Car sharing business

Development trends, business model and solutions
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About the author

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Executive summary

Since the early 1990’s, the emerging trend of short term car sharing and rentals have been on the rise in western countries, this trend continued and by 2010 entered the China market. As of the beginning of 2016, the number of car sharing companies with economics of scale have since reached above 30 and the total fleet in the market amounted to around 30,000. The overall market continues to grow rapidly at a rate of over 50%.

At the time car sharing entered the China market, new energy vehicles also started its initial market development. These vehicles are more cost efficient, particularly in terms of recharge expenses and maintenance, compared to traditional fuel vehicles. These companies embarked on promotion of new energy vehicles via the car sharing business model, hence the car sharing model is now entirely dominated by new energy cars. More than 95% of cars invested in the sharing market are new energy vehicles with only a few fuel vehicles (like Smart cars used in Daimler AG Car2go) seen in the market.

In pursuit of fulfilling the mission of selling and promoting new energy vehicles, a number of original equipment manufacturers (OEM) (SAIC, BAIC, GEELY, Daimler AG, Volkswagen) have begun their presence in the car sharing market. According to the fleet size of car sharing, 77% of automobiles nowadays come from car sharing companies with OEM backgrounds. Companies will mainly focus on first-tier cities and a few on second-tier cities, more companies are also going to start their arrangements in second-tier cities and enter third-tier cities in the next two years. E.g. EVCARD recently already has made arrangements in cities along the Shanghai-Nanjing railway, such as Nanjing and Jiangshan.
Drivers and constraints in China

Drivers

The macro environment for the development of car sharing remain highly positive in the coming few years, and it is expected to achieve breakthrough development before 2020. This paper presents future opportunities for car sharing from the following four aspects of society, consumers, laws and regulations and technology.

Society

The rapid growth of the Chinese economy and its constant proceeding of its urbanisation have resulted in a surge of mobile travel needs. Despite expectations from the Chinese government to address both logistical and environment issues, shortages of road resources currently have caused severe traffic and environment challenges.

As a new way of ride sharing, new energy car sharing could improve vehicle efficiency, promote the development of new energy vehicles and help to abate the environmental problems. Therefore, car sharing will continuously receive a positive welcome from the government and the support of relevant preferential policies.

Consumers

At present, a total of 250 million people nationwide own driver licenses, while only 180 million own a car (120 million private cars), so tens of millions of licensed citizens without a car are potential consumers for car sharing. In addition, the high penetration rate of smart phones in China (smart phone users already reached 560 million), have generated a mature mobile platform (mobile phone usage) for car sharing.

The advantage of car sharing is both in price and flexibility over taxi and tailored taxi. It is more attractive to consumers as it is easier to access than the traditional car rental market. Mainstream applications in the market charge 1 to 1.5RMB per kilometre plus about RMB 10 of hourly fees, or just take RMB 20 to 30 of hourly fees. Based on this calculation, it
costs less for a user with average trip distance of less than 5,600 km a year to choose car sharing than purchasing a new or used car.

The latest survey by Strategy& (PwC’s strategy consulting business) shows that consumers are increasingly willing to accept car sharing due to such advantages. 75% of existing car sharing users are willing to increase their use, and 77% of potential consumers are willing to consider choosing car sharing products.

**Laws and regulations**
Governments are also actively promoting the development of the sharing economy, including new energy vehicles. Those policies offer promising opportunities for car sharing.

**New energy vehicle policies**
The draft of Measures for Carbon Quota of New Energy Vehicle issued by the National Development and Reform Commission and Interim Measures for Integration Concurrent Management of Corporations’ Average Fuel Consumption and New Energy Vehicle (Draft for Public Comments) released by the Ministry of Industry and Information Technology of the People’s Republic of China have sent a strong policy signal that requests OEM to spare no effort in promotion and development of new energy vehicles. The newly issued 13th Five-Year Plan for the National Development of Strategic Emerging Industries further defined its goal of 2 million sales of new energy vehicles by 2020. And in order to boost sales, OEMs are going to have to actively expand the sales channels including car sharing.

Additionally Beijing and Shanghai recently introduced new policies for car-hailing service, and stipulated that only “registered permanent residence with local license” are able to operate in this area. As such operations of car-hailing service in these cities will be severely limited and encounter a drastic drop, bringing large opportunities of mobile travel needs for car sharing.

**Technology**
The convenience and all-facet experience of car sharing will be continuously improved due to the development of Internet technology and intelligent technology. New energy vehicles under rapid development are expected to substantially reduce the cost of electric vehicles (By calculation and estimation, battery cost will decrease by 40% to 1200RMB/KWH in 2020; meanwhile, the trip distance of electric vehicle will further increase, from the average level of 200km currently to 400km in 2025). The decline of electric vehicle costs will relieve stress on company’s operational costs,
and the rise of ride distance will improve consumers’ experience, increasing the working hour per vehicle.

The advancement of driverless technology will extend the development space for the car sharing market. After 2025, driverless technology is expected to provide automatic tailored taxi service for consumers, and help companies to achieve intelligent automatic dispatch, further reducing their operational costs.

**Constraints**

Although the current environment is friendly towards the development of car sharing companies’, challenges in earnings and operations will still need to be addressed.

**Earnings**

Currently, most of car sharing companies are in the red due to high running costs and lack of orders.

The cost of the company consists of three parts. Vehicle depreciation: the vehicle depreciation costs mainly dependent on the purchase costs, so companies with OEM backgrounds have certain advantages. Parking and dispatch costs: high parking cost, parking costs especially in the core areas of first-tier and second-tier cities can run in the thousands (per car per month), a major problem faced by car sharing companies. In addition, inefficiencies in layout also raises dispatch costs. Other operational costs: including labours, software and hardware, marketing, etc.

From the aspect of earnings, the constraint of network numbers and usage convenience have impaired order volume and frequency. In terms of pricing, car sharing companies will continue to offer discounts to initially attract customers, but overall earnings remain low due to inability to raise earnings per customer transaction and utilization frequency.
In conclusion, the majority of companies in the market are at running at a loss because of low earnings and high costs. Car sharing companies are now losing an average of 50MB to 120RMB per vehicle per day. Hence there is significant space for improvement on labour efficiency, purchase costs and dispatch and operational costs.

**Operational difficulties**
Major problems confronted by operators: lack of lease license and supply side bottlenecks in short-term scale expansion. Difficulties in vehicle maintenance: there is still room for the improvement to credibility of current consumers as the mess left behind in cars bring challenges to maintenance of vehicles; the time lag of notification for any illegal driving reports adds difficulty to management, and car sharing companies usually choose to pick up the tab considering the speed of development.

Consumers, on the other hand, are facing the following major problems. Inconvenience of car usage: due to the concentration of needs especially during peak times, supply is limited and results in difficult calling a car, while non-peak times result in an oversupply of cars are left unused, causing a low utilization efficiency. Inconvenience of pick-up and return: the network is not well distributed, which means users have to cover a long distance to pick up a car. There may be some sudden issues when returning the car, e.g. the parking space have been, hence users have to find more than two returning locations. Moreover, range anxiety and battery issue are quite common issues in new energy vehicles.
According to Strategy& analysis, the car sharing market will continue to grow at a rate of over 50% in the five years to come and it is conservatively estimated that by 2020 the volume of domestic B2C cars will exceed 150,000. Currently B2C businesses account for the main share of car sharing market while B2B businesses (for business users) only form a remarkably low proportion. As B2B businesses further expand in the future, the whole volume of shared cars is expected to surpass 170,000.

In terms of the present challenge, we are convinced that the business model of car sharing companies can be comprehensively enhanced through operating model, income model, product design, user selection and big data analysis, so as to secure the profitability and sustainable development of enterprises.

1. Operating model
We suggest that B2C businesses be based on A-to-B model and allow free parking in certain areas. Following the increase of networks, A-to-B model will be able to meet the requirements of most users on sharing cars, which will, for sure, contribute to the dominance of such model before 2020.

Additionally, we also suggest that enterprises running car-sharing businesses broaden their networks in special areas with significant and concentrated car sharing demand, and deliver free parking services for targeted high-value users in particular regions. Free parking are expected to bring better user experiences and decrease dispatching costs, it will be a significant supplement to the A-to-B model.

Based on an established B2C model, we recommend that car sharing companies explore B2B businesses. Although presently B2B business is in its early stage, we believe that it will soon grow at a rapid rate.
2. Income model
Income model can be upgraded by optimising price, enhancing consumer dependency and expanding sources of income.

- **Price optimisation.** Static pricing can be employed in the initial operational stage of car sharing enterprises. In this stage, in order to attract customers, we do not recommend demand based dynamic price adjustment (i.e. customer demand peaks during holidays), but instead to introduce dynamic pricing at a later stage on the back of a stable customer group and established customer habits. When entering into a mature period, such companies can adopt dynamic pricing, where the platform can adjust the price through big data analysis on different time period, locations and customer groups, thus enhancing the overall utilization efficiency and profitability.

- **Enhancement of customer dependency.** Car sharing enterprises need to develop customer loyalty through membership programs, preferential recharge, etc. in order to create consistent user experience and retain quality customers. For regular users, the system can secure their needs by means of reservation guarantee or targeted vehicle locking.

- **Expansion of income sources.** Car sharing companies can consider increasing income through the following channels: Advertisement, APP and car screen advertising; additional service fee, Wi-Fi, child seat; sales of auto parts and accessories, perfume and air purifier; big data service and revenue sharing through cooperation with 4S shops and insurance companies.

3. Product design
With NEV as the main offerings, companies can properly employ diversified types of cars in addition to existing mini-cars. In terms of product design, we suggest that car sharing companies connect such services with other transportation through APP or car screens, so as to provide the customers with integrated trip plans. For example, they can partner with online car-hailing businesses or bicycle sharing businesses and connect their back-end product data with each other. APP will not only work out the cost for car sharing, but will also offer comprehensive trip plans and the total transportation cost. This enables customers to book services provided by other suppliers through car sharing APPs and enjoy a unified discount package.
4. Targeted user selection and management
Car sharing users comprise of personal and corporate users. As for personal users, there are various context and scenarios for demand of car sharing services. Due to constraints of coverage, we will focus on the users of the greatest importance and the scenarios of their car sharing needs.

- **Short trips**: short trip covering 50-100km is the main scenario where car sharing is needed. Since car sharing can meet the requirements of vehicle-free family on privacy and flexibility, it was favoured by a large number of users.

- **Commuters travelling between communities**: such users are mainly short-distance commuters travelling between communities, shopping malls and public facilities following fixed routes. This kind of users usually need this service during concentrated time period, such as commuting time or weekends.

- **University students**: this kind of customers mainly include young, open minded people who are price sensitive. University towns are now often situated in the suburbs where public transportation is absent. Due to students’ strong demands on shopping and outing, there is huge business potential for car sharing companies to explore.

- **Residents of hotels**: they are mainly tourists from other out of town who are keen to head to the urban areas. Their destinations are always unified and routes are simple. Hotels also demonstrate strong will to provide value-added services for customers. For instance, Gofun has reached cooperation with Home Inn. to provide car sharing services for guests.

- **Business staffs**: business staffs primarily consist of salespeople, intermediaries, salesmen from SMEs, press photographers, etc. who need cars to travel between different places in one day and who usually carry large amounts of luggage. They choose car sharing service mainly due to the convenience, flexibility and sufficient space for luggage that it can deliver.
At present, corporate users (the B) of car sharing services mainly consist of government institutions and business parks/ science and technology enterprises. Since the enterprise market is still in its infancy there remains huge potential for car sharing companies on customer development.

After effectively identifying and targeting quality users, car sharing companies still need to strengthen user credit management to develop favourable habits among customers, thus decreasing maintenance costs and economic burden. In the meantime, car sharing companies can build their own customer evaluation system, or consider partnerships with credit rating companies, such as Credit Sesame. For customers that rarely incur accidents and that have good driving habits, discounts and credits can be provided as an incentive, and for customers who seriously violates regulations and guidance, punishment shall be implemented.

5. Big data analysis
Big data analysis is the core capability for car sharing companies in order to continuously upgrade operating efficiency and achieve profitability. Companies running car sharing businesses need to build their capabilities on data analysis at an early stage, and comprehensively apply big data analysis to network planning, car dispatching, customer rating and value-added service design.
Key factors to become a market leader

In the near future, car sharing market will see a growth rate of over 50%. In the rapidly changing market in order to become the market leader, car sharing companies should not only constantly upgrade their business models, but also pay attention to the following 4 factors.

1. Secure core resources as soon as possible.
Development of car sharing is never possible without licenses, parking lots, and charging facilities. However, due to resource scarcity, it is increasingly harder to acquire licenses, parking lots, and charging facilities, costs of which are getting higher and higher.

- **Licence sources**: a lease licence is required for car sharing companies to carry out their business. However, licences issued in first and second-tier cities every year are in limited number, which means car sharing companies should obtain licences as soon as possible. In cities like Beijing, it is increasingly hard to obtain licences for new energy vehicles.

- **Parking lots**: public parking lots in downtown areas are also of limited supply. In response to this, it is better for car sharing companies to establish long-term partnerships with relevant properties on interest-sharing basis.

- **Charging facilities**: shortage and lack of distribution of charging piles make it hard for car sharing companies to expand their business landscape. So it is recommended that car sharing companies to partner with leading enterprises engaged in operation of charging piles to expand business coverage for win-win results.
2. Reinforce cooperation with governments and other enterprises. Development of car sharing business is driven by multi-cooperation and resource integration which will also give a competitive edge for many enterprises.

- **Cooperation with governments** makes it possible for car sharing companies to enjoy preferential policies on land, parking lots and tax.

- **Cooperation with major enterprises and business parks** makes it possible for car sharing companies to carry out B2B, stabilise revenue and raise vehicle utilisation.

- **Cooperation with original equipment manufacturers** makes it possible for car sharing companies to obtain vehicles, accessories and discounts.

- **Cooperation with others** may makes it possible for car sharing companies to share resources with vehicle-life-related enterprises and offer overall service to customers.

3. **Master core technologies.** Car sharing companies should develop core technologies and abilities such as APP design, vehicle-mounted box design, big data calculation and analysis, etc. With vehicle-mounted boxes and APPs, car sharing companies can gather customer information, analyse big data and realise automatic dispatch in a more efficient manner and in pursuit of cost reduction as well as business expansion objectives.
4. Enhance operation competency.
The car sharing market is still at the early development stage, which means the market structure is still unclear. As such operation competency is a decisive factor for profitability and speed of development. It is recommended that car sharing companies establish an operation management and resource negotiation team with Internet company servicing background and continuously improve speed of decision making and executive ability.

Looking into the future of the market, Strategy& deems the period from 2017 to 2018 as a critical period for development of the car sharing business. In an emerging market, both original equipment manufacturers and Internet companies have either entered the market or currently planning to do so in the foreseeable future. Market competition will intensity and become more fierce, the implication is that once deployment for the B2C mode is complete and built in first-tier cities, car sharing companies will in the next 2 years deploy the B2B mode in second and third-tier cities. The car sharing market landscape will be more defined post 2018 with leading enterprises further expanding their market share and reinforcing their leading position through merger and acquisitions. Similar to the car-hailing market, the car sharing market will drive the formation of 3 to 4 leading enterprises dominating the national market. Currently, the market is still in the face of limited enterprise size and investment, which gives relevant companies the opportunity to take the lead in performing study and making overall arrangement to gain market shares. We also expect a lot from the sustainable and fruitful development of the car sharing which will become a significant part of mobile travel.
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