

The Impact of the COVID-19 on Xiaomi's Mobile Phone Supply Chain

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Abstract: The outbreak of COVID-19 in January 2020 continues to this day and has significantly changed people's production and living habits. Many companies have seen dramatic changes in the way they produce, how they operate and how they sell. The COVID-19 has also disrupted the supply chains of many industries and companies, causing huge losses. According to statistics from the World Trade Organisation, world trade fell by 13% - 32% in 2020. Xiaomi mobile phones have developed as a representative of smartphones for several years, building an excellent brand image and rapidly growing sales, taking a large part of the market share in China's smartphone market with the strategic advantage of a low-key, high-end smartphone. This article analyses and compares the changes in Xiaomi's mobile phone supply chain based on the changes before and after the epidemic, and concludes with a summary. The research topic of this paper is the impact of the Xin Guan epidemic on Xiaomi's mobile phone supply chain. It is divided into five aspects, namely parts supply, procurement management, supply chain production resumption, supply chain logistics and supply chain market. The main sources of data are the National Bureau of Statistics and the China Academy of Communications.

keywords: COVID-19, Xiaomi's mobile phone, supply chain, logistics

1. Introduction

Founded in 2010, Xiaomi is a mobile internet company dedicated to the independent development of smartphones. Xiaomi Mobile, MIUI and MiChat are the three core businesses of Xiaomi. From "MiChat", to the mobile operating system "MIUI", to "Xiaomi Mobile", these three businesses have become the three core products of Xiaomi Technology. It pioneered the Internet model for developing mobile phone operating systems with a unique product concept [1]. In the current state of affairs, Xiaomi is the fourth-largest smartphone producer in the world. It has also joined the top five mobile phone marketplaces in more than 30 nations and regions, particularly India, where it has been the top mobile phone shipper for five quarters running. Xiaomi has supported and encouraged additional like-minded companies through its innovative "eco-chain model" while also developing an IoT platform that connects over 130 million smart devices [2]. In addition, Xiaomi's mobile phone, as a representative of smartphones, has greatly increased the volume of Xiaomi's mobile phones by adopting an online consumption model with the advantage of the lowest-end high-end smartphone biography. As

one of the "giants" of technology companies, Xiaomi's supply chain has also been affected by the COVID-19. There are many papers on the analysis of Xiaomi's mobile phone supply chain, but not on the impact of the epidemic on Xiaomi's supply chain. This paper examines the impact of the COVID-19 on Xiaomi's mobile phone supply chain. It examines the specific impact of the COVID-19 on Xiaomi's mobile phone supply chain in five areas: parts supply, procurement management, supply chain production resumption, supply chain logistics and supply chain marketing, using data analysis and citation of literature to provide a reference for the adjustment of Xiaomi's supply chain and the mobile phone market as a whole.

2. Impact of COVID-19 on Xiaomi Mobile Phone Supply Chain

According to the published analysis, Xiaomi experienced a 48% increase in market share in the European market and was the fastest growing mobile brand in terms of market share. Xiaomi's market share in the European market is 9.6% and is much higher than the 6.5% market share in the same period in previous years. This is in large part due to Xiaomi's choice of supply chain at the start of the market and the timely adjustment of its supply chain management model. In other words, the supply chain has played a very important role in the development of Xiaomi [3].

The supply chain of Xiaomi phones is divided into parts suppliers, OEM factories, online and offline sales and distribution.



Figure 1: The supply chain structure diagram of Xiaomi mobile phone.

The pandemic has a more direct effect on Xiaomi's supply chain. This difficulty is visible in five distinct areas.

2.1. The Effect on Xiaomi Phones' Availability of Parts

Especially for raw materials or components originating from regions with a high frequency of COVID-19 or even in areas with the highest transport routes, where the supply chain meets difficulties, this adverse effect may be caused by logistical shortages or disruptions. Based on a DHL special report released on January 29, 2020, the Wuhan outbreak dramatically affected shipments along the Yangtze River, causing supply backlogs at ports and negatively affecting services notably trucking and rail transport. The outbreak also triggered air transportation to and from Wuhan and even China to be disturbed by the US, Singapore, Korea, Thailand, France, Australia, Malaysia, Japan, Canada, Vietnam, and other nations, all of which had a significant impact on supply chain operations and material availability [4]. On the other hand, Xiaomi Mobile is now merely a mobile phone assembly company without any R&D or production capabilities. According to statistics, Xiaomi Mobile is far ahead of the Chinese smartphone market and collaborates with businesses and suppliers all around the nation, including over 100 of the nation's top suppliers. Xiaomi must obviously consider buying the pertinent components and materials elsewhere. As an illustration, consider Sharp screens, Sony cameras, Qualcomm CPUs, and other manufacturers' critical parts [5]. About 12 publicly traded businesses are affiliated with Xiaomi, and each of them provides excellent and elite setups for Xiaomi phones [6]. Currently, Taiwan, China, and the mainland make up the majority of the Xiaomi phone

supply chain. A new Xiaomi smartphone is also being produced. The COVID-19 has an effect on the supply of Xiaomi mobile phone parts since a failure of one component can have a consequence on other components and the phone's assembly.

2.2. The Impact for Xiaomi's Mobile Phone Procurement Management

The supply chain is a huge system, and its sourcing base is usually spread across the country or even the world. However, after the outbreak of the COVID-19, Xiaomi's procurement management was exposed to huge uncertainty and adjustment risks due to the different levels of protection against the epidemic and the differences between different regions, which made the company's operations much less efficient [4]. This challenge can have a direct impact on the normal start-up of supply chain operations, to the extent that even a small shortage of raw materials can have an impact on the resumption of production. Xiaomi's procurement bases and foundries are located in different regions such as Hebei, Nanjing and Beijing. Many of the key components need to be purchased in advance from the manufacturers, and from order to delivery, each component comes from a different manufacturer, resulting in different delivery and arrival times. Delays and shortages in the delivery of parts can have an impact on the speed of assembly and delivery of Xiaomi phones. As a result, closure control management and protective measures during the epidemic also had a significant impact on the management of Xiaomi's mobile phone purchases.

2.3. The Consequence on the Start-up of Xiaomi Phone Supply Chain Production

In order to prevent and contain COVID-19, protective measures such delayed return to work and home quarantine are currently in place in many localities, and city closures have been put into place, especially in areas at high risk of the outbreak. These are crucial for containing the outbreak, but they have also made it much harder to restore supply chain operations. In terms of labour export by province across the country, based on currently available data, the main labour export provinces include Anhui (11 million outworkers in 2017), Henan (21 million in 2017), Sichuan (18.511 million in 2017), Hunan (12 million in 2017), Hubei (10.36 million in 2017), Guangxi (7.9 million in 2017), some of which have implemented stricter measures to control the movement of people due to the higher threat of the epidemic.[4] The Yangtze River Delta, the Pearl River Delta, and the Beijing-Tianjin-Hebei region, where there is a great demand for labour, are the principal destinations for labour exports. According to data, there were 54.52 million migrant employees in the Yangtze River Delta, 45.36 million in the Pearl River Delta, and 21.88 million in the Beijing-Tianjin-Hebei region in 2018. The enormous disparity between labour supply and demand will be particularly apparent during the epidemic [4][6]. When Xiaomi was first established, the company has been selling online in order to reduce expenses and save costs. This approach has minimised the company's costs and shortened the supply chain. It brought economic benefits and economies of scale, and grew the company in the early stages. Later on, Xiaomi also had offline experience shops to improve the brand's quality image. It used a combination of online and offline sales channels, allowing people to buy products more purposefully [9]. The picking of factory items as well as the packing is labour intensive. But the outbreak of the epidemic has had an impact on Xiaomi's ability to resume production and get to work both online and offline, including delays in work and shortages of manpower. As mentioned above, Xiaomi is an assembly company for mobile phones and it does not have R&D and production capabilities for the time being. There are many OEMs and suppliers with whom it cooperates and they are located all over the country. Xiaomi's sourcing bases and foundries are located in different regions such as Hebei, Nanjing and Beijing. The level of management and control varies from city to city, so the level of delivery from foundries and suppliers may also be affected.

2.4. The Impact on Xiaomi's Mobile Phone Supply Chain Logistics

The maintenance of the economy and society along with the fight against the disease all depend on logistics. Currently, the majority of logistics services are dedicated to the fight against the pandemic, which, along with the return to work and the effects of controlled mobility, is also placing stress on the regular operation of supply chain operations for business. The capacity and availability of services are anticipated to provide a challenge to established logistics nodes and networks, and it will be challenging to locate alternate logistics facilities or routes in the nearish future. Additionally, the COVID-19 could pose a challenge to the logistics sector, with many logistics firms potentially seeing a decline in business as a result of the importance of supply chain production [4]. The initial phase of Xiaomi mobile phones was mainly online sales later combined with offline sales. Xiaomi mobile phones go through three steps in between receiving orders and shipping items: order-punching, sorting and distribution. First, the different orders are sorted and orders with the same content are grouped together and printed. All paper information such as orders, invoices and delivery information is checked, bound and sent to the picking area. The items required by the customer are selected in the warehouse. The order is scanned, the computer display shows the dispatch information, the accessories are then listed and selected one by one, scanned and finally sealed and awaiting delivery [7]. So Xiaomi phones require certain logistics for transport. As Xiaomi mobile phones are innovative products with a strong time-sensitive nature, the pre-sales phase is dominated by online channels [10]. Its main mode of transport is a combination of air and road. During the epidemic, both road and air have reduced the transport of goods in order to reduce the risk [5]. Some of the areas with high epidemic risk have also made measures such as road closure management, restricting the entry of commodities and disinfecting the whole range of foreign commodities. All these measures have hindered the transportation of Xiaomi's commodities. Therefore, the new Guan epidemic has a significant impact on Xiaomi's mobile phone supply chain.

2.5. The Impact on Xiaomi's Mobile Phone Supply Chain Market

The COVID-19 outbreak will have a variety of effects on the corporate market. While some industries, like e-commerce and medical products, are expected to enjoy increasing demand, others, like export-oriented businesses, may experience fluctuating demand or even a significant decline in orders. Electromechanical products (including electrical appliances, electronic products, machinery, and equipment) account for 58.4% of China's exports in 2019; these products are followed by seven key categories of labor-intensive products, including clothing and textiles, which account for roughly 20%. Additionally, private businesses made up over 50% of exports for the first time among the different types of export operations, and both these goods and the major exporters are more susceptible to the effects of the epidemic [4]. In the first half of 2022, driven by factors such as the weakening impact of the epidemic, the gradual recovery of logistics and consumer stimulus policies, the electronics manufacturing industry maintained a relatively fast growth trend and played an obvious role in pulling the industry as a whole, becoming an important pillar of industrial economic growth. The second half of the year is anticipated to usher in a new cycle of growth due to the rapid expansion of China's 5G, new energy, and other industries will continue to inject development momentum for the development of the electronics manufacturing industry [6]. In the first half of 2022, the value added of the electronics manufacturing industry above the scale increased by 10.2%, 6.8 percentage points higher than that of the industry as a whole, and was the fastest growing industry among the 28 major manufacturing industries (excluding other manufacturing industries, comprehensive utilization of waste resources and metal products, machinery and equipment repair industries) [8]. Among them, the value added of the electronics manufacturing industry above the scale in June increased by 11.0%

year-on-year, up 3.7 percentage points from the growth rate in May, showing strong growth resilience [8].

3. Conclusion

At the enterprise level, there is no choice but to redesign the supply chain to make it more reliable in the post-New Champions era. "Reliability" will replace "low cost" as the main objective of supply chain management. To do so, companies will have to undertake expensive and complex tasks, including a thorough mapping of suppliers and strengthening of supplier relationships; a deeper understanding of new consumer habits (as opposed to recent trends such as the proliferation of online shopping and longer home time); and accelerated digital conversion tools to improve processes and reduce risks. Xiaomi, as an internet company, has broken the traditional supply chain model. Once online sales shortened the supply chain and saved costs. Xiaomi mobile phones. It caused a huge stir as soon as it was launched, and it laid the foundations and set the example for many businesses. Xiaomi mobile phones have stood out to take a persuasive market share at a time when the mobile phone market is so mature. It has gone through a period of rapid growth and a bottleneck. During the bottleneck period, it regained good sales through adjustments to its sales channels and supply chain strategy. This article is imperfect due to the lack of data and information, as well as the author's limited analytical skills. The paper can be improved by more comprehensive data analysis skills. And the future research area is broadly management specifically human resource management and business management.

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