
INDUSTRY OVERVIEW

Certain information and statistics set out in this section and elsewhere in this document relating to the vending machine retail market in mainland China are derived from different official government publications and the market research report prepared by Frost & Sullivan, an independent industry consultant which was commissioned by us (the “Frost & Sullivan Report”).

No independent verification has been carried out on the official government publications and such information and statistics by us, the Joint Sponsors, the [REDACTED], the [REDACTED], the [REDACTED], the [REDACTED], the [REDACTED], the [REDACTED] or any other parties, excluding Frost & Sullivan, involved in the [REDACTED] or their respective directors, officers, employees, advisers, or agents, and no representation is given as to the accuracy or completeness of such information and statistics.

SOURCE AND RELIABILITY OF INFORMATION

We have commissioned Frost & Sullivan, an Independent Third Party, to conduct a study of mainland China’s vending machine retail market. We agreed to pay Frost & Sullivan a fee of RMB880,000 for the preparation of the Frost & Sullivan Report, and our Directors consider that such fee reflects market rates and are of the view that the payment of the fee does not affect the fairness of conclusions drawn in the Frost & Sullivan Report. Founded in 1961, Frost & Sullivan has over 40 global offices with more than 2,000 industry consultants, market research analysts, technology analysts and economists. Our Directors confirm to the best of their knowledge, and after making reasonable enquiries, that there have been no adverse changes in the industry since the date of the Frost & Sullivan Report which may qualify, contradict or have an impact on the information set out in this section.

RESEARCH METHODOLOGY

During the preparation of the Frost & Sullivan Report, Frost & Sullivan conducted primary research that involved discussing the status of the industry with industry participants and industry experts, as well as secondary research that involved reviewing company reports, independent research reports and Frost & Sullivan’s own database.

BASIS AND ASSUMPTION

The Frost & Sullivan Report was compiled based on the following assumptions: (i) mainland China’s economy is likely to maintain steady growth in the next decade; (ii) mainland China’s social, economic and political environment is likely to remain stable from 2023 to 2027 (the “**Forecast Period**”); (iii) a growing number of enterprises, change of policies and favourable government policy are likely to drive the future growth of the industry. The impact of COVID-19 has been incorporated in the assumptions.

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PAIN POINTS OF TRADITIONAL OFFLINE FMCG MARKET

Pain points of traditional offline FMCG market include high start-up costs, increasing operation costs and complex premise requirements for space and infrastructure, among others. Vending machines can effectively address these pain points with limited requirements for area and manpower, and provide convenient consumption experience. On top of the abovementioned points, a vending machine can also bring convenient consumption experience by providing consumers contactless retail experience and save time costs by reducing billing and waiting time, which satisfies customers’ immediate needs. Compared with traditional offline retailers, vending machines have lower space and infrastructure requirements for placement and operation.

Heavy Start-up Costs and Complex Requirements for Space and Infrastructure: The traditional retail FMCG industry usually has a high requirement for capital strength, especially for brick-and-mortar store owners. The initial investment includes rent and utilities, initial inventory cost, marketing promotion fee, retail POS system, interior décor, equipment and related financing costs. Also, it may take a period of time for FMCG retailers to gain profit as the operation fee exceeds their revenue at the beginning of their business. Considering the impact of COVID-19, traditional FMCG retailers not only need large initial capital but also sustained investment in constructing logistics networks and developing new customers and steady marketing activities. Furthermore, opening a new store has more stringent requirements for area and infrastructure than launching a vending machine does.

High Operation Costs: As the FMCG industry in mainland China continuously develops, the operation cost involving labor cost and rental cost for traditional retailers may rise in the future, resulting in lower competitiveness for traditional retailers. According to the survey data of China Chain-Store & Franchise Association (CCFA) published in 2021, 67.1% of the enterprises indicated that the high operation costs are mainly due to the challenges of labor costs, rental costs and financing costs. The hardware transformation and technology application required for enterprise transformation and upgrading have increased the burden on operation costs. During the COVID-19 pandemic, physical stores could not maintain normal operation, and traditional offline retailers generally suffered heavy losses and operation costs. Furthermore, during the lockdown period, consumers were less willing to spend in crowded environments such as shopping centres and entertainment venues. At the same time, most traditional offline retailers were unable to adjust operating costs flexibly due to their high fixed cost base.

ANALYSIS OF MAINLAND CHINA’S FMCG MARKET

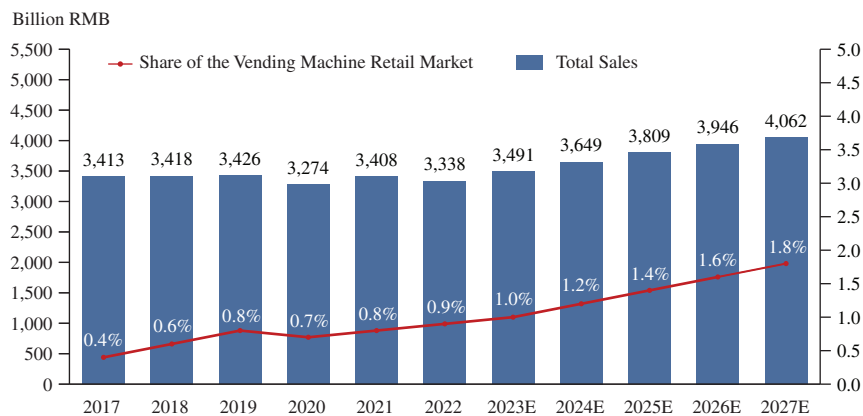
FMCG are products that are sold quickly and at a relatively low cost. Typical FMCG include packaged food and beverage, household care products and personal care products among others.

From 2022 to 2027, mainland China’s total sales of offline FMCG market is expected to increase from RMB3,413 billion to RMB4,052 billion with a CAGR of 4.0%. Currently, most of the products sold through vending machines are food and beverage. With the stable growth of the Chinese economy, the traditional offline FMCG market is expected to continue to increase. Meanwhile, vending machines have effectively addressed the pain points of the

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traditional offline FMCG market, including (1) heavy cost related to new store opening, (2) high operation costs and (3) complex premise requirements for space and infrastructure. Therefore, the vending machine retail market is expected to have sustained growth in the future. From 2022 to 2027, the share of vending machines in total sales of the traditional offline FMCG market is expected to rise from 0.9% to 1.8% in terms of total sales of offline FMCG by vending machines.

Total Sales of Offline FMCG Market and Share of the Vending Machine Retail Market (Mainland China), 2017-2027E



Source: National Bureau of Statistics of China; Frost & Sullivan

ANALYSIS OF MAINLAND CHINA’S UNMANNED RETAIL MARKET

One of the major business forms of the traditional offline FMCG is unmanned retail. Unmanned retail is a retail concept in which there are no service personnel and no cashiers, primarily consisting of vending machines, unmanned stores and unmanned shelves. The total sales of the unmanned retail market increased from RMB13,586.0 million in 2017 to RMB29,916.5 million in 2022, representing a CAGR of 17.1%. The total sales of the unmanned retail market is projected to reach RMB75,578.1 million in 2027 with a CAGR of 20.4% from 2022 to 2027. As shown in the table below, the market share of vending machine sales to the unmanned retail market remained above 93.5% from 2017 to 2022.

Total Sales of Unmanned Retail Market (Mainland China), 2017-2027E

	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	CAGR 17-22	CAGR 22-27E
Vending Machine (Million RMB)	13,126.0	19,286.5	27,081.6	21,429.0	27,123.9	28,908.1	35,597.0	42,201.1	51,546.1	62,131.2	73,927.3	17.1%	20.7%
Other Unmanned Retail Concept (Million RMB)	460.0	1,350.0	1,645.6	1,260.5	1,145.9	1,008.4	1,109.3	1,225.7	1,354.4	1,493.9	1,650.8	17.0%	10.4%
Total Sales of Unmanned Retail Market (Million RMB)	13,586.0	20,636.5	28,727.2	22,689.5	28,269.8	29,916.5	36,706.3	43,426.8	52,900.5	63,625.1	75,578.1	17.1%	20.4%
Market Share of Vending Machine (%)	96.6%	93.5%	94.3%	94.4%	95.9%	96.6%	97.0%	97.2%	97.4%	97.7%	97.8%		

Source: China Commerce Association for General Merchandise, Frost & Sullivan

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The basis for the expected growth of vending machine sales from 2022 to 2027 is as follows. In 2020, the outbreak of COVID-19 has dragged on economic sentiment and activities related to on-site public gathering and consumption in mainland China. Due to the strict quarantine measures implemented by the PRC government to restrain the further spread of COVID-19, the revenue of mainland China’s vending machine market declined from RMB27.1 billion in 2019 to RMB21.4 billion in 2020 with a growth rate of -21.0%. Nonetheless, the historical CAGR from 2016 to 2020 still remained at a high level, which was 24.9%. Before the impact of COVID-19 in 2020, the historical CAGR of mainland China’s vending machine market from 2016 to 2019 was 45.5%, which was very high.

Meanwhile, since mainland China has entered the phase of regular epidemic prevention and control since April 2020, mainland China’s unmanned retail and vending machine market has recovered since the second half of 2020. The revenue of unmanned retail and vending machine market is expected to grow accordingly with increasing disposable income, consumption, urbanization rate and growing penetration rate of points of sale covered by vending machines, increasing social distancing awareness, as well as continuous innovation of vending machines. In 2022, the U.S., Europe and Japan had approximately 6.9 million vending machines, 4.5 million vending machines and 2.8 million vending machines, respectively. Given mainland China’s huge population, the number of vending machines per thousand people in mainland China is much lower than that in major developed countries and regions such as the U.S., Europe and Japan. Also, only 8.8% of potentially available sites in mainland China were occupied by vending machines by the end of 2022, presenting tremendous market potential. Thus, the total revenue of mainland China’s vending machine market is expected to increase with a rapid growth rate, representing a CAGR of 20.7% from 2022 to 2027.

The basis for the lower expected growth of other unmanned retail sales from 2022 to 2027 taking into account its significant growth in the last five years is as follows. The other unmanned retail sales mainly include unmanned stores and unmanned shelves. At the beginning, there were a flurry of enterprises entering the industry. By the end of 2017, over 138 companies had opened approximately 200 unmanned shops in mainland China with collectively a total investment of RMB4 billion. But since the beginning of 2018, many enterprises shut down their business due to their failure to attract stable consumer traffic and differentiate from the traditional retail once the novelty wore off. The total sales of the unmanned market increased to RMB28,727.2 million in 2019, after which the size of the market declined for two consecutive years in 2020 and 2021. During the same period, the total sales of the offline FMCG market and the vending machine market kept increasing contrary to the trend of the other unmanned retail sales market. At present, there is still no substantial capital investment in unmanned stores and unmanned shelves, and there is no leading enterprise to enter the other unmanned retail sales market. Therefore, the other unmanned retail sales market is not expected to see rapid growth, with a CAGR from 2022 to 2027 projected to be 10.4%.

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ANALYSIS OF MAINLAND CHINA’S VENDING MACHINE RETAIL MARKET

A vending machine is an automatic retailing machine, which sells products at an unattended point of sale and accepts payments through various methods such as coins, bank cards, tokens and other means of cashless payment.

The main types of vending machines are as follows:

Beverage Vending Machine: Packaged drink vending machines mainly provide soft drinks, equipped with either a closed front or a glass front.

Beverage and Snack Vending Machine: Beverage and snack vending machines generally offer a wide range of drinks and snacks typically equipped with a glass front.

Pick-and-go Cabinet: Pick-and-go cabinets allow consumers to pick up the merchandise and leave, which in essence revamped the traditional automated retailing mechanism by leaving authentication and payment to technology. This unique type of vending machines is built upon a suite of technologies, including RFID (radio-frequency identification), IoT and data analytics.

Others: Other vending machines mainly include coffee vending machines, fresh juice vending machines, toy vending machines, ice cream vending machines and vending machines selling other merchandise.

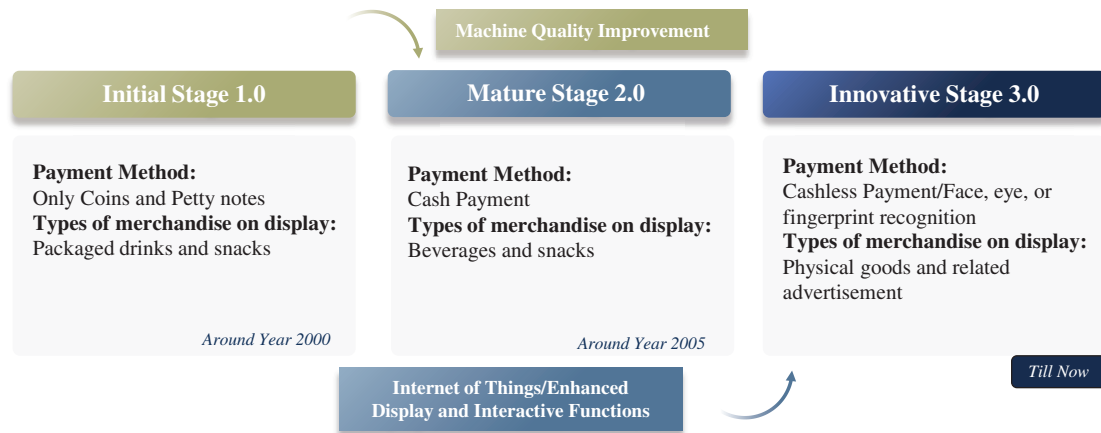
The vending machine retail market is very fragmented due to the limited supply chain capacity and operation capacity of individual operators as well as the associated supply chain costs they need to bear. As a result, it is very challenging for an operator without strong operational management and supply chain capabilities to develop its vending machine retail network while maintaining healthy profitability at the same time.

DEVELOPMENT HISTORY OF MAINLAND CHINA’S VENDING MACHINE RETAIL MARKET

Around 2000, the vending machine retail industry began to evolve and develop in mainland China with the emergence of more diverse types of vending machines with more advanced functions. In the following decade, leading vending machine operators such as our Group started to connect vending machines to the internet, which enables vending machines with human-machine interaction capabilities and cashless payment functions. In the recent decade, the vending machine retail industry has entered into a more innovative stage which focuses on real-time data transmission and IoT.

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Development History of Vending Machine Retail Market (Mainland China)

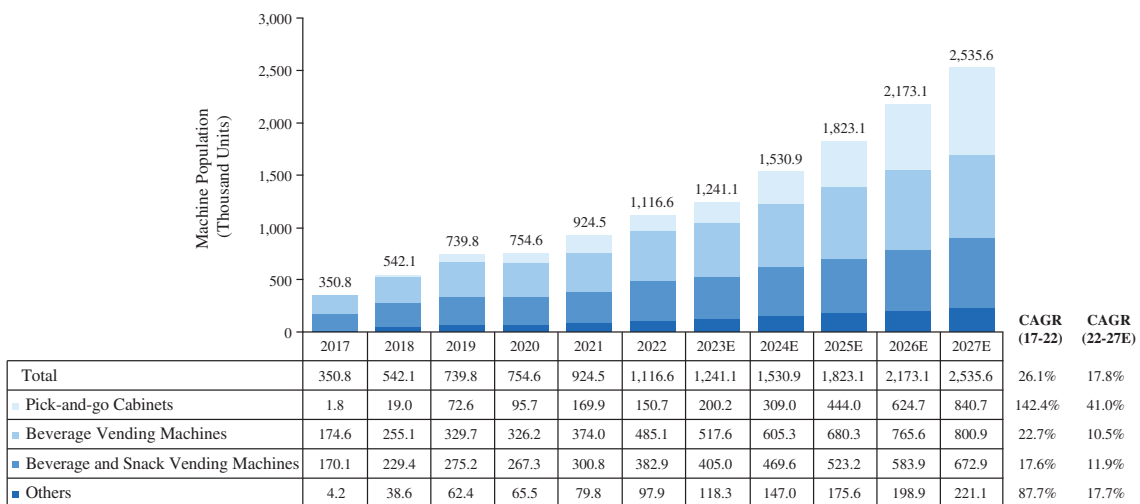


Source: Prepared by the Frost & Sullivan through interviews with industry players and Frost & Sullivan’s research

SIZE OF MAINLAND CHINA’S VENDING MACHINE RETAIL MARKET

Among business forms of unmanned retail, the vending machine plays an important role in the total market. In 2022, the vending machine population in mainland China has reached 1,116,600 with a CAGR of approximately 26.1% from 2017 to 2022. Looking forward, the total vending machine retail market is estimated to reach 2,535,600 in 2027 with a CAGR of 17.8% from 2021 to 2026. The market was mainly driven by the growing disposable income and upgrading consumption of Chinese residents. Associated with the increasing annual disposable income, mainland China’s per capita annual expenditure has maintained a steady growth, increasing from RMB18,322 in 2017 to RMB24,538 in 2022 with a CAGR of 6.0%. Beverage vending machines and beverage and snack vending machines have dominated the vending machine retail market with a market share of roughly 77.7% of machines in 2022, while pick-and-go cabinets and other vending machines have been growing rapidly in the past several years.

Vending Machine Population Breakdown by Major Types (Mainland China), 2017-2027E

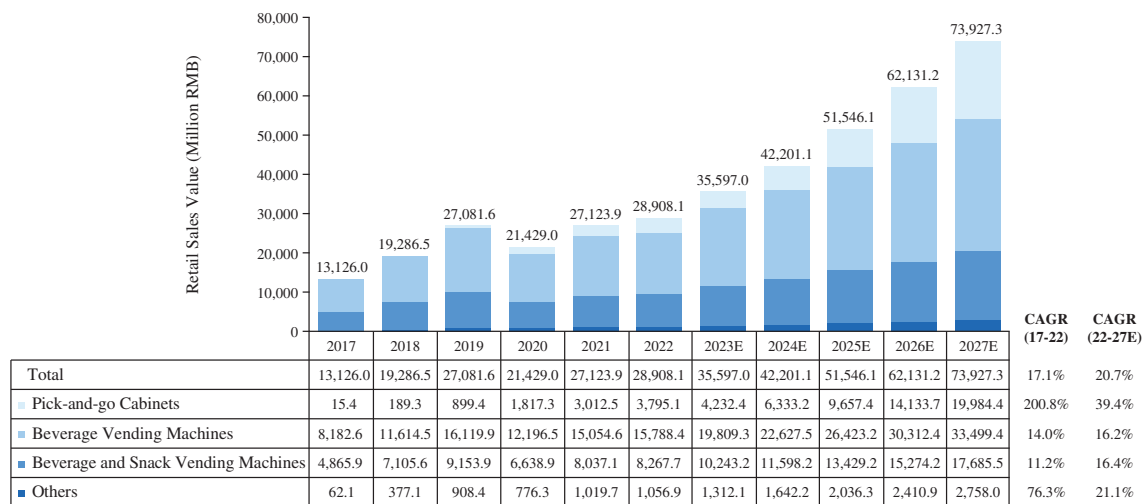


Source: China Commerce Association for General Merchandise, Frost & Sullivan

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The total sales generated from beverage vending machines increased from RMB8,182.6 million in 2017 to RMB15,788.4 million in 2022 and is expected to reach RMB33,499.4 million in 2027, accounting for around 54.6% of mainland China’s vending machine retail market in 2022 and around 45.3% in 2027. Pick-and-go cabinets entered the market in the end of 2016 and kept developing in the following years. The total sales generated from pick-and-go cabinets grew from RMB15.4 million in 2017 to RMB3,795.1 million in 2022 and is expected to reach RMB19,984.4 million in 2027, representing a CAGR of 39.4% from 2022 to 2027. The market share of pick-and-go cabinets is projected to grow from approximately 13.1% in 2022 to approximately 27.0% in 2027.

Vending Machine Market Size Breakdown by Major Types (Mainland China), 2017-2027E

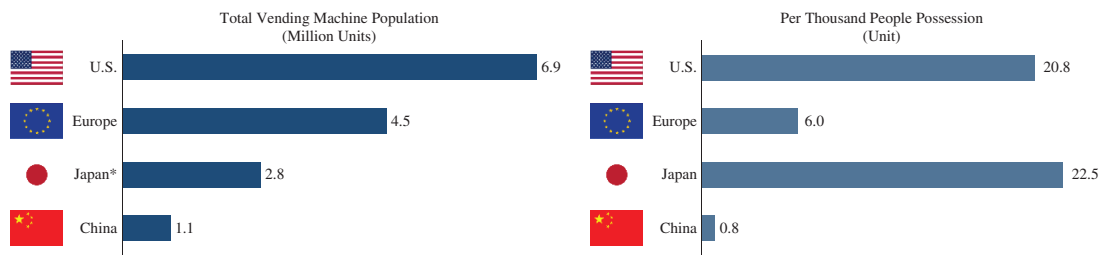


Source: China Commerce Association For General Merchandise, prepared by the Frost & Sullivan through interviews with industry players and Frost & Sullivan’s research

In 2022, the U.S., Europe and Japan had approximately 6.9 million vending machines, 4.5 million vending machines and 2.8 million vending machines, respectively. Given the huge population, the number of vending machines per thousand people in mainland China is much lower than that in major developed countries and regions such as the U.S., Europe and Japan. In 2022, mainland China has 0.8 of vending machine per thousand people while the U.S., Europe and Japan had 20.8, 6.0 and 22.5 per thousand people, respectively. The per capita disposable income of the U.S. and Japan was US\$65,376 and US\$20,640 in 2022, respectively, while mainland China’s per capita disposable income in 2022 was only US \$5,487. Therefore, there remains huge room for growth in mainland China’s vending machine retail market.

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Vending Machine Population Comparison (Mainland China vs. Selected Developed Regions), 2022



Source: European Vending & Coffee Service Association, National Automatic Merchandising Association, Japan Vending System Manufacturers Association, Statistics Bureau and the Director-General for Policy Planning (Statistical Standards) of Japan, Federal Reserve Economic Data, Frost & Sullivan

Note: The vending machine data of Japan include soft beverage vending machines, snack vending machines and coffee vending machines and exclude alcoholic beverage vending machines and cigarette vending machines.

As of December 31, 2022, new tier one cities had the highest market share of mainland China’s vending machine population of approximately 37.0%, followed by tier three cities and below with a market share of around 23.6%. The total market share of tier one cities, new tier one cities and tier two cities was around 83.2% as of December 31, 2022. The strengths of tier one cities, new tier one cities and tier two cities include higher urbanization rate, more developed economy and fast-growing per capita income. New tier one cities are expected to have the fastest growth in terms of vending machine population with a CAGR of 21.8% from 2022 to 2027, followed by tier one cities with a CAGR of 20.0%. Tier three cities and below had a relatively low number of vending machines per thousand people of 0.2 units in 2022 and there are potential growth opportunities accompanied by the developing economy.

Vending Machine Population Breakdown by City Tier (Mainland China), 2017-2027E

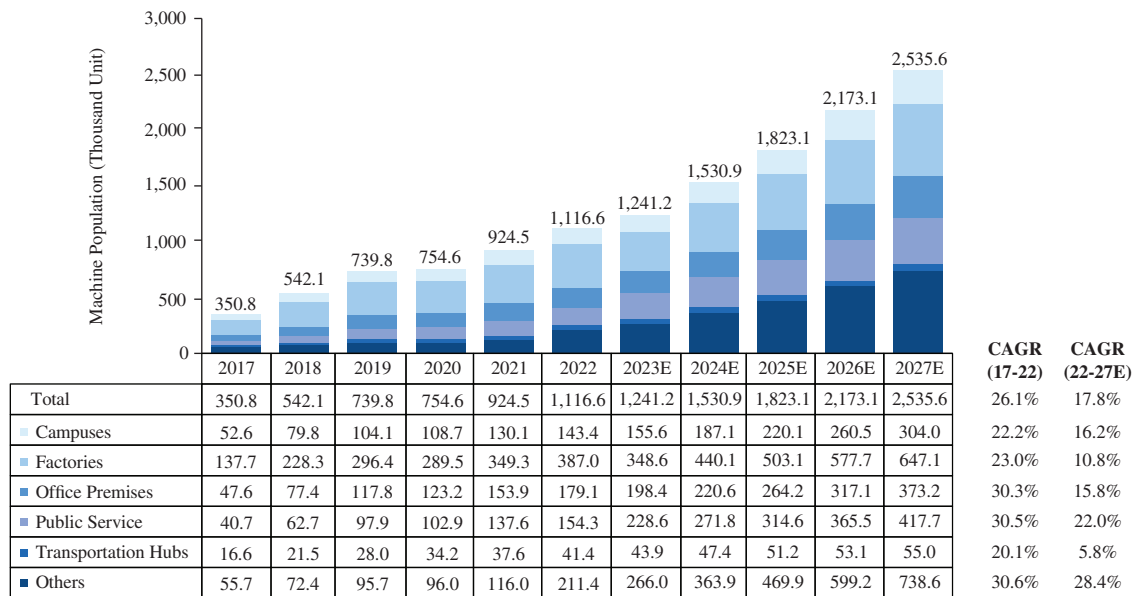


Source: Prepared by the Frost & Sullivan through interviews with industry players and Frost & Sullivan’s research

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Given the scale of mainland China’s vending machine retail market, the market generally relies on five main types of sites to reach a broad base of customers. Traditional types of sites include schools, factories and office premises which accounted for over half of mainland China’s vending machine retail market in terms of machine population. On the other hand, the ongoing penetration of pick-and-go cabinets and related technology innovation have driven the rapid growth of possession size for vending machines in office premises. Factories as a type of site had the highest market share of approximately 34.7% in 2022, and office premises with a market share of around 16.0% in the same year. Looking forward, public venues and others types of sites are the two categorized types of sites with the fastest growth, representing a CAGR of 22.0% and 28.4% respectively from 2022 to 2027.

Vending Machine Population Breakdown by Type of Sites (Mainland China), 2017-2027E



Note: Others include restaurants, hotels, automobile sales service 4S shop and other entertainment type of sites.

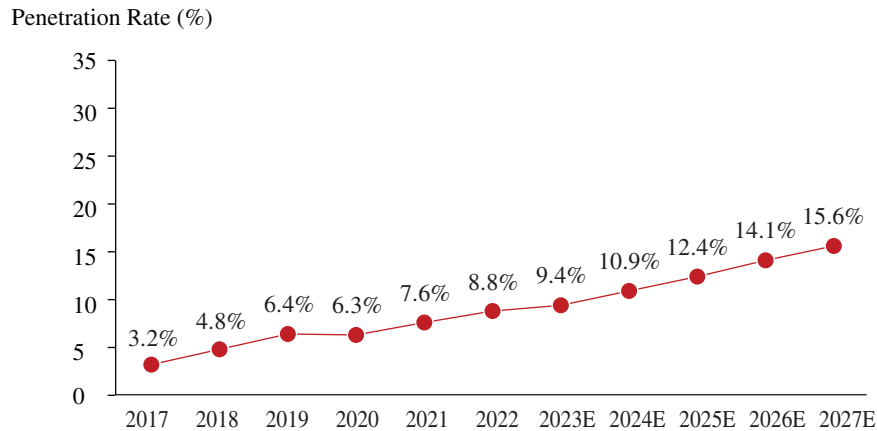
Source: Prepared by the Frost & Sullivan through interviews with industry players and Frost & Sullivan’s research

Points of sale refer to sites where the vending machines could be placed.

Only 8.8% of potentially available sites in mainland China were occupied by vending machines by the end of 2022, presenting tremendous market potential for industry participants. Looking forward, the penetration rate is expected to rise to 15.6% by the end of 2027. Many categories of potential points of sale, such as public service places and restaurants, have been traditionally underserved by players in the industry. Expansion in these places will be a key trend in the vending machine retail industry in mainland China.

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Penetration Rate of Points of Sale Covered by Vending Machines in Mainland China’s Vending Machine Retail Market, 2017-2027E



Source: Prepared by the Frost & Sullivan through interviews with industry players and Frost & Sullivan’s research

MARKET DRIVERS OF MAINLAND CHINA’S VENDING MACHINE RETAIL MARKET

Technology Innovation: Technology innovation has promoted the development of mainland China’s vending machine retail industry by improving the consumption experience of consumers and reducing the cost of operators. On the other hand, to achieve better interactive purchasing experience, cashless payment options and better storage conditions are two critical hardware innovation of vending machines. Also, new technologies such as big data analytics, visual identification, IoT and AI technologies have also improved the operation efficiency and enable operators to access consumption data directly. The development and innovation of technology is likely to drive the future development of the industry.

Wider Range of Merchandise and Improvement of Logistics Infrastructure: Although the per capita cold chain capacity of 0.2 cubic meter in 2022 in mainland China is far behind that of developed countries such as 0.6 cubic meter for the U.S., cold chain logistics is under rapid development and will hold a significant portion of the entire logistics network in mainland China. The refrigerated warehouse capacity in mainland China increased from around 35 million tons in 2015 to around 70 million tons in 2020, almost doubled in the past five years. With the development of infrastructure such as cold chain and warehousing, a wider range of merchandise including fresh food are expected to be sold through vending machines. In addition, while the shape and size of the merchandise are limited in traditional vending machines, they are not restricted in pick-and-go cabinets. A growing number of types of merchandise and development of infrastructure are likely to be displayed in such cabinets, attracting an increasing number of consumers and hence driving the market of vending machine in mainland China.

Contactless Retailing and Increasing Demand for Convenience of Consumption: The average monthly wage of employed people has increased from around RMB7,300 in 2017 to RMB9,300 in 2022 in mainland China. Those people enjoy the fast-paced lifestyle of modern cities and ask for convenience of consumption. The continuously rising labor costs lead to the increasing popularity of contactless retailing, especially the vending machines. Although the contactless retail also faced pressure and low consumer traffic during the COVID-19 outbreak when lockdown and other measures were taken, due to its safety and convenience, contactless

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retailing including vending machines has gained popularity among consumers, especially since the outbreak of COVID-19. Compared with traditional retailers, vending machines are not restricted by opening hours and could have higher operation efficiency. The growing popularity of contactless retailing is likely to drive the vending machine retail market in mainland China.

Growing Investment: An increasing number of players, including both beverage companies and vending machine operators, are expected to invest more in the vending machine retail market in the near future. The growing investment in the market is likely to further drive the market.

COMPETITIVE LANDSCAPE OF MAINLAND CHINA’S UNMANNED RETAIL MARKET AND VENDING MACHINE RETAIL MARKET

Mainland China’s unmanned retail industry is fragmented with thousands of players, most of which are small-scale local individual operators. The top five players in mainland China’s unmanned retail industry constituted a 16.4% market share in terms of GMV in 2022. Our Group recorded a GMV of approximately RMB2.2 billion in 2022, accounting for approximately a 7.4% market share.

Top Five Unmanned Retail Operators in Terms of GMV (Mainland China), 2022

Ranking	Company Name	GMV (RMB Billion)	Market Share (%)
1	Our Group	2.2	7.4%
2	Company A	1.0	3.3%
3	Company B	0.9	3.0%
4	Company C	0.4	1.3%
4	Company D	0.4	1.3%
Subtotal of top 5 market players		4.9	16.3%
Others		25.0	83.7%
Total		29.9	100.0%

Source: The Group and prepared by the Frost & Sullivan through interviews with industry players and Frost & Sullivan’s research

Notes:

- (1) Company A is a listed company on the Hong Kong Stock Exchange. Headquartered in Hangzhou, Company A is a leading company in the packaged drinking water and beverage market in mainland China. Total revenue of Company A in 2022 was RMB33.2 billion.
- (2) Company B is a listed company on the Shenzhen Stock Exchange. Headquartered in Shenzhen, Company B is mainly engaged in delivery services and logistics business. Total revenue of Company B in 2022 was RMB267.5 billion.
- (3) Company C is a listed company on the Hong Kong Stock Exchange. Headquartered in Beijing, Company C is a leading player in the beverage market in mainland China. Total revenue of Company C in 2022 was RMB47.9 billion.
- (4) Company D is a private company. Headquartered in Beijing, Company D is a beverage company based in mainland China. Total revenue of Company D in 2022 was RMB8.0 billion.

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Our Group recorded a GMV of approximately RMB2.2 billion in 2022, accounting for approximately a 7.6% market share in terms of GMV in 2022. Mainland China’s vending machine retail market is a competitive market at present.

Top Five Vending Machine Operators in Terms of GMV (Mainland China), 2022

Ranking	Company Name	GMV (RMB Billion)	Market Share (%)
1	Our Group	2.2	7.6%
2	Company A	1.0	3.5%
3	Company B	0.9	3.1%
4	Company C	0.4	1.4%
4	Company D	0.4	1.4%
Subtotal of top 5 market players		4.9	17.0%
Others		23.9	83.0%
Total		28.8	100.0%

Source: The Group and prepared by the Frost & Sullivan through interviews with industry players and Frost & Sullivan’s research

For number of POSs, our Group had approximately 66,200 vending machines in 2022 excluding Non-Ubox POSs. Our Group had established the largest vending machine distribution scale in terms of GMV and number of POSs in 2022. In terms of number of POSs excluding Non-Ubox POSs, our Group recorded a market share of 7.3% in 2022. Our Group was far ahead of other competitors and its market share exceeded the second largest player and the third largest player in 2022.

Top Five Vending Machine Operators in Terms of Number of POSs (Mainland China), 2022

Ranking	Company Name	Number of POS (Thousand Units)	Market Share (%)
1	Our Group	66.2	7.3%
2	Company A	57.1	6.3%
3	Company B	47.2	5.2%
4	Company D	28.9	3.2%
5	Company C	18.6	2.0%
Subtotal of top 5 market players		218.0	24.0%
Others		692.3	76.0%
Total		910.3	100.0%

Source: The Group and prepared by the Frost & Sullivan through interviews with industry players and Frost & Sullivan’s research

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ENTRY BARRIERS ANALYSIS OF MAINLAND CHINA’S VENDING MACHINE RETAIL MARKET

Location: Generally, the vending machine’s profitability is highly related to its location and consumer traffic. Hence, vending machine operators in mainland China with high bargaining power can access better locations. Existing vending machine operators with long operating histories have already established a POS network. It is hard for new entrants to establish an optimal POS network within the short term.

Supply Chain Management: The distribution of vending machine products depends significantly on the supply chain management capability of market players. For a vending machine operator, it is crucial to have the ability to manage the inventory and logistics for beverage products and snacks across the country. New entrants with less supply chain management experience may not be able to manage their supply chain effectively, which may result in higher costs.

Digitalization and Technology: The technology innovation of the industry enables operators to leverage POS networks, data-driven operation systems and supply chain networks to digitalize and automate retail sales of FMCG. Also, they can leverage the unique consumer touchpoints to offer advertisers with online and offline advertising services that drive traffic and sales. The diversified operation models of different consumption scenarios bring barriers and difficulties to individual operators to survive.

OPPORTUNITIES AND CHALLENGES OF MAINLAND CHINA’S VENDING MACHINE RETAIL MARKET

Opportunities:

Opportunities in Tier One, New Tier One and Tier Two Cities: Currently most of the vending machines are placed in tier one, new tier one and tier two cities due to the more developed economy and higher urbanization rate in these regions. The high labor cost and rental cost in these regions provide potential opportunities for the vending machine retail business, which can also resolve the pain points of traditional offline FMCG retail such as high initial investment for opening new stores and high operation cost. Also, as the consumption power of populations in tier three cities and below increase, expanding the vending machine retail business to tier three cities and below is likely to be new growth opportunities for the market players.

Market Concentration: The concentration rate of the vending machine retail industry is rather low in mainland China. The market is likely to be more concentrated, as the competitiveness of leading players is strong, which leads them to gain a high reputation among customers and establish a steady relationship with suppliers. They are more likely to attract new customers and gain a larger market share, leading to a more concentrated market in the future. In addition, as the market is relatively fragmented with thousands of market players, leading players are also likely to further strengthen their market position through merge and acquisition in the future.

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Challenges:

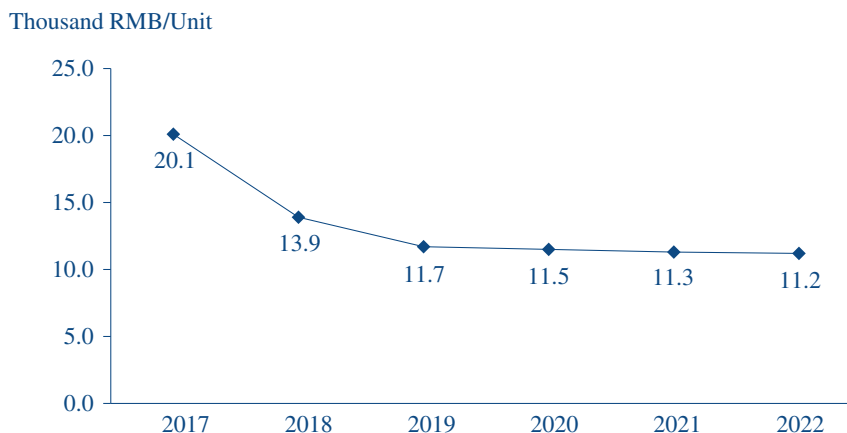
Fiercer Competition: The vending machine retail market in mainland China has witnessed a growth in the past five years. Players have been competing for better locations to attract consumers. An increasing number of players are planning to enter the market, leading to a fiercer competition in the coming future. Market players need to invest more in technology development and customer network establishment. Players also need to improve operation efficiency and catch up with the latest consumption trends in order to gain higher revenue and profit, and hence survive against fierce competition.

Talent Shortage: The vending machine retail market has experienced steady, robust growth since its first deployment in the retailing sector. However, the number of talent in the market is still insufficient. Players have been competing for talent with market experience and deep industry know-how. The lack of talent in the market has become a big challenge to the players, especially for smaller ones.

COST ANALYSIS

The major cost for vending machine operating companies includes the cost of purchasing machines. The average price of vending machine continues to drop due to the developing technology. In 2018 and 2019, the average price of vending machines dropped sharply due to the growing popularity of pick-and-go cabinets. Without the deployment of complex internal mechanical systems, such as structures of motors and movable components that pick up or push the selected merchandise towards the dispensers, in pick-and-go cabinets, the cost of vending machines dropped largely compared with traditional ones, leading to a sharp reduction in the price of vending machines. Going forward, the average price of vending machines is likely to keep the slightly decreasing trend as the technology becomes increasingly mature.

Average Price of Vending Machines (Mainland China), 2017-2022

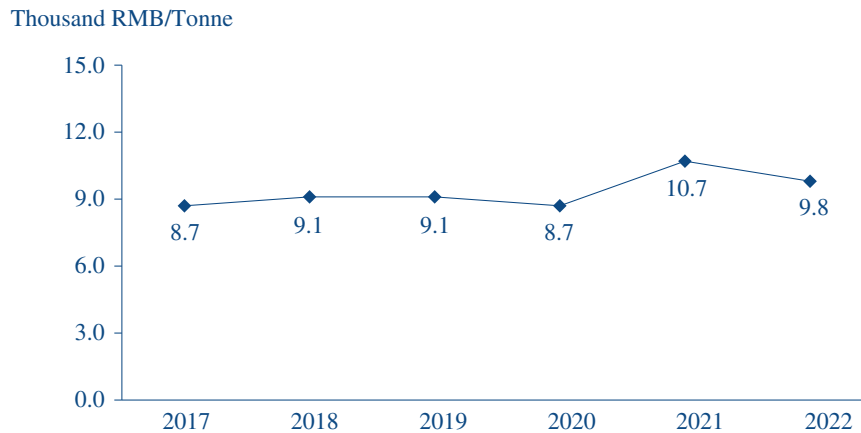


Source: Prepared by the Frost & Sullivan through interviews with industry players and Frost & Sullivan's research

INDUSTRY OVERVIEW

Cost of purchasing merchandise is also one of the major costs for vending machine operators. For example, for soft beverage, one of the most common types of merchandise sold through vending machines in mainland China, the average price gradually increased from 2016 to 2019 and slightly dropped in 2020. Going forward, the average ex-factory price of soft beverages is forecasted to keep the gradually growing trend in the coming future.

Average Ex-factory Price of Soft Beverages (Mainland China), 2017-2022



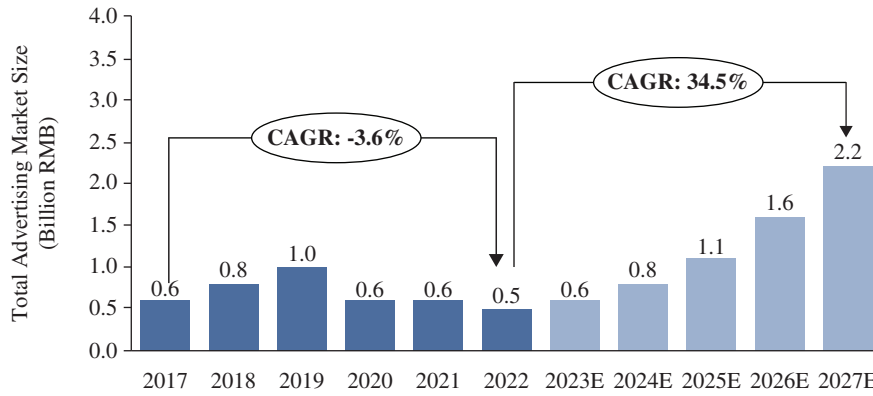
Source: Prepared by the Frost & Sullivan through interviews with industry players and Frost & Sullivan’s research

MARKET SIZE OF VENDING MACHINE ADVERTISING MARKET IN MAINLAND CHINA

The size of the vending machine advertising market in mainland China is approximately RMB0.5 billion in 2022, decreasing at a CAGR of approximately -3.6% from 2017 to 2022. The market size significantly dropped in 2020 and 2022 due to the outbreak of COVID-19 in the first half of 2020. It is expected to recover from 2023 onwards corresponding with economic growth and expected to reach RMB2.2 billion in 2027, representing a CAGR of 34.5% from 2022 to 2027. As mainland China began to modify its zero-COVID policy in the fourth quarter of 2022, the economy is expected to have a rebound in 2023. According to government statistics, railways, highways, waterways, and civil aviation in mainland China transported a total of 226 million passengers during the seven-day Chinese New Year holiday in early 2023, representing an increase of over 70% year-on-year over the same period in 2022. As people move more frequently and economic activity resumes, the demand and consumption of consumer goods are also expected to have a recovery in 2023.

INDUSTRY OVERVIEW

Vending Machine Retail Market Advertising Market Size (Mainland China), 2017-2027E



Source: Prepared by the Frost & Sullivan through interviews with industry players and Frost & Sullivan's research