

# **Analysis of marketing strategies and financial mode for smart home products of Xiaomi Corporation based on Chinese market**

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**Abstract:** Along with the rapid development of IoT, smart home becomes an indispensable part in many high tech companies. Strong support and motivation is given by the government as smart home industry follows the global trend of eco-friendly and low-carbon. Although many consumers are unaware of the convenience and significance of smart home, with its increasing widespread popularity, smart home industry will have a long-term growth in the future. Xiaomi, as one of the leading mobile brands in China, launched a variety of smart home devices in 2013-2014, gradually takes up the most market share in China, The marketing strategies including cost lead strategy, differentiation strategy along with its strategic cooperation will be detailed analyzed in this paper. To better understand its success in Chinese market, Xiaomi's VIE ownership structure and its unique dual-layer equity structure will be evaluated in the second part. Possible suggestions and recommendations to minimize the risks of Xiaomi will be provided at the end of this paper.

## **1. Introduction**

The world "smart" is widely considered as mean intelligence with its various applications. One of the emerging technologies, smart home service, is a representative player in Internet of Things area. (Yang & Ma, 2018). An automated system in which smartphone application, web portal and house devices are interconnected to enable house equipment to be remote controllable. M Rastegar indicates that the intelligence and simplicity of smart home follows the trend of future consumption. The global market scale of smart home will become larger and larger., with revenue of 78,952.08 million U.S dollars in 2020.(Particularly, China is predicted to be the largest smart home market around the world. ( Rastegar, Fotuhi-Firuzabad, & Aminifar , 2017) The "New-type Urbanization plan" emphasizes the Chinese government's focus on new-type, smart and humanities city construction from 2014-2020, leading to rapid growth of smart home services.

Xiaomi is a fast -growing company which successfully entered the global fiercely competitive smartphone market with Android-based operating system. Xiaomi transferred into the world's largest consumer Internet of things firm by 2020 with its revenue over \$37 billion and sales volume surpassing 210 million. (Yang, Ma and Chattopadhyay, 2021) Xiaomi has made efforts on products differentiation while practicing respect for customers perspectives through a customer product development platform in which customers can express their opinions.

Copious research papers are either experiment-based or solely focused on the development of technology, while the unique marketing strategies of Xiaomi based on Chinese market and the financial mode of Xiaomi will be mainly examined in this paper. The methodologies used for strategies analysis are PEST models and SWOT. The second part will be an evaluation of financial mode. Theories included for financial analysis are pecking order theory, principal agent theory, incomplete contract theory, incentive compatibility theory and growth theory. Possible suggestions will be provided for Xiaomi company to minimize risks. Meanwhile, considering about its guiding role in Chinese high-tech industry, the analysis given in this paper will be a valuable reference for other emerging high-tech companies. Besides, customers will be given an objective view of Xiaomi smart home at the end of this paper which helps them to make wiser determination.

## **2. Marketing analysis**

### **2.1 Smart home industry in China**

With the release of more smart home brands, smart home market has large potential to grow. Luckily, the outbreak of covid-19 has relatively small effects on smart home market as it not a necessity. (Chung and Ong, 2017) because smart home is a high-end product rather than a necessity under today's national living standards. In terms of smart home market, however, it still has great potential in China, with a market size accounted over 170 billion RMB in 2020. (National Bureau of Statistic of China, 2020) the general goal of smart home brands is to increase the number of innovations in 2021 even through the global economy is affected by covid-19.

### **2.2 PEST-Macroeconomic level**

#### **2.2.1 Politics**

Chinese government encourages the development of smart home market. Smart home industry was first included in the report of state council in 2016. The report admits the role of smart home industry as an accelerator in the economy, which follows the upgrading consumption trend. In December 2017, the national ministry of industry and information Technology released the “three-year action plan of promoting the development of the new artificial intelligence” where the government proposed to support the application of technologies like machine learning technology in smart home products. It also mentions the action of setting up an evaluation system on smart home, model projects followed by effective promotion. The promulgation of the document “made in China 2025” is the foundation for smart home industry, which sets up clear targets and strategic requirements for Chinese smart manufactures. As a significant application of IOT, smart home industry has been positively support by the government.

#### **2.2.2 Environment**

With rapid economic development, the disposable income of Chinese consumers drastically increases, followed by a rise in total consumption. Although the index for consumer confidence in China plunges in the beginning of 2020 due to the uncertainty under the coronavirus pandemic, it jumps back to its former level in the second half of 2020, showing a positive trend. The average consumption expenditure per household in Chinese urban and rural regions keep an upward tendency with a total value amounted to 50,788 yuan in 2019. (National Bureau of statistic of China, 2021) Thus it can be deduced that stronger consumer purchasing power contribute to higher revenue. The rising sales revenue from real estate sold in China amounts to around 16 trillion yuan, which benefits the development of smart home industry as they are interdependent. (National Bureau of statistic of China, 2020) The new residential buildings will directly connect with the entire appliance of smart home.

#### **2.2.3 Society**

The penetration rate of mobile phone soars. The majority get used to the Internet with 98.3% citizens accessed via mobile phone in 2018. Even though most customers from rural area value the price most, yet middle-class customers give priority of products with high quality and multiple functions, which demonstrates better acceptance rate on high-tech and smart products. In the long run, the control function will be simplified with the combination of artificial intelligence which can automatically learn humans' behaviors, memorize and thus operate by themselves according to humans' voice, simple gesture, or facial expressions. Possibly, the needs of older generation to use smart home devices may increase gradually, expanding the market for smart home industry.

#### **2.2.4 Technology**

With numerous national supportive policies, key technology of Xiaomi, including network technology, IOT technology, artificial intelligence experiences a rapid growth. Advances in technology increases productivity and efficiency, which save costs for companies. But as software may become obsolete quicker, costs on upgrading are needed. Meanwhile, the introduction of 5G rose

to prominence in 2019, which gives high-tech brands with 5G interconnectivity an edge over rivals. With the rapid development of 5G infrastructure and high penetration rate of mobile phone, the connection between the smart home system on mobile phones developed by home appliance firms and smart home devices can be better related, creating more opportunities for companies like Xiaomi, Haier and Huawei in China. With dominant improvement on internet infrastructure, the Charging fees from carriers gradually decreases, which stimulate more demand on the internet.

## **2.3 SWOT analysis- Microeconomic level**

### **2.3.1 Strength**

#### **2.3.1.1 Well-known brand**

Xiaomi is a well-known brand with a good reputation for building high-quality products and affordable price. Xiaomi uses Lei Jun as the product spokesperson to achieve personal brand implantation. The struggling and successful experience of Lei Jun gives strong motivations to Chinese younger generation, which makes Xiaomi attractive to them. As such, the positive influence of Lei Jun strengthens the brand image of Xiaomi (Xiao, Tong, Chen, and Wu, 2017).

#### **2.3.1.2 Loyal customers**

Xiaomi also has a large group of loyal customers. With its unique design and high-tech products with high quality, Xiaomi accumulates enormous customers group with a rapidly growing speed. Customers of Xiaomi have a special name called “fans of MI ” who are full of enthusiasm about Xiaomi and usually willing to purchase its products. Due to affordable price, Xiaomi is considered as a cost-effective brand by a wide range of customers. The enormous smartphone market of Xiaomi makes it easier to turn customers of Xiaomi smart phone into customers of Xiaomi smart home.

#### **2.3.1.3 Strategic cooperation partners**

Xiaomi has numerous strategic cooperation partners such as Meidi and Thunder. In terms of the cooperation of Meidi, in December 2014, Meidi forms a strategic cooperation with Xiaomi, providing 1.29% share for Xiaomi. (Midea Announces a Strategic Cooperation with Xiaomi, 2014) Meidi is a well-established brand in home appliance industry, but it is weaker in smart home market compared with brands like Samsung and Xiaomi. Meidi’s great strength in production, management and supply chain logistics largely fills Xiaomi’s weaknesses. For Xiaomi, a brand with a large number of loyal customers, has advantageous in marketing, capital operation and e-commerce platform. Since both Xiaomi and Meidi use their own APP, product connection still need to be enhanced. Additionally, for the cooperation of Thunder, Xiaomi releases star domain CDN with Thunder, trying to get a foothold in the cloud service space. Xiaomi uses CDN as its cloud system, integrating its smart terminal devices into the cloud service systems so as to increase competitiveness. Thunder has accumulated 4 million internet users who can potentially become customers of Xiaomi as well.

### **2.3.2 Weakness**

#### **2.3.2.1 A latter entrant of global market**

Online sales is the initial way of Xiaomi to enter the market while the offline sales is still needed to grow compared with its competitors like Haier and Huawei. As a latter entrant of global market, the intelligence level of Xiaomi technology should be caught up with its rivals. The expansion to offline sales is required for Xiaomi smart home since customer experience must be provided in offline stores.

#### **2.3.2.2 Price sensitive customers**

In terms of customers, the majority are younger generation who is price sensitive. Most of Xiaomi’s domestic users are the younger from tier-three city which is a low-end market. Thus, compared with its rivals like Apple and Huawei with their high-end offering, it is more difficult for Xiaomi to attract new segments of customers. Due to promotion priority on Xiaomi smart phone rather than smart home, along with insufficient amount of smart home products, most customers are ignorant to Xiaomi smart

home. Xiaomi still need to increase the level of intelligence for its products and strength its promotion on smart home to attract consumers with high disposable income.

### **2.3.3 Opportunity**

The rising disposable incomes in China can be the driver for potential future growth of smart home market. Consumers habits have changed dramatically in China due to the rise in disposable income and the prevalence of technology. The change of customers habits creates larger growth area for online shopping, which wins more customers over from brick-and mortar stores for Xiaomi. Xiaomi has large investment in product development and strong competitiveness in customer loyalty. Additionally, due to trade war between the USA and China, extra taxes are added on smart home devices of foreign companies like apple. Meanwhile, Chinese customers become quite patriotic and tend to be loyal to domestic brand.

### **2.3.4 Threat**

**The market competition of Xiaomi is fierce.** Xiaomi is working hard to stand out in the fierce smart home competitive market. The main competitors of Xiaomi are Huawei, Haier, Apple and Samsung. Smart speaker, as one of the strongest segments, in particular, shows that famous Chinese brand like Alibaba will be a potential threat to Xiaomi. In the first quarter of 2020, Alibaba takes up the largest smart speaker market share in China, accounting for over 35.2 percent of sales volume over total sales of 10 million units, which is 4.8 percent higher than the second higher brand Xiaomi ( Qian Zhan Forward intelligence, 2020). With the supportive policies and large market in smart home, high-tech companies and internet companies with advance in wireless communication and robot learning technique may potentially enter the market in the same way as Xiaomi does.

## **2.4 Strategic management--Differentiation strategy**

### **2.4.1 High cost performance**

To further differentiates its products, Xiaomi set up moderate prices. For instance, its smart rice cooker and smart purifier is attractive with a price less than one thousand yuan. And the price of its smart ring is less than one hundred yuan, which is affordable for normal customers with average salary. Compared with the same type of products of other brands, it has high cost performance.

### **2.4.2 Cost lead strategy**

Firstly, to reduce cost in the supply sector, Xiaomi Smart home seriously selects suppliers by creating an evaluation system to verify product providers with the consideration of production capacity, delivery price, business background, and product price. Xiaomi will select new alternative supplier if the original supplier fails in the evaluation to ensure the daily operation. In addition, by outsourcing its non-core products like electronics products, Xiaomi can thus concentrate on producing smartphone with better quality. Via the affiliation of venture companies, Xiaomi entrusts its production with low prices. ( Xiang, 2002)

In terms of marketing, with the promotion on Chinese social network like WeChat and Sina Weibo, Xiaomi's can retain its customers base and reduce its marketing expenses by 2-5% in China. (Panigrahi, 2019)

Furthermore, Xiaomi establishes an online distribution network that directly sells product through its official website namely mi.com to reduce the expenses on inventory and distribution. As a result, Xiaomi was able to increase price competitiveness with a reduction of distribution expanses by 30%. (Panigrahi,2019) What Xiaomi needs to consider more is to ensure high quality product while minimizing the distribution costs.

### **3. Ownership structure**

#### **3.1 Theories**

In order to better understand the current problems faced by Xiaomi, three theories (1976 principal agent theory, 1998 incomplete contract theory and incentive compatibility theory) will be mentioned in the following. Jensen and Meckling (1976) recognized the existence of agency problem. Relationship between the firm's owners namely principals and the firm's managers as agents is complexed since they have different incentives in terms of firm's operations, which leads to costs of equity( conflicts between managers and shareholders) and costs of debt( conflicts between share holders and debt-holders)((Chen& Chen, 2011) Incomplete contrast theory claims that due to factors like emergence of new technology, human's bounded rationality, and incompleteness of information, when parties try to enter into an agreement together, they cannot predict the future scenarios, thus fail to define elements like changes in strategies (Hart,1995) Incentive compatibility was first introduced by economist Leonid Hurwicz in 1960. Interaction is established to ensure those with more information are motivated to act in the interest of other party ( Rafferty and James, 2014) Incentive compatibility may help to solve the informational asymmetry on different levels of a hierarchy by bonding personal profit with firm's benefits.

#### **3.2 VIE structure of Xiaomi**

##### **3.2.1 Necessity of VIE structure**

China considers its technology- platform businesses as value added telecommunications businesses so it limits foreign ownership to no more than 50 %. As a result, companies list overseas exchange, using legal contracts to control without owing shares in the underlying businesses. Thus, variable Interest entity becomes a choice for relevant businesses as it allows companies to circumvent Chinese restrictions on foreign investment. ( Gillis &Lowry, 2014) Since Xiaomi covers electronic commerce and internet service, the traditional way for listing overseas are hindered, which makes VIE structure a must for Xiaomi, which help ensure the stability of overseas operations will not be affected by the changes in management rights of domestic entity companies.

##### **3.2.2 Advantages**

Same as the great majority of companies holding VIE structure, Xiaomi, Inc is domiciled in the Cayman Islands where no taxes are required. Then Xiaomi starts an offshore company in Hong Kong whose shares are fully owned by Xiaomi, Inc. Then Xiaomi Hong Kong establishes a wholly foreign owned enterprise namely Xiaomi communication which in turn controls its four biggest shareholders, Jun lei with 77.8%, Wanqiang Li with 10.12%, Feng Hong ( 10.07%) and De Liu with 2.01%, Besides, it also controls a Xiaomi's domestic enterprise called Xiaomi technology, the operating business attached by several operating subsidiaries. Xiaomi Communication uses contractual agreement to control domestic enterprises on management and profit aspects.

In other words, Xiaomi Inc owns the economic right to the interest of its offshore entity as well as the ability to vote on companies' operation decisions while other domestic subsidiaries of Xiaomi transfer their profits to Xiaomi Hong Kong so as to make larger loans to foreign banks. Owing to the effective control of the entity through financial processing, the overseas listed becomes an actual operating company with operating revenue and hefty profit. In October 2014, Xiaomi gained 10 billion dollars loans from 29 foreign banks, which supports Xiaomi's international expansions and make a series of investments based on Xiaomi ecosystem in China. Not only can this large amount of funds help Xiaomi fix its problems but also construct stronger competitive strategies. Moreover, the establishment of domestic and foreign capital flow pipeline enables corporate profits within the entity or funds of overseas to flow smoothly.

##### **3.2.3 Risks**

There lie challenges in enforcing VIE agreements. VIE-like contracts were unenforceable because they were considered as legal forms that conceal illegal intention in the article 52 of Chinese contract

law. (Neil, 2013) Thus, when one stakeholder fails to respect the contracts that established control over VIE, significant losses may occur to other stakeholders. Besides, since large amount of funds are required in telecommunications and high-tech industry, there is no clear mention about VIE structure in Chinese regulations. Thus, VIE is in “grey area” which makes it inevitably subject to the follow-up policies and regulations of supervision. What’s worse, VIE structure of Xiaomi may potentially be destroyed by Chinese changing policies in the future.

## 4. Financing

### 4.1 Theories

Pecking order theory and growth theory will be included to better evaluate the finance structure (dual-share) of Xiaomi. The pecking order theory indicates that there is always a particular preference order for capital used to finance the businesses (Myers and Majluf, 1984). When financing a new project, companies prefer endogenous financing to exogenous financing, debt to stock right, and long term debt over short-term debt. Berger and Udell (1998) propose a financial growth cycle which explains that as growing businesses become more experienced and more informational transparent, their financial needs and options will change. They predict that younger firms rely on internal sources while older firms have access to external sources with more retained earnings. once a firm become more experienced, it will likely choose public equity or long-term debt financing. (Gregory, Rutherford, Oswald& Gardiner, 2015)

### 4.2 Dual-layer share structure

#### 4.2.1 Necessity

The funds for research and development costs on smart home appliances and smart phone are insufficient for Xiaomi, according to growth theory and pecking order theory, Xiaomi should rely on debts theoretically. But it’s difficult for technology companies to be trusted by Chinese banks, which makes Xiaomi unable to raise funds from debt. Therefore, Xiaomi had to choose a new financial mode after insufficient venture capital and private equity. After financing by private equity and venture capital, which dilutes the control rights of founder. Dual layer share structure is a good choice due to it allows business to issue more than one class of shares so that one class carries disproportionate voting rights. (Ho, 2019) Xiaomi listed in Hong Kong with dual-layer share structure in 2018. In view of core appeal of the founder Jun Lei is to guarantee control rights and long-term growth of Xiaomi, dual layer share structure is a good choice.

#### 4.2.2 Advantage

Table 1. Revenue, operating profit and net profit during 2016-2020

year	Revenue (in millions)	Operating profit	Net profit
2016	68,434,161	3,785,064	1,175,509
2017	114,624,742	12,215,467	(41,829,352)
2018	174,915.4	1,196.5	13,927,124
2019	205,838.7	11,760.2	12,162,646
2020	245,865,633	24,034,729 1	21,633,432

Table 2. Research and development expenses worldwide during 2017-2020

Year	Research and development expenses worldwide (billions yuan)
2017	3.15
2018	5.78
2019	7.49
2020	9.26

The use of dual-layer shares prevent Malicious mergers and acquisition since the high concentration of voting rights bring higher bid price for Xiaomi in which 82.4 % of total voting rights represented by A class share concentrate on Jun Lei and Bin Lin. Although the operating profit is low in 2018 due to expenses on listing, an increase in profit is achieved in 2019, which contributes to excess growth in 2020(*Annual reoprt, 2020*) Noticeably, an increase in research and development spending from 5.78 billion RMB in 2018 to 7.49 billion RMB in 2019 (*Annual reoprt, 2020*) allows Xiaomi to improve product quality as well as innovate greater variety of products. In short, this structure could enable Xiaomi to pursue long-term growth and innovations, maximizing the market returns.

#### **4.2.3 Risk and suggestion**

According to principal agent theory, there will be conflicts between owners and shareholders. Conflicts is created between the owners of superior-voting shares like Jun Lei and holders of inferior shares in Xiaomi, since those like Jun Lei will not receive shares of the residual gains or losses from new investments that are commensurate with their control. In accordance to incomplete contract theory, since Jun Lei and Bin Lin have extreme power, the contact between them and other shareholders fail to include rules that can constrain them. Under this structure, the board oversight function is undermined as the controlling company management make use of their superior voting power to elects board instead of the voting results from the majority shareholders. There lies potential risks if the owner have wrong prediction to the market with his incorrect decision. Regulations regarding dual-class share in Western countries should be further enhanced to ensure fair interest gained by shareholders.

### **5. Conclusion**

To sum up, the cost lead strategy has enabled Xiaomi to select suppliers more efficiently and thus save large amount of management costs. Besides, the differentiation strategy emphasizes individual design with its custom production, which generates huge profits for Xiaomi. In terms of finance mode, the choice of dual-layer share structure solves the contradiction between financing and the dilution of control rights for founding shareholder, which helps ensure the stability of Xiaomi development. In order to further increase sales volume, multiple channels should be expanded to enhance Xiaomi's influence and ensure customers loyalty. The advancements in the Internet of Things has led to a falling price of sensors and processors, which reduces the cost of production for manufactures. Thus, smart home firms are given incentives to furtherly promote automation for household's sector. IOT technology evolution enable smart home industry to move towards a seamless and connected experience. Chinese smart home market is expected to be close to USD 37 Billion by the end of the year 2025(Markets, 2019), of which the penetration rate is 14.45% in 2021 and will be 25.4% in 2025. (Smart Home penetration rate per segment forecast in China from 2017 to 2025, 2019). Along with the increase in disposable income, customers prefer to improve the quality of home life. These trends not only creates more potential for Xiaomi to diversify its product into more series of smart home devices, but also indicates huge demand in the near future.

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