Research on the Export Competitiveness of Chinese Smart Phones—Based on PEST Model

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Abstract: Chinese electronic information industry has developed rapidly in recent years, and the mobile phone industry has also risen rapidly. With the popularity of smart phones, China has become the world's largest smartphone market. In the new round of global competition of smart phone technology, Chinese smart phone has ushered in an unprecedented development opportunity. It is of practical significance to study the export competitiveness of smart phone. This paper analyzes the current situation of China's smartphone export through PEST analysis model, and points out the main problems existing in China's smartphone export. Finally, this paper puts forward relevant suggestions to improve the competitiveness of smartphone export.

Keywords: Chinese Smartphone Industry; International Competitiveness; PEST Analysis Model

1. Introduction

With the advent of the mobile Internet era, electronic information technology has become an important driving force for world economic development. In the 'Made in China 2025' strategic development plan, the Chinese government has made it clear that it will continue to contribute to the emerging technology industry. In recent years, China's smartphone industry has been constantly upgraded and adjusted, and its export situation has improved significantly. But advances in new technologies, such as screen folding and artificial intelligence, won't be enough to become new export growth hotspots until 5G becomes widespread globally. In this context, it is particularly important to study the export competitiveness of China's smart phones. This paper first uses PEST analysis model to study the current situation of China's smartphone export, points out relevant export problems, and finally puts forward suggestions to improve export competitiveness, so as to find new growth points for China's smartphone export.

2. Current export situation of smartphone development in China

This paper will use PEST analysis model to analyze the development status of Chinese smart phones from four aspects: economy, politics, social culture and technology. The PEST analysis model is shown in Figure 1.

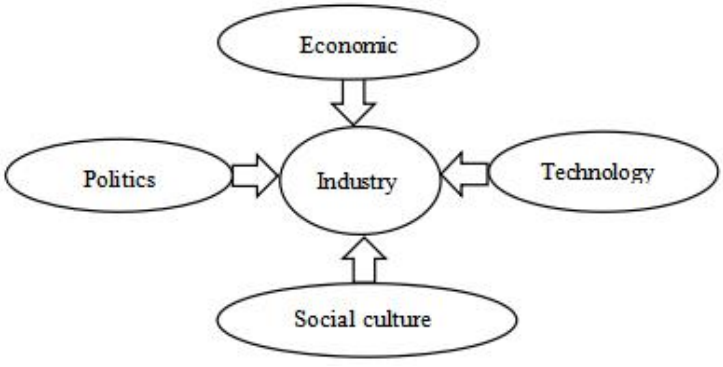

Figure 1 PEST analysis model.

2.1 Economic environment

After the financial crisis, global trade declined instead of increasing. According to WTO data, in the past decade, the growth rate of global trade in goods has lagged far behind that of the world economy. Domestically, statistics show that China's economic aggregate accounted for 14.39 percent of the world's total in 2015, up from 9.21 percent in 2010. By 2022, China's economy will account for about one-fifth of the world's total. Therefore, China is an economic giant. China's GDP is still growing. In this new historical stage of China's economic transformation, China has also become the world's largest mobile communication market. As more and more Chinese consumers start to use smartphones, the Chinese smartphone market has great potential for competition. With the continuous growth of China's total GDP, more hard technologies of smart phones will be ready to try, which lays a solid economic foundation for improving the international competitiveness of Chinese smart phones.

2.2 Political and legal environment

The pace of global informatization, modernization and industrialization has never stopped. In 2022, the Internet and smart terminals have accelerated into the 5G era. Countries have made full use of information technology to drive industrialization and achieved high-quality leapfrog development. The Chinese government has heavily supported the development of domestic phones as a matter of policy, investing billions of renminbi in research and development. So far, the market access of foreign mobile phone brands in China has entered the stage of full opening-up, and the pace of regional economic integration and economic globalization is getting faster, while the signing of RCEP in 2020, as an accelerator of goods, services and investment liberalization, more favorable market access has also brought huge business opportunities for smartphone companies in the region.

2.3 Socio-cultural environment

With the acceleration of technological innovation, the use of smart phones has become quite common. According to Newzoo's latest report, the global smartphone user base reached 6.648 billion in 2022. The emergence of contemporary smart phones has a profound impact on contemporary people's office, consumption, social interaction, entertainment and other aspects. On the entertainment front, smartphone users worldwide downloaded 134.4 billion apps in 2021, according to Anniel. In the social aspect, the social function of smart phone has replaced the traditional mail, landline, fax machine, and become the main social tool between people. In the workplace, most smartphones come with work software and even replace office computers. It can be seen that in the social and cultural environment with the increasing demand of smartphone users, the competition among global smartphone brands is becoming increasingly fierce.

2.4 Technical environment

The universal technology in the era of Industry 4.0 is 5G technology. In the document "Promoting the Better and Faster Development of 5G", the Chinese government also clearly puts the performance test of millimeter wave equipment and the increase of the salary cost of R&D personnel as the focus of work, so that 5G millimeter wave and RF terminal technology is developing at full speed. On the one hand, 5G millimeter wave technology will bring a revolutionary upgrade of user experience, improve the level of information intelligence, and intensify the competition among global smartphone brands. On the other hand, the upgrading of 5G commercial terminals will drive the digital transformation of hundreds of industries. Chinese manufacturers will continue to optimize and innovate their own technologies to enhance their technological competitiveness.

3. Export problems of Chinese smartphone industry

3.1 Lack of core technology

Lack of core professional technology is the difficult problem of our smart phone industry. First of all, there is still a big gap between domestic chips and foreign advanced chips in quality and performance. In addition, the domestic smartphone industry has no

independently developed operating system, and generally adopts and relies on the general Android operating system developed by Google. If Google refuses to supply the smartphone or increases its fees, the domestic smartphone industry will suffer a devastating blow.

3.2 Serious brand homogenization

Domestic smartphones are so homogeneous that there is no way to tell them apart from their logos. From the touch screen to the size of the phone, from the thickness of the phone to the operating system, from the color of the phone to the material, the domestic smartphone brands are almost identical. The homogeneity of mobile phone products has reduced the competitiveness of domestic smartphone companies, making it difficult for domestic smartphone companies to open a gap with their competitors in pricing.

3.3 Backward marketing methods

There are currently three types of smartphone sales in China: online sales represented by Xiaomi phones, offline sales represented by Meizu and Nitze mobile phone factory stores, and direct sales represented by physical stores of ZTE and Lenovo. Xiaomi's model saves money and costs, but it does not appeal to middle-aged and elderly customers who do not know how to operate the Internet. The Meizu model can reduce the cost of opening a store, but it is not conducive to improving customer satisfaction and brand loyalty. The physical store model can improve customer satisfaction and awareness, but it will increase the cost of manufacturing and selling the phone. Creating a new marketing model combining online and offline has become the key for domestic smart phone manufacturers to break through.

4. Suggestions

4.1 Developing core technologies

Smartphone development in China began in 2008. In recent years, Chinese smartphone companies have slowly begun to gain experience. China's smartphone industry should give full play to its comparative advantages and master core technologies such as smartphone chips, processors, screens, lens sets and metal casings with 5G and artificial intelligence algorithms as the breakthrough points. In addition, contemporary consumers pay more attention to the camera function of the phone. Chinese manufacturers should improve the shooting function of mobile phones and put more effort into the field of smart phone light perception. China's smartphone industry should strengthen core technology certification to protect its market competition potential, in view of the insufficient protection of core technology.

4.2 Optimize brand image

The global smartphone market has become saturated and mature, while the brand image of Chinese smartphones has not fully reached the international standard. However, we have also noticed that China's emerging mobile phone brands, such as Xiaomi, are attracting more consumers with their more intelligent and concise appearance. Besides Xiaomi, Huawei and Lenovo have also increased consumers' willingness to buy in recent years. In addition, Xiaomi and Huawei rank very high in value for money among potential consumers. In recent years, the growth of smart phone market has entered a plateau period, and brand manufacturers have adopted the strategy of low price to seize market share. High-end smartphones will no longer dominate the market, and this is a good time for Chinese smartphones to establish international brands. Chinese smartphone brands should stick to their brand image, maintain consistent high quality and high technology standards, and improve their competitiveness.

4.3 Improving marketing strategies

After 2017, the smartphone industry experienced rapid digestion and a dizzying array of new marketing methods. First, Chinese manufacturers can market by sending promotional videos and pictures to consumers. In addition, in the current social environment, media coverage is particularly important for brand promotion. Companies can use media coverage to increase consumer reading of

product information. At the same time, cross-border marketing can also improve brand marketing to some extent. Finally, the use of spokesperson marketing and short video marketing can better keep up with the current trend, allowing consumers to easily access the information of smart brands in their spare time. The combination of entertainment and brand marketing is a good strategy for Chinese smart phone brand promotion.

References

[1] Xiong AJ. (2007). Chinese mobile phone market analysis and competitive strategy research. Chinese industrial economy, no 10, pp. 128-134.

[2] Pei CH, Wang L. (2002). On the theoretical concept and analysis method of international competitiveness. Chinese industrial economy, no. 4, pp. 8-13.

[3] Freeman C. (2004). Technological infrastructure and international competitiveness. Industrial and Corporate Change, no. 13, pp. 5-7.

[4] Jiao FP, Ge BS. (2008). Comprehensive measurement of international competitiveness of Chinese telecom industry based on principal component analysis method. Industrial technical economy, no 27, pp. 131-133.

[5] Shtal TV., Zmieieva GO. (2016). Systematization of the Methods for Evaluating the International Competitiveness of Enterprise. Bìznes Inform, no.1, pp. 17-21.

[6] Bu YF. (2010). Evaluation of International Competitiveness of China's high-tech Industries: Theory, Method and Empirical Research. Annals of Social Sciences, no. 6, pp. 67-71.

[7] Du ZH. (2005). The fission and extension of domestic mobile phone industry chain. Mobile communication, no 10, pp. 45-48.