

# ***A New Approach to Chinese Delivery Software under the New Situation: A Business Report on Campus Pickup Services – Can-grab***

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**Abstract:** This paper introduces the design of Can-grab, a campus service app for college students. Providing two sections of services—delivery and housekeeping, Can-grab aims to bring the last mile's convenience to customers. Stanley Milgram's concept of the six-degree network and distribution of coupons are used for promotion. This essay examines the key benefits of Can-grab, including the marketing strategy and market size. According to the joint analysis, the lowest estimates of Total Addressable Market Size, Serviceable Available Market Size, and Serviceable Obtainable Market Size are estimated at 42 million, 26 million, and 8.32 million. By comparing the revenue, the best price is concluded as 7.8 yuan when time=30 and function=3. The Acquisition cost and LTV are 8 yuan and 34,897.4 yuan, respectively. This paper makes a three-stage plan for the future development of can-grab, introduces the start-up members and department structure, and points out the potential problems for development, including personal privacy and security, campus access permission, and intense market competitiveness.

**Keywords:** Can-grab, Delivery & Housekeeping, Market Size, Marketing Strategy

## **1. Introduction**

In order to follow the trend of the times and meet the needs of college students on campus, the main product is Can-grab. Can-grab is an app that mainly serves the better-off college students, and its main riders are the poorer college students who want to study and earn money at the same time. The wealth gap between rich and poor can be huge. Apart from several special majors and universities, the average tuition is about 5000 RMB annually, equal to 700 dollars annually. That means how much money you have is not the threshold for entering a good college. The gap creates two different groups of people. A group of students may be from a disadvantaged place. They need to cover their tuition and daily expenses by themselves while another group of

students needn't worry about anything about money. The product functions as a platform to link these two groups of people to shape a happier and more convenient living space for people of different classes. The services are divided into two sections. One is responsible for delivering things, such as picking up takeaway and printing what you need. Can-grab allows students to receive what they want at a fraction of the price within a specified period without leaving their rooms. The other section is mainly responsible for household services, like cleaning the dormitory or the bathroom, and so on. Combined with joint analysis, this article analyzes the advantages of can-grab and the future vision. The marketing way and the size of the market have also been evaluated.

## 2. Literature review

According to Xu G. et.al, with the development of the economic level and the improvement of the efficiency of the means of transport, people's lifestyles have also changed radically [1]. The food environment has been transformed in the past decade by developing new services such as online grocery and takeaway delivery [2]. The online takeaway food ordering industry has developed rapidly in recent years [3]. People can order online and receive what they want at home without leaving their homes. What's more, the demand for takeaway foods has been increasing. For example, online orders in China have surged during the COVID-19 pandemic [4]. In China, there are a lot of apps that can satisfy people's daily life, such as Meituan and Elema. People can buy all the things they want. However, these apps are ignoring a potential market --- the university market. According to the 2020 National Education Development Statistics Bulletin, China has about 229 million school-education students, which takes up much of the Chinese population [5]. Due to access restrictions within the university, couriers can only deliver things to the entrance of the university campus or inside the courier station, requiring students to go up and down the stairs themselves to pick up their things to their dormitories. Moreover, Chinese universities are urged to be a strategic driving force for public safety to adapt to the changing needs due to the pandemic [6]. The access policy creates a huge blank space in offering service to students and teachers living on the campus. We are targeting the blank in express delivery and housekeeping, trying to seize the opportunity to start our own business.

### 2.1. Business model

Having known some basic information about Can-grab's product, the business model will show the whole pattern of the product. Based on college students, Can-grab offers delivery and housekeeping services by matching two demands. The customer profile is drawn through surveys—students who are well off financially and do not bother to walk downstairs to get takeout.

Compared to other apps, a reliable team and caring service are the outstanding advantages. The service quality can be guaranteed, and after-sales service is timely provided for customers. For example, delivery workers can ask us for help when they encounter personal threats from customers. If customers encounter harassment from delivery workers or the order takes too long, they can also complain to us.

Another configuration about us is caring service. Delivery service can be customized. For example, if you want to ensure your boyfriend is at the library, you can let someone confirm it. The project in the early stages will be promoted from two aspects--individual and school organization. The concept of the six-degree network was proposed and validated by American psychologist Stanley Milgram in the 1960s. The so-called six-degree network refers to the fact that all people on Earth can connect with others through the six levels of acquaintance relationship chains. "You can meet any stranger on Earth with up to six people." The theoretical foundation

of SNS (Social Network Service) is also based on the theory of six-degree segmentation. Based on the theory, users can also choose to share the Can-grab app, and then they are supposed to get corresponding coupons (sharing makes more new users get more discounts). At the same time, given that the people in the school are not fixed, every year some people graduate and leave the school, and new people enter the school. Therefore, a sustainable solution should be set. Students always change, but school organizations remain. For example, we can give the student's union some money, and the members of the student's union share Can-grab's link. Therefore, we can keep every student in the school knowing Can-grab.

## 2.2. Marketing

The services are aimed at university students. In Chinese universities, the gap between rich and poor among students can be huge. Those privileged from an early age are not willing to clean, take the food back to the dormitory, or make the bed themselves, so the platform is handy. Besides, the gate of some universities or the delivery station is far from the dormitory, so many students who are lazy or tired of walking around in the sun are willing to pay some money in exchange for convenient services through Can-Grab. The platform also serves students from poor families. Those students who are struggling financially can apply to be riders on the platforms, which allows them to work on campus in their spare time. Such students function as a labor force to serve their peers. It is essential to note that the service is delivering the couriers and takeaways directly to the halls of residence, not to the campus entrance or delivery station. To expand the customer base, it is necessary to fully use WeChat software. The team will mobilize their friends to share the platform link within a large WeChat group, which has three to four hundred people. In this way, many people will see and know the platform. People will get a coupon when they share and click the link for the first time. The platform can discount customers when they experience the service for the first time.

## 2.3. Market size

As for the market size of the product, the team of Can-grab made a reasonable estimate based on various social factors. First, According to the early, middle, and later stages of development, the market is divided into three parts. In the initial stage of product development, the market is expected to expand to Beijing, Shanghai, and Guangzhou, the three cities with the highest degree of economic development in China. In the medium-term of product development, the market will be expanded to eastern China. At the later stage of product maturity, products are planned to be nationwide.

From the scientific point of view of product promotion, this solution is effective, and a detailed consideration of the city's economic development will be carried out—the degree of opening up to the outside world, the number and scale of universities, and other factors. In addition, the Total Addressable Market Size, Serviceable Available Market Size, and Serviceable attainable market Size are estimated according to the formula. The lowest estimate of its profit is 42 million, 26 million, and 8.32 million, respectively.

Formula:  $95\% * 2 \text{ yuan minimum delivery unit price per order} * \text{total number of college students in the corresponding area} * \text{monthly frequency (where 95\% refers to 95\% of college students ordering takeout)} * \text{Sino-us currency exchange rate}$ .

Nationwide:  $95\% * 2 * 46.55 \text{ million people} * 7 = 619115000 \text{ RMB} = 85004489.5 \text{ USD}$

Eastern region:  $95\% * 2 * 123.59 \text{ million people} * 7 = 16437470 \text{ RMB} = 2256864.63 \text{ USD}$

Three cities:  $95\% * 2 * (4052189 + 554800 + 1489300 \text{ people}) * 7 = 78385938 \text{ RMB} = 10762389.3 \text{ USD}$

Data source: 46.55 million people from "Beijing Business Daily"; 12.359 million people come from "Baidu Guanyan Report Network"; 4052189 from Baidu's "Maigoo Brand List"; 554800 people come from "Baidu Procurement Network"; 1489300 people from Baidu's account "Still Seeking Green Fj"

## The average number of takeaways ordered by Chinese college students in 2021

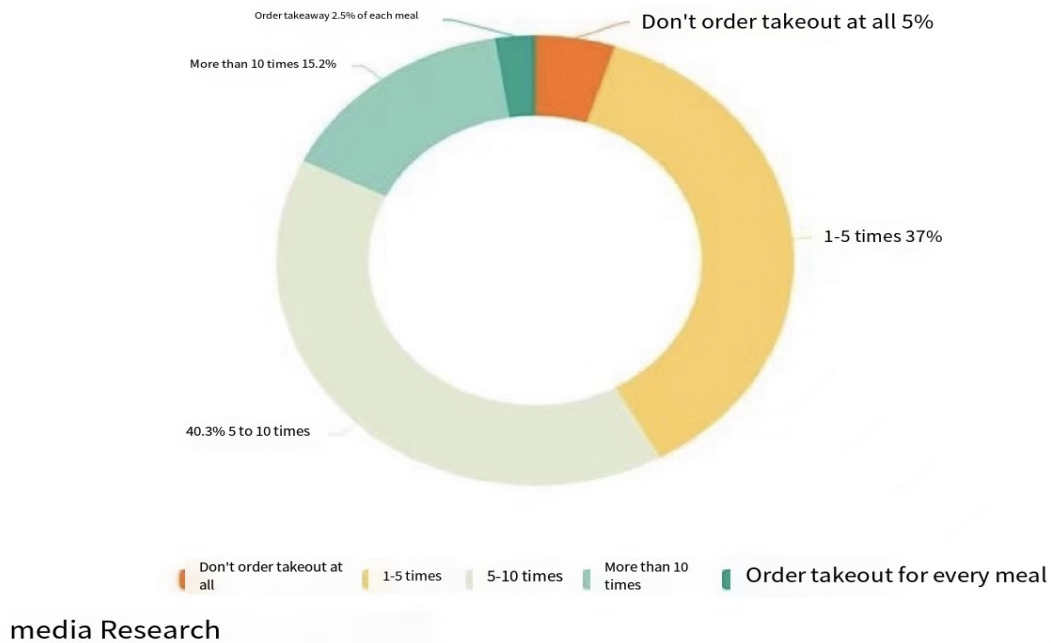


Figure 1: The Average Number of Takeaways Ordered by Chinese College Students in 2021.

In this formula, the number of universities is considered in the range, the frequency of students and staff taking takeout delivery, the development of the regional economic scale, and probability estimation. In addition, on this basis, the team will strive for excellence, including regional differences, the speed and scale of communication within the university, policies, and other social factors. After careful consideration and precise calculation, we will fully use the data in the early stage of establishment and the data observed in the actual development to track, compare, and make statistics and then summarize the team's problems. We will continue to follow up on the data and plan the later stage of our team's plan in a problem-oriented way.

### 3. Joint analysis

According to the joint analysis, the linear regression is carried out. There are 3 attributes: price, time, and function, and the number of functions represents the kind of services [7].

Table 1: The Linear Regression of 3 Attributes: Price, Time, and Function.

	Coefficients	Standard error	T stat	P-value	Lower 95%	Upper 95%	Lower limit 95%	Upper limit 95%
Intercept	1.10964254	0.08586385	12.92328	3.64E-35	0.941126	1.278159	0.941125606	1.278159268
Price	-0.0743393	0.010810306	-6.87671	1.15E-11	-0.09556	-0.05312	-0.0955555698	-0.053122949
time	-0.0242666	0.001563838	-15.5173	2.71E-48	-0.02734	-0.0212	-0.027335823	-0.021197425
Function	0.2569747	0.018699238	13.74252	3.79E-39	0.220275	0.293674	0.220275458	0.293673944

In Table1, based on the regression, the equation can be obtained:

$$\text{QUANTITY} = (1.109 - 0.074 * \text{price} - 0.024 * \text{time} + 0.26 * \text{function}) * \text{market size} = (1.109 - 0.074 * \text{price} - 0.72 + 0.78)$$

Based on linear regression analysis by Excel, the demand curve is captured when time=30 and function=3[6].

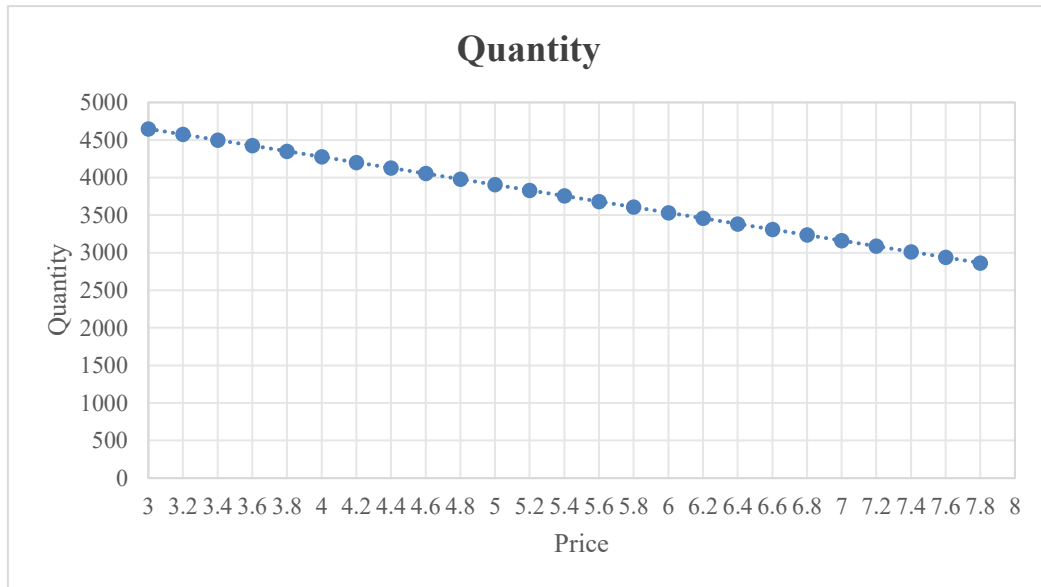


Figure 2: The liner regression of 2 Attributes: Quantity and price.

As shown in Figure 2, quantity and price have a linear relationship, with quantity decreasing as price increases. Therefore, the revenue is shown at different prices. By comparing the revenue, the best price can be concluded as 7.8 yuan when time=30 and function=3.

Table 2: The Statistic Data of 3 Attributes: Price & Quantity & Revenue.

Price	Quantity	Revenue
3	4647.75	13943.25
3.2	4573.41	14634.91
3.4	4499.071	15296.84
3.6	4424.732	15929.03
3.8	4350.392	16531.49
4	4276.053	17104.21
4.2	4201.714	17647.2

Table 2: (continued).

4.4	4127.375	18160.45
4.6	4053.035	18643.96
4.8	3978.696	19097.74
5	3904.357	19521.78
5.2	3830.017	19916.09
5.4	3755.678	20280.66
5.6	3681.339	20615.5
5.8	3606.999	20920.6
6	3532.66	21195.96
6.2	3458.321	21441.59
6.4	3383.981	21657.48
6.6	3309.642	21843.64
6.8	3235.303	22000.06
7	3160.963	22126.74
7.2	3086.624	22223.69
7.4	3012.285	22290.91
7.6	2937.945	22328.38
7.8	2863.606	22336.13

As shown in Table 2, the revenue is presented at different prices. By comparing the revenue, the best price can be concluded as 7.8 yuan when time=30 and function=3.

#### 4. Lifetime value and Acquisition cost

Acquisition cost per customer=8

LTV=sum of the present value of expected profits=34897.4[1].

Table 3: Customer lifetime value.

	Today	Year1	Year2	Year3	Year4	Year5	
Revenues	0	22336	22336	22336	22336	22336	
Product Costs	0	0	0	0	0	0	
Marketing Costs	8	50	50	50	50	50	
Customer Profits	0	22286	22286	22286	22286	22286	
Probability of being active	100%	70%	49%	34%	24%	17%	
Expected profit	0	15600.2	10920.14	7577.24	5348.64	3788.62	
Present value of expected profits	-8	14182	9024.909	5692.863	3653.193	2352.435	34897.4 LTV

Table 3 shows that the prediction of the sum of LTV in five years is 34897.4. As a result, creating a great deal of value for the customers is possible.



## 5. Main advantages

Regarding the competitive advantages of products, there are mainly the following points. First, it has policy advantages. Since the outbreak of the epidemic, Chinese universities had more strict management and restrictions on foreigners. As the biggest competitors, "Dada" and "Meituan" can only place more takeout deliveries at the campus gate due to policy reasons, which has won the distance advantage for products. Second, there are rich alumni resources. Can-grab's team members are from different universities in different parts of the country, and the schools have good interpersonal and alumni resources. In addition, we can also use the alumni resources of parents, relatives, and classmates to expand and penetrate different markets. Third, the service type is comprehensive and functional. The service content is not only delivery delivery but also housekeeping and dormitory cleaning. Fourth, align supply and demand needs to be improved. Under the college entrance examination system, there is a large gap between the rich and the poor and the difference in living habits among Chinese college students. Therefore, Can-grab as a unique platform for students who work and study can serve as supply resources, and the other side can provide demand. Fifth, there is an irreplaceable first-to-market advantage. In the face of a market that has never been opened up, to achieve a full, comprehensive, and more real and powerful investigation and research before competitors flocked to our emerging markets, sufficient data preparation and completed research report were made by the Can-grab start-up team. And constant efforts would be made to improve the products.

## 6. Vision

Can-grab is a team of highly educated and qualified creators. As a campus platform, Can-grab will form a scientific management system. Can-grab's start-up team members are young, innovative, and brave to solve problems. We have a good sense of social responsibility and are willing to provide the best service for customers' needs [8].

In the early stages, Can-grab consists of 3 departments: Product, Marketing, and IT. Most of the services on Can-Grab rely on part-time employees. Therefore, the decision was made for this group of people to share equal treatment with full-time staff.

For the future, in the first 4-6 years, Can-grab will focus on platform building and promotion. It is expected to reach a 60% usage rate among students in China's first-tier cities within 5-7 years. Then, in the second phase, Can-grab will expand its service to campuses in surrounding cities and gradually expand its service. Then, for the next step, Can-grab will explore more scenarios and cooperate with bigger companies like ALI and Jingdong [9].

Can-grab's mission is to bring the last mile's convenience to college students. In an 8- 15 min walk, App users can get the orders on Can-grab and bring the takeaways and express packages to the customer. This is the initial idea: more services will be rolled out for customers like housekeeping or to cultivate a social community for students to explore more possibilities of mutual services. Take it a step further. Can-grab will also try to bring Can-grab to more scenarios like residential quarters or hospitals. So, in the long run, the vision of Can-grab is to shape a happier living space for people. The corporation's values are compatibility, diversity, and safety. Can-grab is compatible with people with personal needs and provides diverse services. Most importantly, Can-grab will establish a real-name system so it is traceable for customers to check their orders and to ensure basic security.

## 7. Discussion

Although the market demand for campus errands business is increasing daily, there are many difficulties and limitations. First of all, the problem of cooperation authority of schools. Because

the campus market of Can-Grab is relatively closed in China, under the management of the state, security issues are the most priority to be considered. The support and consent of the university and the government is a prerequisite for Can-grab to establish a student service community on campus. So, the personal privacy and security of student customers must be the focus of platform operation. How to convince the school and get support and cooperation will be the problem that Can-grab needs to solve [10].

Moreover, due to the high barriers in the takeaway industry, new entrants have a less competitive advantage. At present, the potential of the domestic local life market has not yet been fully released. According to research (2020), in 2020, the local life service market size in China was 19.5 trillion yuan, and the online penetration rate was only 24.3%. It is expected that the market size will grow to 35.3 trillion yuan in 2025, and the online penetration rate will reach 30.8% [7]. There is still plenty of room for growth. However, in the face of continuous market penetration, Alibaba, Jingdong, Pinduoduo, and other large platforms have gradually increased the local life service business in recent years.

Although Can-grab has a more accurate market, more differentiated service, and a more social platform, in terms of mature takeaway apps, Can-grab has a relatively small market entry advantage. The reasons are as follows. First, the takeout platform needs a long time to accumulate at the user end, the merchant end, and the delivery end. For example, at the algorithm distribution level, traffic, geographical location, and residential floor height require much practical data accumulation as support. Second, the user's mind is difficult to change. Generally speaking, consumers pay more attention to the comprehensive experience of takeout consumption. Most users use a single platform, so the switching barrier is high.

## 8. Conclusion

Can-grab is an on-campus service APP for Chinese college students, providing short-distance delivery and housekeeping services. Compared with Meituan and Ele. Me, a big food delivery platform, Can-grab, focuses on the internal demand of campuses and targets the college student market. In response to the differentiated needs of different student groups, Can-grab provides a channel for some college students to earn money and also provides life convenience for others.

Can-grab has a relatively complete business model. During the initial promotion period, Can-grab will use Stanley Milgram's six-degree network concept to promote the business through the method of recommendation sharing by acquaintances. At the same time, Can-grab will also provide discount coupons when each new user uses the service. At the same time, Can-grab will also introduce a customer feedback mechanism and customized services.

In the early days, Can-grab targeted large cities such as Beijing, Shanghai, and Guangzhou. In the medium term, it will expand to eastern China and eventually to the whole of China. By calculating the market size, Can-grab estimated the Total Addressable Market Size, Serviceable Available Market Size, and Serviceable Obtainable Market Size, respectively, according to the formula. The lowest estimate of its profit is 42 million, 26 million, and 8.32 million, respectively. By comparing the revenue, we can conclude that the best price is 7.8 yuan when time=30 and function=3. The Acquisition cost and LTV are 8 yuan and 34,897.4 yuan, respectively.

As for market competition, Can-grab has advantages in national policies, alumni resources, services, and market supply and demand. Through government support during the pandemic, sufficient resource promotion, multiple categories of services, and sufficient demand from the domestic college student market, Can-grab has sufficient market space for development. Can-grab has a relatively mature concept of corporate operation and development. In the future, Can-Grab will expand its business scenarios to cover hospitals and residential areas and continue to promote



cooperation with Alibaba, Jingdong, and other companies to bring the convenience of the last mile to people and create a better life for them.

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All authors contributed equally to this work and should be considered co-first authors.

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