A THEORETICAL ANALYSIS OF THE CHALLENGES FACED BY INDIAN SMARTPHONE MANUFACTURERS

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Abstract

The smart phone industry in India has encountered several hurdles in recent times, such as fierce competition from both local and global competitors, rapid changes in consumer behavior and technology, as well as the impact of economic and regulatory factors. Among the challenges that the Indian smart phone industry is facing, the intense competition from both domestic and international players is a significant one. As the market expands, the number of players has surged, causing a cutthroat competition for market share and profitability.

This has compelled smart phone manufacturers to come up with new innovations and unique features to differentiate their products and remain competitive. Despite these obstacles, the Indian smart phone industry has the potential to grow and thrive.

To do so, companies will need to continuously innovate, adapt to changing consumer trends, and navigate the ever-evolving regulatory landscape in the country.

Keywords: *Mobile Industry, Smart phones, Challenges, OEM vendors, Ecosystem, Opportunity.*

1. INTRODUCTION

India is currently the second-largest smart phone market globally, with a significant growth rate in the last decade. The Indian smart phone market has been dominated by foreign manufacturers, but Indian smart phone manufacturers have also emerged in the market. However, these domestic manufacturers have faced several challenges, limiting their growth potential. This literature review aims to explore the challenges faced by Indian smartphone manufacturers. The mobile phone manufacturing industry in India has been growing steadily over the years, and with the COVID-19 pandemic, there is a great opportunity for the country to attract more mobile phone manufacturers to set up their manufacturing units in India. This could help in reducing India's trade deficit, which has been widening due to large imports of mobile phones.

According to the India Cellular and Electronics Association (ICEA), the mobile manufacturing industry in India is targeting $100 billion mobile phone exports by 2025. The industry also aims to export mobile components worth $40 billion during the same period. The ICEA has presented a plan to transform India's mobile manufacturing sector over the next few years, and the industry is ready to lead India's post-COVID-19 exit strategy. The chairman of ICEA, Pankaj Mohindroo, has stated that the production of mobile phones has already started in India with the easing of the lockdown, and the industry hopes to achieve 100% capacity by August. With all this happening, the mobile manufacturing industry in India could become one of the most significant employment opportunity generators in India.

The report submitted by ICEA to the government also highlights the fact that mobile phones and electronics, in general, are the largest imported segment in the world. The global smartphone market is expected to reach $647 billion, and with India targeting $100 billion mobile phone exports by 2025, the country could become a significant player in the global smartphone market.

In conclusion, the mobile manufacturing industry in India is set to grow, and with the right policies and support from the government, it could become a significant contributor to the country's economy. The industry's plan to transform India's mobile manufacturing sector over the next few years is a step in the right direction, and it could lead to the creation of many employment opportunities in the country.

2. LITERATURE REVIEW

The report's targets are in line with the National Policy on Electronics 2019 (NPE 2019) of the government. It acknowledges the latest electronics manufacturing schemes and plans announced by the Ministry of Electronics and Information Technology (MEITY), and anticipates that these initiatives will aid the industry's development. For India to establish itself as a significant player in the mobile manufacturing sector, it must have access to the global market, be able to attract large-scale global value chain (GVC) investments, enjoy labor cost advantages, have a global presence, use advanced technology, have a low cost of inputs, have a domestic ecosystem, and be competitive.

The major mobile manufacturing companies from around the world have already begun making preliminary investments, but they have so far limited their operations to assembly; meaning they import manufactured parts from other countries and only perform the final product assembly process in India. India must offer incentives to global lead firms to encourage investment and increase manufacturing and exports. Due to the global pandemic, many firms are no longer interested in continuing to manufacture their products in China. Well-known manufacturers like Wistron, Foxconn, and Pegatron are attempting to establish their production facilities outside of China. India may face tough competition from other Southeast Asian countries such as Vietnam, Malaysia, Thailand, and Indonesia.

India has already notified schemes that comply with World Trade Organization (WTO) regulations. India could benefit greatly in terms of employment and GDP growth if it can achieve timely, smooth implementation and disbursement without any delays. The use of mobile phones can contribute to economic growth by improving communication and coordination between individuals and businesses, leading to increased efficiency and productivity.

A noteworthy example comes from the fishing industry in Kerala, India, where mobile phones were introduced in 1997. Prior to this, fishermen would rely on intuition to match their catch to market demand. However, with the use of mobile phones, they were able to better match their haul to the coastline's markets, resulting in a reduction of wastage by 35%, an increase in fishermen's profits by 8%, and a decrease in prices for consumers by 4%.

These positive outcomes demonstrate the potential benefits of mobile technology for traditional industries. The study raises the question of how much direct societal gains smartphones could bring to Indian society, particularly if they were designed and

manufactured domestically without increasing the country's import bill. This study provides empirical evidence to support this hypothesis.

A recent study has found that Smartphone sales in India saw an unprecedented growth of 166.8% in the last quarter of 2013, making it the world's fastest-growing Smartphone market during that period. The study also highlights that Smartphones accounted for 53.6% of global mobile phone sales in 2013, surpassing the annual sales of feature phones for the first time. The shipments and market share of the top five foreign countries in terms of Smartphone units in millions, with that of India for 2013 and 2017.

By the end of 2015, Samsung, equipped with the Android operating system, has emerged as the leader in the fiercely competitive Indian market, capturing a substantial 27% of the market share. Meanwhile, local manufacturers such as Micromax and Lenovo Group have emerged as the runners-up with a market share of 14% and 12% respectively. In terms of Smartphone market share, the table of companies manufacturing in India, irrespective of their local value addition, is provided. Despite being a potential global manufacturing destination, India has slipped from second to fourth position in the 2013 Global Manufacturing Competitiveness Index (GMCI) ranking. In order to regain its former status, India needs to focus on education and product-oriented research to establish itself as a competitive manufacturing destination. Unlike other economies such as China, Taiwan, and South Korea, which rely on manufacturing to provide jobs to the poor population,

India's economic development is based on a low cost and limited pool of skilled labor, leading to specialization in ICT services rather than manufacturing. Taxation in the telecommunication sector is relatively high in India, with rates hovering around 30-31%, exceeding those in other countries like China, USA, Taiwan, and South Korea. Furthermore, import duties on components are also steep, making the components more expensive in India than in other countries. To make the industry more investor and customer-friendly, India's taxation structure in the telecom sector must be simplified by rationalizing taxation.

3. PROBLEM DEFINITION

Micromax, Lava, Xolo, Karbonn, Spice, and Intex were once well-known Indian smart phone brands, but they have since lost their competitiveness in the market. Prior to 2014, these companies were doing relatively well and some even held leading positions. Micromax, for example, surpassed Samsung India to become the number one smartphone company in India

between 2013 and 2015.

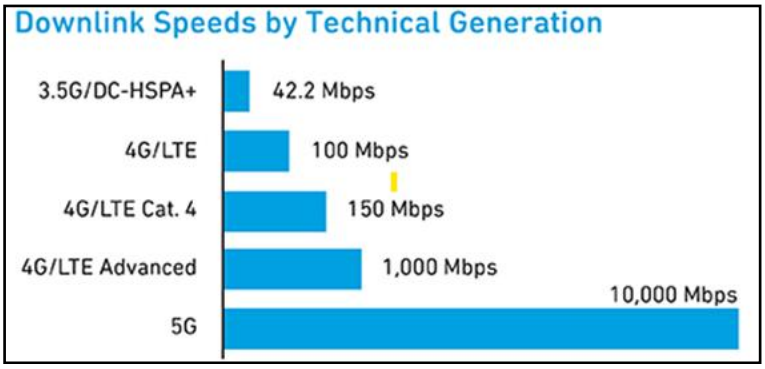

Figure 1: Downlink Speeds by Technology Generation (Source: https://bit.ly/3HdeurP.)

Karbonn and Micromax were also market leaders at the time and even sponsored many cricket series. However, with the emergence of Chinese companies like Xiaomi, Oppo, and Vivo, the market dynamics changed. Chinese companies operate on economies of scale, producing millions of smart phones and lowering production costs. This has allowed them to sell smart phones at cheaper prices, making it difficult for Indian brands to compete. Currently, Xiaomi is the leading smartphone company in India, while BBK electronics, the parent company of Oppo, RealMe, Vivo, and OnePlus, holds a large portion of the Indian smartphone industry. India has a thriving smart phone market, but local smart phone manufacturers face several challenges in the highly competitive and dynamic industry. Some of the significant challenges faced by Indian smart phone manufacturers include:

Intense competition: The Indian smart phone market is highly competitive, with global players such as Samsung, Xiaomi, and Apple dominating the market. Domestic manufacturers face stiff competition from these players, making it challenging for them to gain market share.

Lack of technological innovation: Indian smart phone manufacturers face challenges in terms of technological innovation. Most of the Indian manufacturers have limited R&D capabilities, making it difficult for them to develop cutting-edge technologies and compete with global players.

Quality issues: Indian manufacturers have been criticized for the quality of their products, which often fall short of global standards. This has made it challenging for them to compete with global brands, which are known for their high-quality products.

Limited marketing budget: Indian smart phone manufacturers have limited marketing budgets, making it difficult for them to create brand awareness and reach out to potential

customers.

Fragmented supply chain: The supply chain for smart phones in India is fragmented, with different components sourced from different vendors. This makes it challenging for manufacturers to maintain quality standards and ensure timely delivery of products.

Dependence on imports: Indian manufacturers are heavily dependent on imports for critical components such as display panels and chipsets. This dependence on imports makes them vulnerable to global supply chain disruptions, which can impact their production and sales.

Price sensitivity: Indian consumers are highly price-sensitive, and they often prioritize affordability over brand loyalty. This makes it challenging for Indian manufacturers to maintain their profit margins while offering affordable products to consumers.

To overcome these challenges, Indian smart phone manufacturers need to focus on building their R&D capabilities, improving their product quality, and investing in marketing and branding. They also need to work on building a robust and reliable supply chain and developing cost-effective solutions to remain competitive in the market.

4. OBJECTIVE

The scope of Indian smart phone manufacturers is vast, as India is one of the fastest-growing smart phone markets in the world. With a large population and increasing digitalization, there is a high demand for smart phones in India. Indian manufacturers have an advantage in this market, as they have a better understanding of the local needs and preferences of the consumers.

The primary objective of Indian smart phone manufacturers is to provide affordable smart phones with features that cater to the needs of the local population. The Indian market is price-sensitive, and Indian manufacturers have been able to offer smart phones with competitive pricing. They also aim to compete with international brands by offering smart phones with features that are tailored to the local market.

Another objective of Indian smart phone manufacturers is to promote local manufacturing and contribute to the Indian economy. The Indian government's initiatives to promote local manufacturing have provided an opportunity for Indian manufacturers to invest in local production and boost the country's manufacturing capabilities.

Despite the promising scope, Indian smart phone manufacturers face stiff competition from international brands such as Samsung, Apple, and Xiaomi, who have a strong presence in the Indian market. These brands offer advanced technology and features that Indian manufacturers may not be able to match. Therefore, Indian manufacturers need to continue to innovate and improve their products to stay competitive in the long run.

5. SCOPE

The scope of Indian smart phone manufacturers is vast, given the rapid growth of the Indian smart phone market. India is the second-largest smart phone market globally, and it is estimated that the Indian smart phone market will continue to grow at a steady rate in the coming years. Indian manufacturers have an advantage in this market due to their understanding of the local market and consumer preferences. They can offer features that cater to the specific needs of Indian consumers, such as regional language support, larger batteries, and dual SIM support.

Moreover, the Indian government's initiatives to promote local manufacturing, such as the Production-Linked Incentive (PLI) Scheme, have provided a boost to Indian smartphone manufacturers. The PLI scheme offers incentives to companies that manufacture electronic components, including smart phones, in India. This has encouraged Indian manufacturers to invest in local production and contribute to the Indian economy.

The scope of Indian smart phone manufacturers is vast, and they have the potential to grow and compete with international brands. However, to stay competitive, Indian manufacturers need to continue to innovate and offer smart phones with features that cater to the needs of the local market. They also need to invest in local production and contribute to the Indian economy.

6. RESEARCH METHODOLOGY

To investigate the challenges encountered by manufacturers in India, there exist various research methodologies that can be employed. One of the methods we adopt is conducting a comprehensive literature review. Through this method, the researcher evaluates existing studies and research materials on the topic to identify common challenges faced by manufacturers in India. Alternatively, a survey can be conducted to gather data from a

selected group of manufacturers in India. The researcher can employ methods like interviews or questionnaires to collect the required data. Other potential research methodologies that could be employed include case studies, focus groups, and experiments. The most suitable methodology to be used will depend on the research question, the type of data needed, and the available resources. Research methodology is the process of designing, conducting, analyzing, and reporting research studies. Here is an example of a research methodology for a study on Indian smart phone manufacturers:

1. Research problem: The research problem is to understand the market share, consumer behavior, and growth potential of Indian smart phone manufacturers.

2. Research design: The research design for this study is a quantitative research design using a survey questionnaire to collect data from a sample of smart phone users in India.

3. Sampling: The sampling method used for this study is probability sampling. A random sample of smart phone users will be selected from different regions of India.

4. Data collection: The data for this study will be collected using an online survey questionnaire. The survey will include questions about the respondents' smart phone usage, brand preference, and reasons for choosing a particular brand.

5. Data analysis: The data collected will be analyzed using descriptive statistics and inferential statistics. Descriptive statistics will be used to summarize the data, while inferential statistics will be used to test hypotheses and draw conclusions.

6. Ethical considerations: The study will ensure that the privacy and confidentiality of the respondents are protected. Informed consent will be obtained from the respondents before the survey, and their participation will be voluntary.

7. Limitations: The limitations of this study include potential bias in self-reported data and limited generalizability to the entire population of smart phone users in India.

7. ANALYSIS AND FINDINGS

India has become one of the largest smart phone markets in the world, and the demand for smart phones in the country has been growing at a rapid pace in recent years. Indian smart phone manufacturers have been gaining significant momentum in the market and have been able to capture a substantial share of the market. Here is an analysis of the Indian smart phone manufacturers and their findings:

1. Xiaomi: Xiaomi is currently the largest smart phone manufacturer in India, with a market

share of 27%. The company has been able to establish itself as a leading player in the Indian market by offering high-quality smart phones at affordable prices. Xiaomi has a strong online presence and has been able to leverage e-commerce platforms to sell its products. The company has also been able to establish a strong offline retail network, which has helped it reach customers in smaller cities and towns.

2. Samsung: Samsung is the second-largest smart phone manufacturer in India, with a market share of 17%. The company has been able to maintain its position in the market by offering a range of smart phones across different price points. Samsung has a strong brand image in India and has been able to establish a strong offline retail network across the country. The company has also been able to leverage its manufacturing facilities in India to reduce costs and improve its competitiveness in the market.

3. Vivo: Vivo is the third-largest smart phone manufacturer in India, with a market share of 16%. The company has been able to establish a strong presence in the Indian market by offering smartphones with innovative features and high-quality cameras. Vivo has also been able to establish a strong offline retail network across the country and has been able to leverage celebrity endorsements to increase brand awareness.

4. Oppo: Oppo is the fourth-largest smartphone manufacturer in India, with a market share of 10%. The company has been able to establish a strong presence in the Indian market by offering smart phones with innovative features and high-quality cameras. Oppo has also been able to establish a strong offline retail network across the country and has been able to leverage celebrity endorsements to increase brand awareness.

5. Realme: Realme is the fifth-largest smart phone manufacturer in India, with a market share of 10%. The company has been able to establish a strong presence in the Indian market by offering smart phones with innovative features and high-quality cameras. Realme has a strong online presence and has been able to leverage e-commerce platforms to sell its products. The company has also been able to establish a strong offline retail network across the country.

Overall, the Indian smart phone market is highly competitive, and the competition is likely to intensify in the coming years. Indian smart phone manufacturers have been able to establish themselves in the market by offering high-quality smart phones at affordable prices, leveraging celebrity endorsements, establishing strong offline retail networks, and leveraging e-commerce platforms to sell their products. The market is expected to continue to grow at a

rapid pace, driven by the increasing adoption of smart phones and the growing demand for innovative features and high-quality cameras.

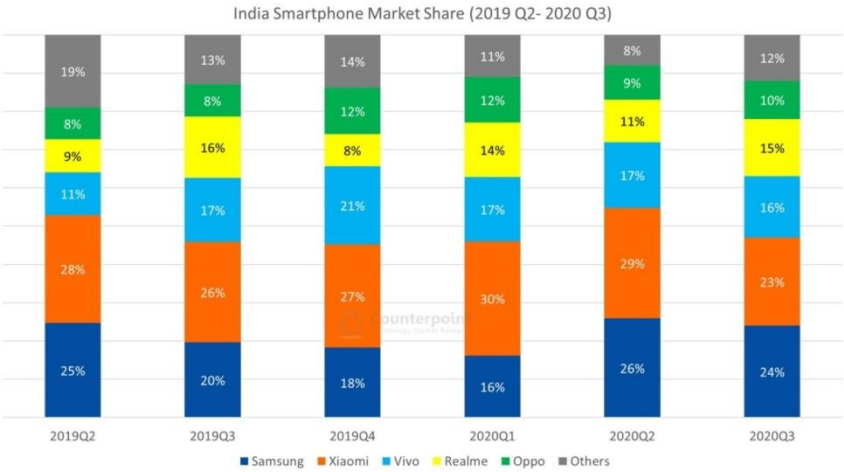

Figure 2: India Smartphone Market Share (Source: https://bit.ly/3Avhj3S.)

India smart phone revenue by vendors as there is no access to real-time data. However, cutoff date of September 2021, some of the leading smartphone vendors in India were:

1. Xiaomi
2. Samsung
3. Vivo
4. Realme
5. Oppo

According to a report by Counterpoint Research, Xiaomi was the leading smart phone brand in India in Q2 2021 with a 28% market share, followed by Samsung with a 17% market share. Vivo, Realme, and Oppo rounded out the top five with 15%, 14%, and 10% market share, respectively.

The report also noted that the Indian smart phone market rebounded strongly in Q2 2021, with a 19% growth compared to the same period in 2020, driven by increased consumer spending and pent-up demand following the COVID-19 pandemic.

Overall, the Indian smart phone market is highly competitive, with multiple vendors vying for market share through aggressive pricing strategies, innovative features, and strong distribution networks.

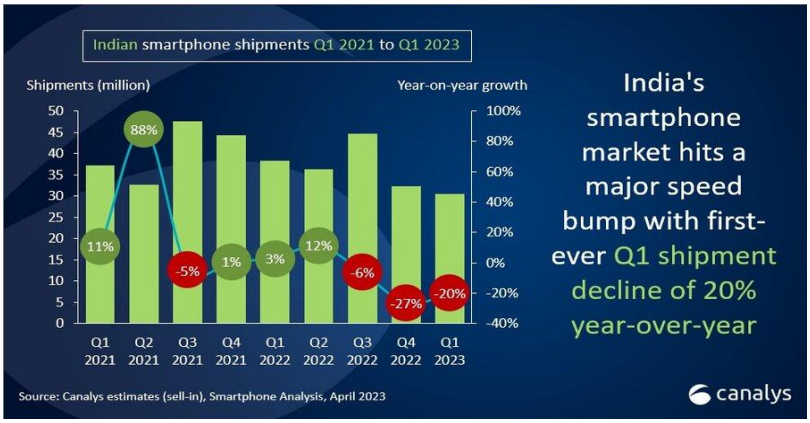

Figure 3: Indian Smartphone Shipments (Source: https://bit.ly/41Yxpi1.)

India's smart phone industry is poised for exponential growth over the next five years, with an estimated 1.7 billion smart phones to be shipped, resulting in a market worth around $250 billion (roughly Rs. 19,39,700 crore). Over 840 million of these smart phones are expected to be 5G-enabled, and 5G penetration is expected to increase year on year from 2022, leading to a surge in 5G smart phone sales. This growth will be further fueled by the Indian government's recently announced $10 billion (roughly Rs. 77,600 crore) incentive plan to boost semiconductor manufacturing and their strong support for the BharatNet initiative to connect rural and remote areas by 2025.

In the urban market, new smart phones will account for 95 percent of all smart phone replacements over the next five years, with a three-year average lifespan for mobile devices. This rapid replacement rate is driven by increasing consumer demand in India, and in 2026, only 5% of replacements in the urban market are expected to be used phones, compared to 25 percent today. Overall, the future of the Indian smart phone market is bright, with strong government support, increasing 5G penetration, and a growing consumer base driving exponential growth in the coming years.

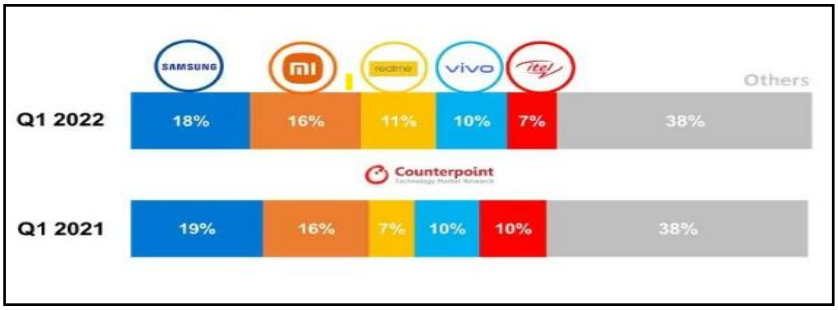

Figure 4: India Handset Market Share (Source: https://bit.ly/41HTZM4.)

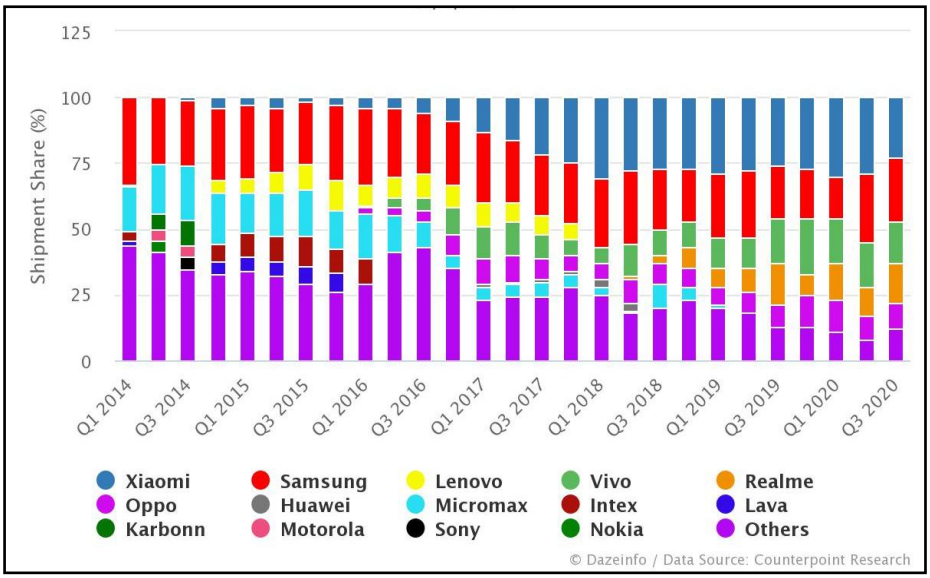

Figure 5: India Smartphone Market Share by Top Vendors (Source: https://bit.ly/41THIDU.)

India's smart phone shipments grew by 9% YoY (year over year) to reach almost 37 million units in Q2 2022 (April-June). However, there was a QoQ (quarter over quarter) decline of 5%. Xiaomi was the leading smart phone brand in Q2 2022, with a 19% shipment share, closely followed by Samsung. The installed base of smart phones in India crossed 600 million during the quarter.

29% of overall shipments were contributed by 5G smart phones. Samsung led the 5G smart phone segment with a 25% share, followed by vivo and OnePlus. Three out of the top five smart phone models in Q2 2022 were from realme.

In the premium smart phone market (>INR 30,000), Samsung led the way, closely followed by Apple.

8. LIMITATIONS

There are several limitations and challenges that Indian smart phone manufacturers face in the highly competitive smart phone market. Here are some of the major ones:

1. Limited technological capabilities: Indian smart phone manufacturers often lack the technological capabilities and expertise required to develop high-end devices that can compete with global brands. This can lead to a lack of innovation and poor product quality.

2. High competition: The smart phone market is highly competitive, with established global brands dominating the market. Indian manufacturers find it challenging to compete with these

companies in terms of brand recognition, marketing budgets, and global supply chains.

3. Limited resources: Indian smart phone manufacturers often have limited financial resources, which can hinder their ability to invest in research and development, marketing, and distribution.

4. Dependence on Chinese suppliers: Indian manufacturers rely heavily on Chinese suppliers for components and raw materials, making them vulnerable to supply chain disruptions and geopolitical tensions between India and China.

5. Fragmented market: The Indian smart phone market is highly fragmented, with numerous small players competing for market share. This makes it difficult for Indian manufacturers to gain a foothold in the market and achieve economies of scale.

6. Price sensitivity: Indian consumers are highly price-sensitive, and demand value for money products. Indian manufacturers need to develop cost-effective products that offer good quality and features at affordable prices.

7. Inadequate infrastructure: The lack of adequate infrastructure, including reliable power supply and internet connectivity, can make it difficult for Indian manufacturers to operate efficiently and compete with global brands.

Overall, these limitations and challenges make it difficult for Indian smart phone manufacturers to establish themselves as significant players in the global smart phone market.

9. CONCLUSION

It is true that leading global mobile manufacturers have invested in India, but their operations are limited to assembling parts sourced from other countries. To boost manufacturing and exports, India needs to incentivize these companies to invest more. One way to do this is by providing a friendly business environment, robust infrastructure, and supportive policies that attract investment and encourage growth.

The global pandemic has disrupted supply chains, causing many companies to explore opportunities to shift their manufacturing bases from China to other countries. India could benefit from this shift if it can provide the necessary conditions to attract investment. Renowned manufacturers such as Wistron, Foxconn, and Pegatron are looking to set up manufacturing facilities outside China, and countries such as Vietnam, Malaysia, Thailand, and Indonesia pose as competition to India.

India has announced schemes that comply with World Trade Organization regulations to

attract investment and boost manufacturing. For instance, the Production-Linked Incentive (PLI) scheme aims to provide incentives to mobile phone manufacturers to produce high-value products in India. The scheme offers a financial incentive to manufacturers for incremental sales of goods manufactured in India, and this could result in significant employment and GDP growth if implemented smoothly and efficiently.

To compete with other countries and attract more investment, India needs to focus on improving the ease of doing business, strengthening its infrastructure, and providing a stable policy environment. The government must also provide a skilled workforce, create robust supply chains, and promote innovation and research and development to support the growth of the mobile manufacturing industry. If India can address these challenges, it has the potential to become a leading hub for mobile phone manufacturing and exports.

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