

Analysis on the Prospect of China's Automotive Aftermarket from the Perspective of Oil Market Development

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Abstract

China's car ownership continues to increase, oil capacity and consumption are gradually rising, and China's engine oil market continues to develop, and shows the characteristics: numerous brands, varied brands, foreign brands are more popular, and China's self-owned oil brands are on the rise, etc. Moreover, China's car aftermarket is developing rapidly, behind which is the increasing demand for related support. Facing the trillion-dollar car aftermarket, more and more capital/participants are entering the market. There are also many factors that affect the development of the car aftermarket, such as the amount of car ownership, service/product prices, consumers' income levels, consumer demand preferences, population factors, national policy factors, etc., these subjective and objective factors affect the engine oil market, they have also become the important factors that affect the development of the car aftermarket to some extent. If China's car aftermarket wants to develop rapidly, it needs to think about how to "take the essence and discard the dregs".

Keywords

Car Ownership; Engine Oil Market; Car Aftermarket; Influencing Factors; Development Prospect.

1. Current Situation of China's Engine Oil Market

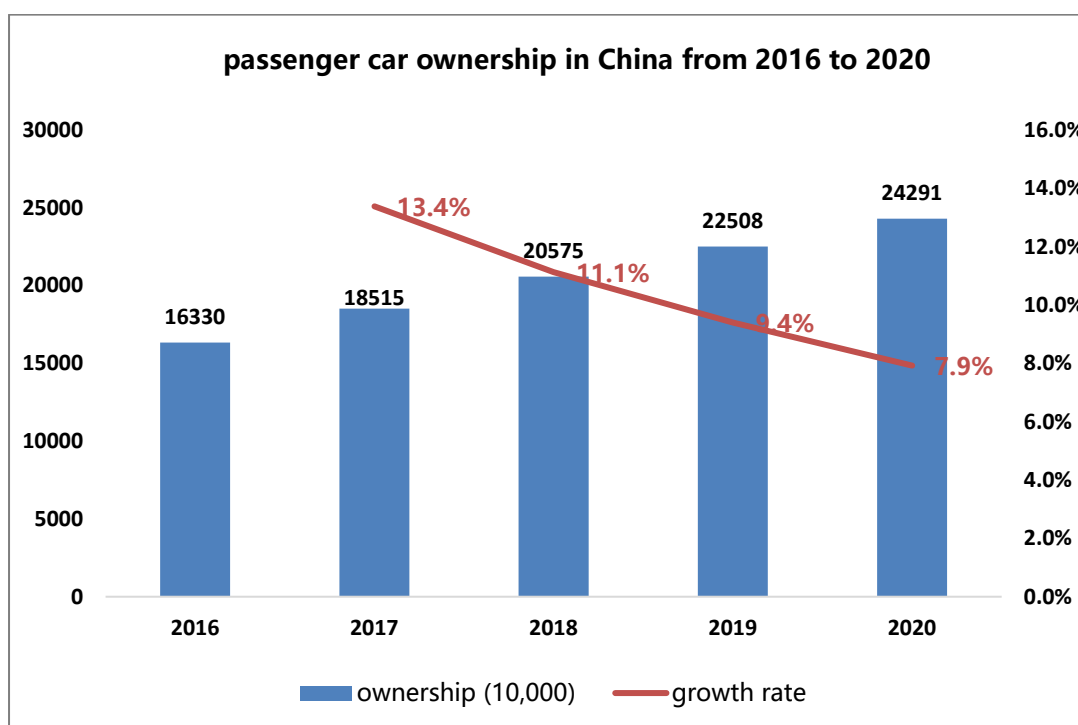


Fig 1. China's Passenger Car Ownership, Industry Information Network

(1) The number of car ownership continues to increase

With the rapid development of China's economy, it has now become the world's second largest economy. Moreover, residents' income is continuously growing, and residents' consumption has begun to upgrade, consumer groups such as generation Y and generation Z have entered the stage, and the car consumption market has also developed rapidly. China's car market is the largest in the world, and its production, sales and ownership have ranked first in the world for many years, by the end of 2021, China's car ownership will exceed 300 million (Fig.1).

(2) The production and consumption of engine oil gradually rise

Lubricant is commonly known as engine oil, which is a liquid or semi-solid lubricant used in various types of cars and mechanical equipment to reduce friction and protect machinery and processed parts. As the rigid demand products of car ownership, Engine oil product and other car supplies are also the "barometer" of the rapid development of the industry, and are closely related to the macro-economy, as well as the development of industries such as car, machinery, and transportation. At present, the engine oil market in China is developing rapidly, and the production of engine oil is increasing year by year, moreover, the consumption of engine oil is huge, and it also shows an increasing trend year by year (Fig.2 and Fig.3).

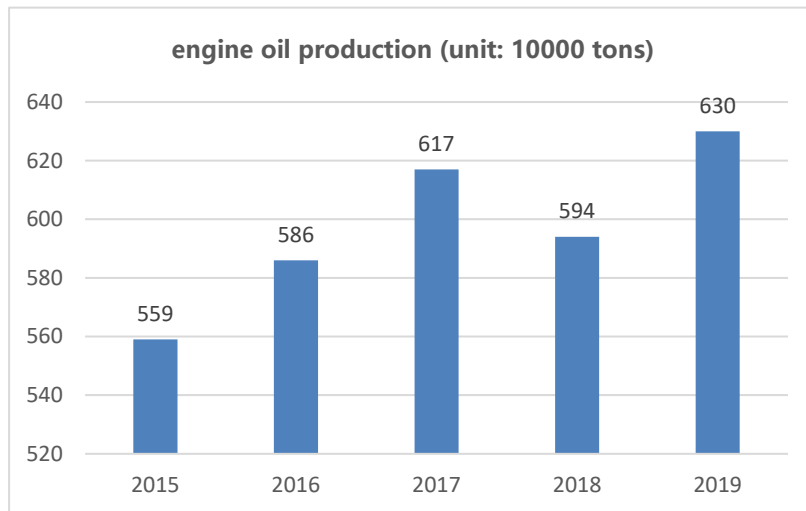


Fig 2. Data integration of "oil production"

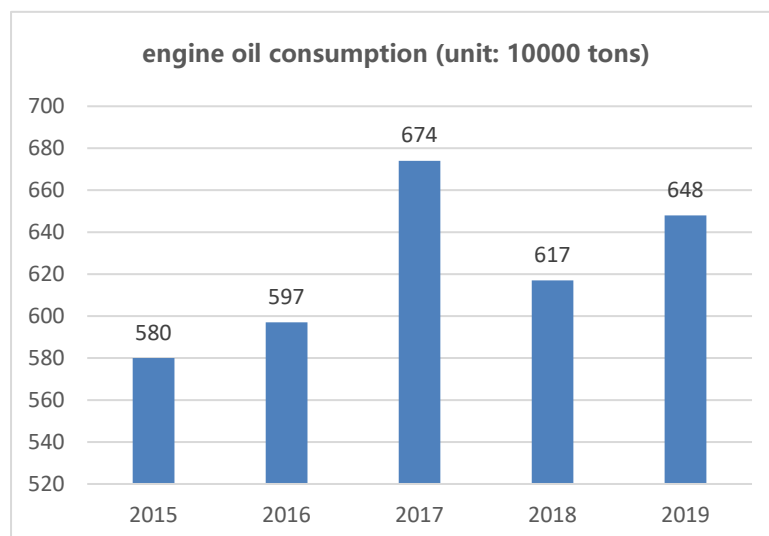


Fig 3. Data integration of "oil consumption", data are from prospective industry research institute

(3) Features of China's engine oil market

At present, China's engine oil market presents the following four features. First, there are many brands of engine oil—every year, the LubTop general evaluation list sponsored by China Lubricant Information Network (www.sinolub.com) and "Lubricant Market" magazine, co-sponsored by Frankfurt Exhibition (Beijing) Co., Ltd. (AMR Frankfurt Beijing Exhibition), supported and co-organized by industry authorities and many mainstream media will select the top ten lubricant brands of the year. In 2020, the top ten lubricant brands evaluated by LubTop are Mobil Lubricants, Shell Lubricants, Fuchs Lubricants, Lopal Lubricants, Total Lubricants, Monarch Lubricants, Copton Lubricants, Yuchai Petronas, Chevron Lubricants, Sineng Lubricants [1].

Second, there are various engine oil brands, there are not only the well-known big brands such as Meijiaqiao, as well as state-owned brands such as Great Wall and Kunlun, but also many unknown or niche brands such as Deman and Kaitu.

Third, foreign brands of lubricants are more popular among Chinese consumers, especially Mobil, Castrol, Shell and other brands (Fig.4). In 2019, in the sales volume of China's engine oil market, the three major brands of Mobil, Castrol, Shell accounted for 65.5%, sales of all other brands were less than these three brands. Of course, there are some reasons for this, for example, these brands have great brand influence, good brand reputation, complete product lines, stable product performance, as well as many advertisements and adequate marketing, etc.

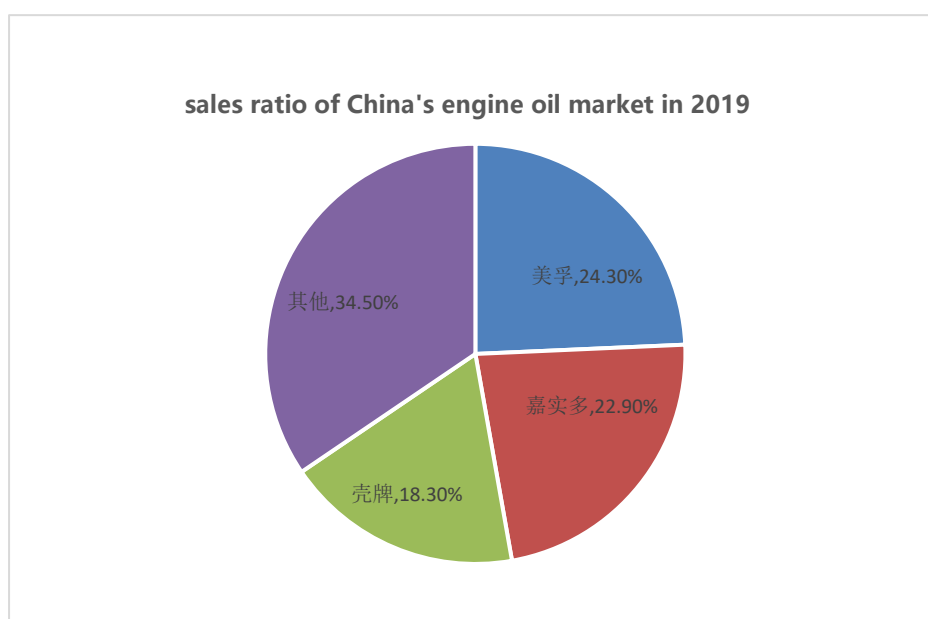


Fig 4. "Sales ratio of China's engine oil market in 2019", Industry Information Network

Fourth, China's lubricant brands are on the rise. In addition to the domestic super brands such as Great Wall and Kunlun, other independent brands have also emerged, such as Copton, Lopal, Zhonghua, Lipeng, Gaoke, Yuchai, Donghao, etc. [2] According to the information of the Lub TOP general evaluation list, in 2019, the top ten brands of lubricants in China are basically occupied by foreign brands, among which Mobil, Shell and Castrol lubricants occupy the top three of the "Top Ten Brands of China's Lubricants", however, in self-owned brands, Gaoke Lubricants, Lihon Lubricants and Sineng Lubricants occupy the top three positions in the "Top 10 Chinese Lubricant Self-Owned Brands" (Fig.5). In total, although foreign manufacturers have stronger competitiveness in our country's lubricant market, self-owned brands are gradually improving their competitiveness, and consumers' recognition is also gradually improving.

2019 Lubtop overall rating list: evaluation results of lubricant industry	
1. Mobil	1.Gaoke
2. Shell	2.Lihon
3. Castrol	3.Sineng
4. Total	4.Zhonghua
5. Fuchs	5. Tongli
6. Yuchai Petronas	6. Ynakelan
7. Lopal	7. Soty
8. Copton	8. Jorun
9. Monarch	9. Cofine
10. Chevron	10. Dochi

Fig 5. 2019 LubTop overall rating list: evaluation results of lubricant industry, LubTop overall rating list

2. Development Condition of China's Car Aftermarket

(1) The car aftermarket has been greatly developed

The definition of the car aftermarket is very broad, it is a collective name of a series of transaction activities caused various subsequent need services around the after-sales use and ownership link of the car in the process from sale to scrap, it includes many concepts, including car maintenance, car finance, car insurance, car modification, car rental, second-hand car, etc. As mentioned above, China's current passenger car market has been greatly developed due to various reasons, and the scale of China's car aftermarket is constantly expanding. According to public information, China's car aftermarket has experienced five development stages, namely: stage 1, the beginning of development from 1990 to 1996, stage 2, the high-speed development stage from 1997 to 2006, stage 3, the development rebalancing stage from 2007 to 2010, stage 4, the flat development stage from 2011 to 2015, stage 5, the Internet + development stage Internet+ development stage from 2016 to the present (namely the car aftermarket catches the east wind of Internet development). According to the data of China Car Dealers Association, in 2017, the scale of China's car aftermarket exceeded the trillion-yuan mark, reaching 1.07 trillion yuan, and it is increasing year by year in 2018, 2019, and 2020[3]. Judging from industry growth, the scale of the car aftermarket will increase to 1.33 trillion in 2019, and the scale of the car aftermarket will increase to 1 trillion + in 2020. Due to the epidemic, although the development of the car market in the first half of 2020 slowed down, the whole year has not been greatly affected.

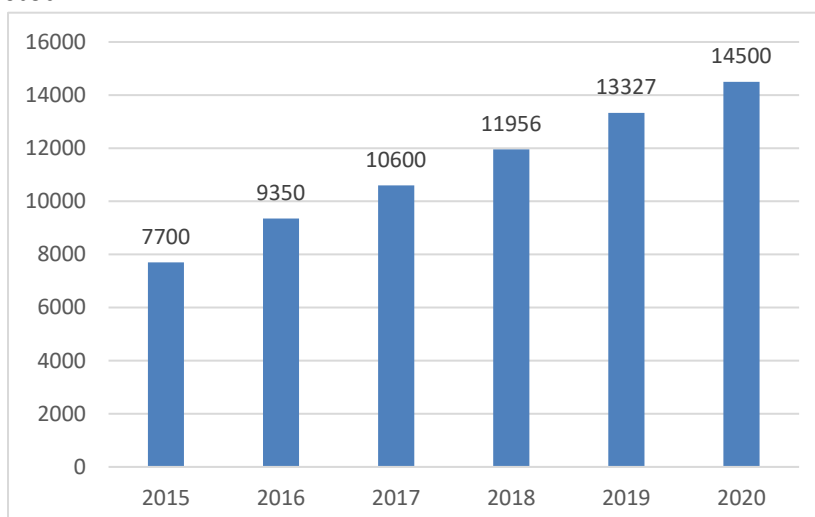


Fig 6. Development scale of China's car aftermarket (unit: 100 million yuan)

At present, the development of the car aftermarket shows the following features: first, the market is booming, and the serviceable market is relatively lagging behind, and the whole is in the stage of scattered (decentralized market), chaotic (disordered management), and small (small enterprise scale); second, the digital technology brought about by the development of the Internet has opened up a new model of post-market development; third, there are many investors, but there are lacks of enough supervision and unified standards (for example, parts and other supply chain markets are not standardized enough, dealer' purchase channels are chaotic); fourth, as consumers, the general public has not enjoyed the economical prices brought about by this booming development, and there are many phenomena such as opaque and non-standard prices.

(2) Behind the development of the aftermarket is the increasing demand of related supporting facilities

Behind the dual development of the car aftermarket and the Internet, the supporting needs for the aftermarket are constantly expanding. Judging from different fields, in the field of fuel vehicles, in the past two years, due to factors such as the epidemic and the shortage of chips, the overall sales of fuel vehicles are declining, in 2018, the overall sales of fuel vehicles was 21.23 million, in 2019 the overall sales of fuel vehicles was 19.41 million, in 2020, the overall sales of fuel vehicles were 17.79 million, and in 2021, the overall sales of fuel vehicles were 15 million. However, it is undeniable that the contribution of fuel vehicles to the car market is still the largest, its share is over 80%. Such a large share, the supporting market required is unquestioned.

In China's new energy vehicle market, there are three main energy types: pure electric vehicles, plug-in hybrid vehicles (including extended-range electric vehicles), and hybrid electric vehicles. Because of its interior structure, pure electric cars do not need an engine, so they do not need oil and oil filter. As far as plug-in hybrid vehicles, the fuel system and the motor system need to be maintained at the same time, then for the fuel system, it is necessary to replace the oil, maintain the belt and other maintenance. For hybrid electric vehicles, compared with traditional engines, dual-engine engines (two hybrid electric vehicles) exchange work back and forth, and the number of starts will inevitably increase in multiples, so it has higher requirements for engine oil quality, grade, and oil change mileage, etc. According to the internal data of China Car Information, the scale of the new energy vehicle maintenance market will reach nearly 4 billion in 2019, nearly 5 billion in 2021, and is expected to exceed 25 billion by 2025. Facing such a huge new energy vehicle maintenance market, whether it is the supply of spare parts, the participation of personnel and talents, the addition of technology, the supply of various equipment, the selection of stores and other venues, etc., such vehicle aftermarket support are predictable.

3. The Influence of Development of Engine Oil Market on China's Car Aftermarket

(1) Influencing factor of engine oil market

Facing the trillion-dollar car aftermarket, more and more capital and participants are entering the market. There are also many factors that affect the development of the car aftermarket, such as the amount of car ownership, the reasonable density of cars in a city/country (the ratio of cars and roads per capita), service/product prices, consumers' income levels, and consumers' demand preferences, population factors, national policy factors, etc., as well as engine oil as the accessories of cars, all affect the development of the car aftermarket from all aspects. This paper focuses on the influence of the development of the engine oil market on the car aftermarket. Engine oil supplies are one of the many supplies in the car, but it is undoubtedly a very important line, and it is the "blood" of the car. In order to understand the influence of the

development of the engine oil market on the whole car aftermarket, we must first understand the factors that affect the development of the engine oil market.

The oil market is affected by some factors: 1. engine oil brand, 2. product features/performance, 3. OEM certification, 4. recommendation, 5. brand support. Engine oil brand involves the country of the brand, brand image condition, and service behind the brand (especially service quality); product features/performance involve engine oil quality, viscosity condition, oil change mileage condition, grade condition, etc.; recommendation involves recommendation condition of dealers/oil brands/KOL/technicians; brand support mainly are promotions/offers/ gifts given by some brands.

Moreover, the engine oil market is influenced by the engine oil users and the use place/location [5]. As far as users are concerned, it is well known that the owners of plug-in hybrids and hybrid electric vehicle in ordinary gasoline vehicles and new energy vehicles need to use oil supplies, the personal characteristics of these consumers (such as gender, age, education background, work situation, income situation, etc.), personality situation, consumption outlook (consumption preference) and actual consumption conditions, vehicle ownership, use condition and other actual factors, all will affect their choice and use of engine oil products. Another user group is maintenance technicians. In the same way, the personal characteristics of this group of people (such as gender, age, education, etc.), their work place, income, training, career planning, etc., as well as their familiarity with engine oil products, usual use habits, recommendations habits, etc., will affect their choice of engine oil supplies.

As far as the use sites/places are concerned, in addition to personal DIY use (namely buy engine oil and change it yourself / ask an acquaintance to change it), there are many places where consumers use oil, for example, use/change engine oil in the 4S shop where people buy the car, change engine oil at O2O chain repair and maintenance shop (Tmall Cars, Tuhu Cars, Jidong Car Association, Damai Cars, Xiaoju Cars, etc.), chain maintenance stores (chain maintenance stores except O2O) (namely stores opened in different parts of the country, with unified store names, decoration, and management), independent maintenance shop (personal maintenance shop), quick maintenance beauty shop (namely quickly do well in repairs, simple maintenance and beauty work on the car. Including tire repair, oil filter replacement, spark plug replacement, brake pad replacement, brake oil addition, transmission oil replacement, etc.), as well as tire shops and other locations. In addition, the distance of these locations away from the user's residence will also affect their choice of oil store/address, and then indirectly affects their choice of different engine oil brands, grades, and quality. Judging from causality, these subjective and objective factors that affect the engine oil market, they have also become important factors affecting the development of the car aftermarket to some extent.

(2) The engine oil market directly or indirectly affects the development of the car aftermarket. At present, we are gradually changing from the front-end consumption of cars to the era of back-end consumption in the car aftermarket. Due to the huge population base in China and the low car ownership per capita, the car ownership will continue to increase with social progress in the future. What follows is the demand for car ancillary products, services, and supporting equipment. Therefore, aftermarket will develop, which put higher requirements for the maintenance industry, and the demand for engine oil will be "when the river rises, the boat floats high". A series of processes such as production, transportation, and sales of engine oil, and every link involved, will actually be related to the development of the aftermarket. If engine oil with high production, good sales, rapid and large market development, the car maintenance industry will develop greatly, and the car aftermarket will also develop. That is to say, the influence of the development of the oil market on the development of the car aftermarket is a positive promotion, or the relationship of mutual needs and mutual achievements.

It cannot be ignored that China's engine oil market is facing some problems at present, for example, the quality of oil is not pure enough, fake goods are circulating, the price of oil is uneven, the service of oil brands is not professional, and the sales channels are mixed. Moreover, the consumption idea of middle and low-end car consumers has not yet changed, which has a negative effect on the choice and use of engine oil; the engine oil market of new energy vehicles has not yet truly entered the blue ocean. Whether the engine oil market can move towards "high quality", "refinement" and "professionalization" in the future will directly affect the development of the car maintenance industry, namely, influence the development of the car aftermarket. This effect will be another influence, the negative influence.

4. Conclusion

The development of the car market can be seen from the data on the ownership data of passenger cars in China, and the demand for engine oil products in the fuel vehicle market and hybrid models in new energy vehicles has continued to expand, which has effectively expanded the oil market, and engine oil products are an important part of the car aftermarket. At present, China's engine oil market presents some uniqueness, and there are not a few factors affecting the rapid development of the engine oil market, the current oil market also reflects some problems. It can be said that the development of the engine oil market has a great impact on the development of China's car aftermarket. If China's car aftermarket wants to get long development, it is necessary to retain these positive effects and abandon the negative effects, and how to "take the essence and remove the dross" will become a topic for all aftermarket participants to think about.

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