

# Convenient pickup point in e-commerce logistics: a theoretical framework for motivations and strategies

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## Abstract

The deployment of convenient pickup point is a novel way to tackle the bottleneck of terminal delivery in e-commerce delivery, exploration of key development motivations and channel organization strategies are beneficial to theoretical research as well as practice of relevant enterprises. Based on China industrial environment, a four-ring key motivation positioning model is proposed. In this model, the key motivation of e-commerce enterprise, express enterprise and the third-party platform is identified to improving service level, controlling delivery cost and pursuing economical profit respectively, the detailed basis for above judgment is also provided. The development patterns of convenient pickup point are discussed, and a joint development alliance is encouraged to construct public pickup service network. Two kinds of operation patterns are compared with a prediction on evolution trend, developers are suggested to establish unattended point if provided capital guarantee. The potential schemes of channel layout are also revealed, to protect consumer's perceived convenience, the entrance of residential area is regarded as the optimal place to establish pickup point. At last, conclusions and shortcomings are summarized with some proposals of further research directions.

*Keywords:* e-commerce, logistics, pickup point, delivery management

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## 1 Introduction

Due to high cost, poor flexibility, low efficiency and other weaknesses of traditional parcel delivery, the promotion of customer pickup mode relying on the convenient pickup points attracts extensive attention in the e-commerce logistics distribution. It offers flexible, convenient and comfortable parcel signing experience for the specific group and is expected to relieve the terminal delivery bottlenecks in e-commerce.

In Europe, postal enterprises, main developers of convenient pickup points, dominate the online distribution market [1], whose development behavior can be traced back to 1990s. In addition to the well-established companies such as Royal Mail and PostNL, there emerge various third-party platforms specialized in terminal delivery service including MyParcel, Kiala and CollectPlus [2]. In the United States, express enterprises actively deploy convenient pickup points and e-commerce enterprises also put forward the concept of sustainable network delivery with the core to establish the convenient pickup points [3]. As the important carrier of e-commerce logistics in Europe and America, the international express delivery giant is expanding delivery network through merger & acquisition. In 2012, Fedex acquired the Belgium-based Kiala, obtaining more than 7000 pickup points. In Asia, customer pickup mode has been promoted to developed countries like Singapore and South Korea. Furthermore, the mode of "on-line shopping in an electronic store and pickup goods in a convenient store" from Japan and Taiwan is popular [4]; more than 90% of the book parcels within the territory of Taiwan are delivered to the customers through such channel [5].

Underdeveloped countries have taken into account the delivery innovation, but the convenient delivery point develops slowly. However, in mainland China, the

development group of convenient pickup point grow rapidly, mainly including three kinds of developers-the first is the E-commerce enterprises which focus on terminal delivery service quality with development enthusiasm, strong sense of innovation and heavy investment like Jingdong Mall, Alibaba, Suning e-commerce; the second is express enterprises which set pickup points in heavy-populated areas like schools, markets and office buildings; and the third is the third-party platforms which are engaged in the collecting agency service like Shouhuobao and City 100. Different from conditions in foreign countries, the e-commerce enterprises are the main force to develop convenient pickup points in China and the influence of other developers is much smaller. At present, the largest convenient pickup service network is Cainiao Logistics Station. As of May, 2014, it has covered more than 130 cities with more than 10,000 points. According to the public news, Alibaba has concluded the cooperation intention with China Post. It is expected that the former may have the opportunity of utilizing nearly 100,000 post offices controlled by the latter. At that time, Cainiao Logistics Station may become the largest operator of convenient pickup points in the world.

However, convenient pickup point has the obvious defects, which may transfer the terminal delivery expense to customers [6]. It is also uncertain whether the convenient pickup point can be accepted on the market [7]. So there still exist many disputes on the development value and prospects of convenient pickup points. Especially in mainland China, the cognitive deficiencies of online shopping crowd for convenient pickup point and their deeply rooted thought of requiring door-to-door delivery hinder the promotion process of related businesses. Although some scholars have proposed to build "modern terminal logistics" [8], there are only few scholars that focus on convenient pickup points in

mainland China [9, 10]. So the theoretical research is very scarce. At present, there are less than 30 articles of academic literature published. Most of them are to design the specific implementation plans, not deeply discussing the development phenomenon of convenient pickup points.

The following part of this paper is as follows. First of all, based on the e-commerce logistics industry environment of China, it proposes a key motivation positioning model to analyze the key motivation differences of three types of developers in China. Then it discusses the development mode, operation pattern, point location and other channel organization strategies of convenient pickup point and presents the corresponding management suggestions.

## 2 Positioning model for key motivation

### 2.1 CONSTRUCTION BASIS FOR MODEL

As for the development motivation for convenient pickup points, there exist four points of view, which are the fundamental basis to build motivation positioning model for this paper.

First, it is cost motivation, deploying pickup points in order to control delivery cost. Browne et al (2001) put forward [11], the door-to-door delivery rises the cost; therefore, not suitable for those small parcels of low value but large delivery quantity. Setting convenient pickup points can realize "large-scale" delivery, cutting human and vehicle consumption and effectively curbing the sharp rise of delivery cost. Second, it is service motivation. Developers aim to provide personalized and customized delivery service to obtain the selection preference of the target group and increase the loyalty of customers. German Research Company Infas find that young people, students and full-time workers are prone to accepting the pickup mode. This kind of online consumer, due to the limited work and study time, can not wait for the parcels at home. Their demands for pickup are relatively strong. The third is profit motivation. Developers believe that convenient pickup points have the high return of investment. Although the unit profit is small, the market space is huge. With the expansion of O2O (Online to Offline) service, the profit is promising. Profit expectation is important for the third-party platform. But few companies have disclosed their operation data. It is difficult to evaluate the actual revenue. Finally, it is environment. Some believe that convenient pickup points can reduce the vehicle consumption, beneficial to the public by cutting carbon emission, relieving traffic pressure and avoiding traffic jams. This view is supported by the empirical researches. For example, Edwards et al (2009) calculated the data of West Sussex, Britain [12], concluding that the carbon emission could be maximally reduced by 87% if the first-delivery-failure parcels were transferred to the pickup points. In developed countries, with the relatively sound environmental protection laws and the strong corporate social responsibility awareness, environmental factors can exert great impact on the operating decisions of logistics enterprises.

### 2.2 INTERPRETATION FOR MODEL

Business development activities are closely related to

factors like logistics strategy, competition pattern and customer expectations. So the real development motivation many involve various factors. Despite of this, the driving strength of each factor may be different. It is beneficial to accurately identify the key motivation factors to work out the reasonable scheme of pickup points.

Summarizing the application cases in mainland China, this paper argues that the first factor that should be considered to identify the key motivation of developers is enterprise type. Under the current industry environment, enterprises of the same type many have the similar key motivation. In order to illustrate the key motivation differences of e-commerce enterprises, express enterprises and third-party platforms, this paper designs the positioning model for key motivation shown in Figure 1. This model is of the concentric ring structure; from inside to outside, there are four alternative factors of cost, service, profit and environment. This sequence indicates the process transferring from the internal appealing to the external appealing with the target accessibility decreasing in turn.

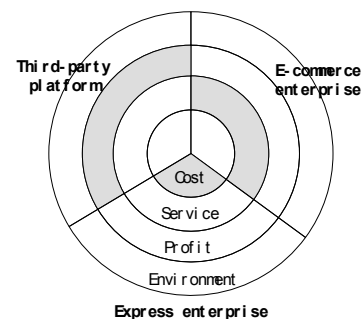


FIGURE 1 Four ring positioning model for key motivation

In Figure 1, the shadow areas represent the results of key motivation positioning of three types of enterprises. It can be seen that the key motivations for e-commerce enterprises, express enterprises and third-party platforms are respectively service, cost and profit. Take in account the fact that the green delivery concept has not been popular in China and companies pay huge attention the short-term economic interests, we can conclude that the environmental motivation is not reflected in China.

Of course, with the changing industry environment, the key motivation positioning results may vary or even be combined. So it is necessary to clarify the periodic characteristics and regionality of the above-mentioned model.

## 3 Key motivation explanations for three types of developers

Based on the above-mentioned theoretical model, the following part explains the key motivation positioning results of three types of developers in China.

### 3.1 EXPRESS ENTERPRISES: EXPLANATIONS BASED ON COST

The price competition is fierce in express industry, which directly affects the profits of express enterprises facing strong cost control pressure. With the setting of convenient pickup points, express enterprises can reduce the delivery

resource consumption and win the competitive advantages on the market. After deploying the convenient pickup points, they are equipped with the basic conditions to provide differentiated services to consumers. However, in the current e-commerce ecosystem, express enterprises actually pay more attention to the service demands of senders (sellers). It is the senders that select their express partners, so offering differentiated services to receivers can increase competitive advantages but fails to bring the direct collecting benefits in short term. As a result, improving the delivery service capability can not be regarded as the key motivation for Chinese express enterprises to develop convenient pickup points. Although some pickup points also can collect the parcels, this "waiting" collecting mode can only undertake the scattered personal business. So the profit is much lower than the door-to-door collecting. In this aspect, the profit appeal is not obvious.

Why there are only few express enterprises that have developed the convenient pickup points? This paper summarizes three reasons. First of all, many express enterprises adopt the regional contracting mode for the terminal delivery; superficially, the delivery cost is not very high. Secondly, most of private express enterprises adopt the franchising mode. The cooperation levels of various franchisees are different, resulting in the difficulty in the organizing and operating of customer pickup mode. Besides, the non-standard parcel signing behaviors of signing for others after receiving currently existing in China make express enterprises unwilling to developing the formal convenient pickup points. With the rising of labor cost and high service requirements of customers, express enterprise are facing more and more cost control pressure, which may facilitate them to develop convenient pickup points.

### 3.2 E-COMMERCE ENTERPRISES: EXPLANATIONS BASED ON SERVICE

Most Chinese e-commerce enterprises outsource their logistics and fail to effectively supervise the parcel delivery process. They can not fully control the customer shopping experience. It is urgent for e-commerce enterprises to solve the problem how to overcome the last kilometer service barrier. With the convenient pickup points, "busy" and "cautious" consumers can flexibly choose the alternative delivery schemes of safety and reliability. This helps to maintain the service reputation of e-commerce enterprises, increase the shopping satisfaction and website loyalty.

If e-commerce enterprises develop the convenient pickup points, they can improve their price negotiation ability with their logistics service providers and obtain indirect benefits from cost control. However, due to the inaccurate cost information, e-commerce enterprises can not evaluate the benefits on cost control of convenient pickup points to express enterprises; the improvement of its negotiation ability is limited. Based on this, this paper argues that cost control is not the key motivation for e-commerce enterprises to develop convenient pickup points.

### 3.3 THIRD-PARTY PLATFORMS: EXPLANATIONS BASED ON PROFIT

The third party platform is a product of the labor division

specialization of logistics. It plays a unique role in the distribution process and its development should be supported by the industry chain. The third platform often takes the profit as the goal and may have some conflicts with partners. If the third party platform has a wide distribution network, its network assets and brand value will be increased, which lifts its game power in dealing with partners.

In China, the third-party platform often adopts the franchising mode to expand the service network, resulting in the non-optimistic comprehensive profit outlook. Subtracting the commission paid to the franchisees, the profits of the third-party platforms are really limited. In addition, the third-party platform is also influenced by the other developers, establishing the delicate relationship with them. On one hand, e-commerce enterprises or express enterprises, when developing convenient pickup points, adopt the free franchising strategies and invite the third-party platforms to join their own pickup service networks; on the other hand, the number of convenient pickup points established or controlled by these enterprises has exceed that of the third-party platform with high reputation; for small third-party platforms, the brand crisis is self-evident. Based on the above reasons, this paper holds that the third-party platform should consider its survival and development before pursuing the profits.

## 4 Channel organization of convenient pickup points

Channel organization includes decision making like development mode, operation mode and location plan which have great influence on the promotion effects of convenient pickup points.

### 4.1 DEVELOPMENT MODE

Chinese companies tend to independently develop convenient pickup points with the exclusive network service. The independent development can achieve the standardization and unification to ensure better quality of service. From a social perspective, the independent development is easy to cause the structural imbalances in the layout of pickup points, namely, the "cluster" deployment in the densely populated areas with other areas neglected. At the same time, due to the lack of coordination of developers, there are differences in business process and service function, which is not conducive to cultivating consumers' selection preference.

From the perspective of scale economy and customer convenience, establishing the public pickup service network can ensure the long-term interests. Therefore, it is essential to break the current pattern of independent development, promote the integration of resources and network and guide the development orientation of convenient pickup points to transfer from "enterprise centered" to "customer centered". In theory, the third-party platform has the complete openness, which is the ideal carrier to build public pickup service network. However, due to the poor comprehensive strength, the service network of third-party platforms in China presents the fragmentation characteristics, failing to cover the large and medium-sized cities and take the responsibilities of building the public pickup service

network. Therefore, it is inevitable to explore the joint development mode.

Joint development can share the costs and ensure the rapid expansion of service network. According to the composition structure of development alliance, the joint development can be further divided into horizontal joint development and cross-industry joint development. In accordance with the former analysis, e-commerce enterprises develop convenient pickup points to gain service strengths. Without considering the expansion speed, the independent development is beneficial to satisfy this requirement. Express enterprises aim to pursue cost control effects, so establishing the horizontal joint development alliance is obviously more advantageous; at the same time, they should take an active part in the cross-industry alliance to build the public pickup service network involving more enterprises and larger markets. Third-party platforms focus on profits, so the scale effect is significant for them. Horizontal joint development mode is preferred to rapidly expand the service network coverage. Although cross-industry joint development is more efficient, it can be seen from the cases of Shouhuobao and Cainiao Logistics Station that this model may have the brand weakening risk.

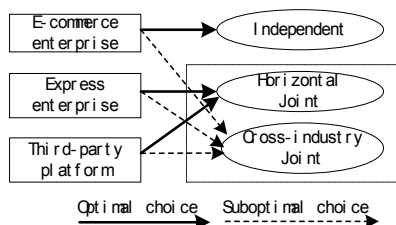


FIGURE 2 Development mode suggestions for convenient pickup points

4.2 OPERATION PATTERN

Based on the problem whether the pickup process involves assistance from others or not, the operation pattern of convenient pickup points can be divided into attended point and unattended point. Attended points are operated in the form of “shop-in-shop”. Developers authorize other institutions to execute the parcel delivery responsibilities, which is the common operation pattern of convenient pickup points at this phase. Unattended mode relies on the exclusive or shared inbox to complete the delivery procedure. But due to large initial investment and high management risk, the early deployment is not very well [13]. In recent years, with the equipment price falls, the unattended mode has stepped on the new stage. Relevant data show that, by the end of 2011, DHL has set 2500 Packstations in Germany with more than 2 million registered users. Since 2012, enterprises in China have initiated the unattended mode. For example, Jingdong Mall has set over 600 self-service equipments all over the country (as of July 2014) at an astonishing speed.

According to the cost calculation model built by Punakivi (2003) [14], initial investment and operating cost, unattended mode can be more cost-effective. Considering the self-service equipment standards established by the management department of China Post, the mass production cost of shared inbox is expected to decrease. Moreover, with the increase of the quantity of parcel delivered, the

interference of attended mode on channels will emerge, which may affect the cooperation intention of channels and further change their selection preference for the operation pattern of pickup points. So this paper believes, developer, with the financial support, can take the unattended operation pattern as the first choice

With the abundant capital, the large e-commerce enterprise has the capability to launch self-service equipment in large quantity. But the express enterprises may face different conditions. It may be difficult for them to deploy the unattended pickup points. Consequently, express enterprises should choose to cooperate with e-commerce enterprises; the former is responsible for daily management and maintenance functions and the later exploits the advantages of initial capital to the full. Basically, the third-party platforms are still in the start-up stage with the serious capital bottleneck. They can not blindly follow the unattended operation pattern unless they obtain the external support to avoid the deviation from the business rule of low-cost expansion.

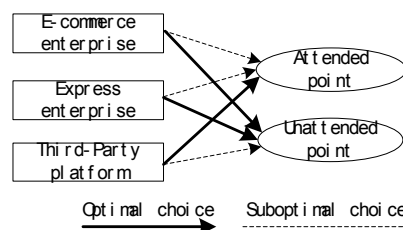


FIGURE 3 Operation pattern suggestions for convenient pickup points

4.3 CHANNEL LOCATION

Channel diversification is of the efficiency advantages, but it may produce management risks and raise the channel maintenance costs. Channel location should take into consideration factors like service time, safety assurance and economic investment, attaching much importance to the convenience awareness degree of customers. It is the key index of evaluating the channel rationality.

Young office workers, the core group of online shopping, are the key service objects of convenient pickup points. The location of convenient pickup points should ensure that it is easy for this group to pick up the parcel after work. Centering on the daily activities of young office workers, this paper holds that the optimal location should near the residence place or the working place. And the last choice is the places along the traffic line. Following this logic, the entrances of the community and the nearby business places are the most ideal locations. Areas near working places like entrances of office buildings and parking lots are also of certain selection value. Convenient pickup points should not be deployed along urban traffic line and near transportation junction unless the service objects prefer the private vehicles.

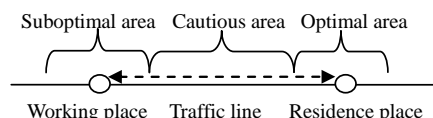


FIGURE 4 Channel location suggestions for convenient pickup points

## 5 Conclusion

Combining the e-commerce logistics industry environment in China, this paper discusses the development motivation of convenient pickup points. By building a motivation positioning model, it endeavors to analyze the differences of multiple motivations and reveals the key development motivation of various developers. Studies show, e-commerce enterprises intend to improve service quality through convenient pickup points, express enterprises aim to control the delivery cost of the last mile and the third-party platforms are in the pursuit of profit targets. Of course, if the industry environment changes, the above motivation model should be modified accordingly.

This paper also discusses the channel organization strategy of convenient pickup points and presents some suggestions. First, it explores the basic features of both development modes and proposes that e-commerce enterprises can preferably choose independent development mode while the others can actively explore the joint development mode to better build the public pickup service network. Then, it compares the features of both operation patterns. It believes that unattended mode represents the industry development direction. With sufficient capital, developers can take this mode as their first choices. Finally, it analyzes three potential channel location plans, putting forward that the entrance of residence place is ideal to

deploy convenient pickup points. The places near the working area also have the development value. And it is necessary to cautiously select the places along the traffic line.

This paper also has some weaknesses. On one hand, the industry practices and theoretical researches of convenient pickup points in China are still in the initial stage, so the proposed positioning model for key motivation is a theoretical structure lack of empirical support; and the research perspective only focuses on the current stage with limited application scope. On the other hand, for the sake of simplicity, discussing channel organization strategy ignores some related factors; for instance, it does not consider the influence mechanism of corporate management strategy, resulting in the imperfection of conclusions. In the following studies, it is necessary to break through the limits from research methods (like conducting case studies or questionnaires) and strengthen the analysis on consumer behaviors to provide sufficient decision-making basis to optimize the development plans of convenient pickup points.

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