zi [2017] No.213 [S]. Beijing: China Standards Press, 2017.
- [3] Alipay, Internet Commercial Bank. *2019 China Store Economic Temperature Map* [EB/OL]. (2019-12-19) [2025-10-15]. <https://finance.china.com.cn/2019-12-19/doc-iihnzahi8653813.shtml>.
- [4] Chinese Government Website. *China will promote the transformation and upgrading of pedestrian streets in an orderly and reasonable manner* [EB/OL]. (2019-12-31) [2025-10-15].

[https://www.gov.cn/zhengce/2019-12/31/content\\_5465363.htm](https://www.gov.cn/zhengce/2019-12/31/content_5465363.htm).

[5] Report Research Society. 20 Industries with Higher Closure Rates in 2025 [EB/OL]. (2025-08-05) [2025-10-15].

[https://mp.weixin.qq.com/s?src=11&timestamp=1760512243&ver=6297&signature=i1zh3kr4uadgGu&8vtraJP9LK99zDQPo6HBX2o8eHBLIEQ&2m6W5skCz8iHiUH-b2czbtZbVaJfxF2kSbBwPgP3gcHKU2XpYKU0LJ-4CR2C\\*E3ZV02-nI6-85HDz8NaoB&new=1](https://mp.weixin.qq.com/s?src=11&timestamp=1760512243&ver=6297&signature=i1zh3kr4uadgGu&8vtraJP9LK99zDQPo6HBX2o8eHBLIEQ&2m6W5skCz8iHiUH-b2czbtZbVaJfxF2kSbBwPgP3gcHKU2XpYKU0LJ-4CR2C*E3ZV02-nI6-85HDz8NaoB&new=1)

[6] Customer Experience Management in Times Market. 2024 Store Experience Survey: Consumer Pain Points & Brand Power Points [EB/OL]. (2024-08-07) [2025-10-15].

<https://baijiahao.baidu.com/s?id=1806710395609178738&wfr=spider&for=pc>

[7] FENG Guochuan. Freedom and Fantasy: Street Shops and Shopping Centers in the City [J]. New Architecture, 2023, (06): 155-156.

[8] Opening and Closing. 2024 Store Digital Solution Provider Overview [J]. Internet Weekly, 2025, (06): 36.

[9] CHEN Yanxia. Digital technology innovation promotes new formats, builds new models and opens up new space [N]. Tongren Daily, 2025-07-15 (003).

[10] LUO Zhengming. New Problems and Countermeasures in the Development of Domestic Instant Retail Industry [J]. Time-honored Brand Marketing, 2025, (15): 28.

[11] WU Mengchen. Difficulties and Path Analysis of Digital Transformation of Retail Industry [J]. Business Observation, 2023, 9 (32): 15.

[12] CUI Yao, Wang Guiling, Jia Xiaohui, et al. Shopping Process Optimization of Physical Retail Stores Based on Digital Application [J]. Business Culture, 2022, (13): 86.

[13] KONG Dong, Sun Kai, Zhang Mingxiang. How O2O enterprises use online and offline integration to improve customer experience: a conceptual model from the perspective of partnership [J]. China Circulation Economy, 2017, 31 (06): 50.

[14] CHEN Xiuwen. Experiential Marketing Strategy of Retail Enterprises in Physical Stores [J]. Business Culture, 2020, (13): 77.

[15] LI Mengyao, Chen Xiya, Wang Huimin. Live broadcast with goods to play commercial operation [J]. Culture Industry, 2024, (19): 133.

[16] HU Xiaomei. New Outlet for Digital Transformation of Instant Retail Stores [N]. Hebei Economic Daily, 2022-11-02 (002).

[17] YI Huiyang. Research on the digital transformation path of retail enterprises under the background of digitalization [J]. Modern Business Research, 2024, (22): 151.