

# The Impact of Innovation on Competitiveness in Smartphone Industry in China

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## ABSTRACT

Smartphone is considered as a common trend in this globalization era. Everyone wishes to have his / her own smartphone as it is making everyone's life easier. Today, there are four major domestic smartphone brands that dominate the smartphone segment in China, which are Huawei, Vivo, Oppo, and Xiaomi, in which Xiaomi smartphone founded by Lei Jun was ranked at the Top-25 in Beijing which accounted for 6.8 billion. This study strived to analyse the impact of innovation on the competitiveness among smartphone manufacturers in Chinese context. Grounded by Porter's Five Forces Framework, this study had assessed the five primary factors, which are the bargaining power of buyers, bargaining power of suppliers, threat of new entrants, threat of substitutes, and rivalry among competitors.

**Keywords:** Smartphones, Industry Competition, China, Porter's Five Forces Model, Innovation

## 1. INTRODUCTION

Smartphone is an essential mobile device that allows user to do things more than just make phone calls as well as text messages [1]. [2] mentioned that almost half of the adult population in the world has their own smartphones. Importantly, the number of smartphone users are getting larger day by day; also, the number is predicted to reach 3.8 billions in [3]. A smartphone consists of multiple functions similar to what user might expected from a computer and perform the way those regular computers can do [4].

Since the end of last decade, the Chinese smartphone manufacturing industry has emerged achieving success in their local market and slowly move towards the international markets [5]. [6] acknowledged that China is considered as latecomer into 3G mobile business markets. In fact, China has given up the investment in 3G, and looked into 4G era. Grounded by Porter's Five Forces Model, this study would like to study the impact of innovation on the competitiveness of smartphone industry in China.

## 2. LITERATURE REVIEW

### 2.1 Porter's Five Forces Model

The concept of Porter's five forces model was developed to measure the competitiveness and attractiveness of a certain market. Porter's five forces model consists of a process of monitoring and scanning the environment as well as acquiring the competitive intelligence on a certain industry with the use of this model internationally [7]. This model helps to recognize the power lies in a given business environment [8]. This model is useful because when a firm

realizes the environmental and industry forces that could adversely affect its profitability, the firm will be able to restructure its business strategy accordingly.

The framework assesses the bargaining power of buyers, bargaining power of suppliers, threat of new entrants, threat of substitutes, and rivalry among competitors. Figure 1 illustrates the all five forces introduced by Michael Porter. This theory assumes the stronger the competitive forces in the industry, the lesser the profit is [9]. Firms instead could decide to take advantages of a strong position and prevent to take wrong steps in the future [10].



**Figure 1:** Porter's Five Forces Framework  
Source: Fern Fort University (2019) [11]

## 3. METHODOLOGY

The analysis in this research paper aimed to assess the impact of innovation on the competitiveness among smartphone manufacturers in Beijing through the in-depth analysis of the five underlying forces including the threat of

new entrance, threat of substitutes, bargaining power of suppliers and buyers, and rivalry among existing competitors in smartphone industry. It is a powerful tool in understanding whether smartphone has potential to be profitable in the business environment [12].

Porter's Five Forces Framework provides a reason that the research on smartphone industry in China is beneficial, because since there is a lot of smartphone brands such as Huawei, Oppo, Vivo, and others are competing with each other, this can help analyse what strategic plan that the smartphone manufacturer will implement and execute in terms of innovation in order to maintain its competitive position in the industry.

#### 4. FINDINGS & CONCLUSIONS

This research findings revealed that the competition in smartphone industry in China is high. In terms of the bargaining power of buyers, generally, there are two categories of smartphone buyer in Chinese market. The first category is individual users who are more price-sensitive to purchase smartphone as well as the monthly data plan. The second category are business users who purchase smartphone with the intention to deploy wireless applications. Of course, the business users will be less price-sensitive than those of individual users [13]. Their purchase intention on buying smartphone depends on whether the smartphone will provide solutions that are more cost-efficient to enhance the organization's productivity and profitability [14]. The switching costs of users for individual and business users are high. This is because once the end-users have the knowledge on using the smartphone's operating system and applications, then they are not likely to switch from one to another in order to learn a new process.

For the bargaining power of suppliers, the operating system, chipset, and other related components of smartphones in China are seeming to be the global leader in respective grounds. The key providers of chipset include Intel, ARM, Samsung, and Qualcomm [15]. The concentration of Chinese 3G chipset market is important because currently the market leader of the CDMA technology is Qualcomm, which includes WCDMA, CDMA 2000 EV-DO, and TD-SCDMA [16]. The bargaining power of suppliers is considered high for OS, because the OS of smartphone in China was highly focused, and one of the operators, China Mobile holds the capability to integrate the whole value chain [17].

Next, the threat of new entrants for smartphone industry in China is considered low. The trend of smartphone innovation in the specialization along the value chain has caused low barriers-to-entry in the sense of capital and technology. New entrants might face a proprietary operating system as a barrier for them.

Other than that, there are still a lot of market barriers to entry for those new entrants such as learning-by-doing. For instance, in China, the large companies in smartphone industry have beyond the new comers that comes from the PC industry like Dell and Acer. This is because these

companies in the market development and technology have moved down the learning curve [18].

In terms of the threats of substitutes, computer is the main substitute product for smartphone. [19] claimed that the threat of substitute product is very low because now the smartphone can have multi-functionality, applications, and services than a computer can do. Another direct product substitutions includes tablet PC. In fact, smartphone and tablet PC are similar to each other in terms of the features and functionalities. However, the main objective of smartphone is to enable the users to communicate with others in many ways [20]. For example, voice calling, email, video calling, and instant messaging are more suitable for smartphone than for a tablet PC. Tablet PC is more concentrating on computing because it has a large screen that can be displayed to customers to enjoy a wide eyesight [21]. Not only that, tablet PC also concentrates on the entertainment aspect such as gaming [22].

Lastly, the rivalry among existing competitors is high in smartphone industry in China. The crucial key driver of innovation is to maintain a competitive edge in many successful businesses [23]. Majority of the smartphone manufacturers have executed a persistent cycle of innovation that empowers as a strategy to boost their market share and profitability, to strengthen their brand name, and to have the technological know-how more than their rivals do. There is a lot of smartphone brands in China and it forces each brand to be more competitive in order to capture more market share and to compete with its competitors. In addition, besides the renowned international smartphone brands, there are also many famous and strong domestic brands including Huawei, Vivo, Oppo, and Xiaomi. Hence, the rivalry among existing competitors in Chinese market is relatively high.

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