



Case Report

Mobile phone manufacturing in India: A pre-post pandemic comprehension

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Abstract

India now officially has the largest population in the world, with a census of over 1.4 billion people. A third of this demographic is comprised of people aged 15-29 years, while another third is aged 0-14 years. This country's population youth has created for India a unique advantage as a market for technology-related products among the younger crowd that drives demand for electronics. The electronics industry in India is gaining momentum courtesy various initiatives of the government to make India the global leader in this space. In January 2022, the government set itself a target of \$300 billion in electronics production by 2025-26, focusing on smart phone exports. As a result, India has become the second-largest mobile phone manufacturer in the world, with over 200 mobile phone manufacturing facilities across the country. With increased consumer spending power, the doors to fantastic opportunities will be revealed before international companies to enter into growing Indian markets.

Keywords: Mobile phone, Production, Pre-post pandemic, India

Received: 02-03-2024; **Accepted:** 25-04-2025; **Available Online:** 23-07-2025

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1. Introduction

Over the last 10 years, the value of mobile phones made in India has increased significantly. It grew from Rs 18,900 crore in 2014-15 to an expected Rs 4.1 lakh crore in 2024, marking a 2000% rise. Government support, such as the PLI scheme, played a key role in attracting foreign companies to manufacture phones locally. India now manufactures nearly all its mobile phone needs domestically, specifically 97%. By 2024, about 30% of these phones will be exported. For example, phone exports grew from Rs 1,556 crore in 2014-15 to an expected Rs 1.2 lakh crore in 2024, showing a 7500% increase. This growth in exports has made mobile phones India's fifth-largest export. In 2017, the government launched a program to boost local phone manufacturing, significantly expanding the industry. From just 2 factories in 2014, India is now the second-largest mobile phone producer globally, behind China. Indian-made phones are exported to countries like the UK, Netherlands, Austria, Italy, as well as regions in the Middle East, North Africa, and South America. Between 2014 and 2024, India is estimated to produce about 2.45 billion phones, worth Rs 19.45 trillion, nearly hitting the

target of 2.5 billion phones valued at Rs 20 trillion. In 2023, India exported \$11 billion worth of phones while total domestic production was \$44 billion. Initially, in 2014-15, India's local production met only 25% of its mobile demand. By 2018-19, production caught up with demand. With the help of the PLI scheme, production grew from \$30 billion in 2020 to \$49 billion in 2023-24. Exports increased by 91% in 2022-23 compared to the previous year, making smart phones a top-five export product for India. The government aims to make India a crucial part of the global supply chain by enhancing its electronic manufacturing capability. Foxconn, the largest contract manufacturer in the world and a key producer of Apple's iPhones, has operations in India. Apple began making iPhones in India in 2017, ramping up production and opening stores in the country last year.¹ Now, India is transforming from being heavily dependent on imports to achieving near self-sufficiency and establishing itself as a significant exporter.

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2. Drivers of Smart Phone Manufacturing

2.1. Government initiatives

1. **Production Linked Incentive Scheme (PLI):** The Indian government launched the PLI scheme in April 2020 to boost mobile phone manufacturing within the country. It encourages companies to increase production and set up local facilities by providing financial incentives. These rewards are given one year after companies hit specific production targets. Up until now, around Rs. 2,500 crore has been allocated under this scheme. Samsung received Rs. 500 crore for meeting its first-year goals, while Rs. 2,000 crore was given to three contract manufacturers working with Apple and Dixon.² This initiative has drawn in significant global players like Dixon Technologies, Foxconn, Apple, and Samsung, fostering competition and promoting the transfer of advanced technology to the Indian workforce.
2. **Phased Manufacturing Programme (PMP):** In May 2017, the PMP scheme was introduced to promote the local manufacturing of mobile phones. The program's aim is to develop a robust domestic manufacturing environment for mobile devices. By imposing tariffs, India intends to protect local industries. In the electronics field, these tariffs work to gradually increase local production, aligning with the PMP's objectives.
3. **Make in India:** Launched in 2014, the Make in India initiative by the central government has significantly boosted the production of mobile phones within the country. Between 2014 and 2022, the production of mobile phones in India surpassed 2 billion units, highlighting the success of the initiative in promoting domestic manufacturing.

2.2. China+1 trend

Countries around the world are looking to lower risks tied to geopolitical tensions and the problems of depending too much on one country, like China, for their supply chains. They are also interested in expanding where they manufacture and get products. India is becoming an attractive choice because it's a growing market. The strategy known as China+1 is working well for India, helping it catch up with China's mobile phone exports. In recent times, data showed that China and Vietnam saw a decrease in their exports in 2023-24. China's export dropped by 2.78% while Vietnam decreased by 17.6%.³ On the other hand, India's exports went up by over 40%. More specifically, China's mobile phone exports fell by \$3.8 billion and Vietnam's reduced by \$5.6 billion from the previous year. However, India's mobile phone exports increased by \$4.5 billion. These figures indicate that India captured nearly half of the export decline from both China and Vietnam combined.

2.3. Domestic demand

The demand for mobile phones in India is strong because there are many people who want to buy them, and they have more money to spend. This high demand, both within India and from other countries, encourages factories to produce more phones. Back in 2014, Indians spent around 12 billion US dollars on mobile phones. By 2024, this number grew significantly to 36 billion US dollars, increasing at an annual rate of 13%, according to the ICEA. This growth shows how quickly the market for phones is expanding in India.

2.4. Cost of manufacturing

Affordable labour in India plays a crucial role in the mobile phone industry by keeping production costs low. This allows manufacturers to sell phones at more competitive prices, drawing investments from both Indian and international companies. The government has been supportive, offering initiatives like the PLI scheme to encourage growth. As a result, companies can increase production to satisfy higher demand without significantly raising expenses. This industry is also a major job creator. Reports indicate that it has already generated about 500,000 jobs, with an additional 150,000 to 200,000 jobs expected by the financial year 2025.⁴ This expansion significantly impacts the economy, boosting the sector's growth.

2.5. Global competitiveness

India is advancing in mobile phone manufacturing by increasing production and engaging more in global value chains. To make supply chains better, it's important to cut taxes on essential parts and assemblies. The Union Budget for 2024-25 introduced key changes by lowering the basic customs duty on mobile phones, PCBs, and chargers from 20% to 15%. It also removed taxes on critical minerals and materials needed for smart phone production. These moves are expected to boost local manufacturing and meet industry demands by simplifying taxes.

3. Materials and Methods

The study is solely relied on secondary data, collected from the publications of Govt. of Kerala and India.

4. Analysis and Discussion

4.1. Production, Imports and exports trend over the past decade

Over the last ten years, India has seen important changes in how it produces, imports, and exports goods. The country aims for a US\$ 7 trillion economy by 2030. To achieve this, it needs to grow its digital sector and export more products. A key part of this plan is electronics manufacturing, with mobile phone production being especially important. India ranks among the largest manufacturing centers globally, following China, particularly for mobile devices. This position is supported by a large number of skilled workers,

strong government support, and improving infrastructure and resources to boost electronics production. In the fiscal year 2024, India's export of smart phones increased by 42%, reaching a total of \$15.6 billion.⁵ This achievement made smart phones the fourth-largest export product for the country. The United States emerged as the largest market for these Indian smart phones, purchasing \$5.6 billion worth. This amount was a significant increase of 158% compared to the year before, reflecting substantial growth in demand from the U.S. market (**Table 1**).

Table 1: India’s global rank in the export and import of mobile phone (2011-2024)

Year	Rank in the export	Rank in the import
2011	11	8
2012	12	10
2013	16	8
2014	23	6
2015	34	7
2016	29	13
2017	37	20
2018	16	26
2019	11	46
2020	11	27
2021	10	37
2022	6	32
2023	5	32
2024	4	32

Source: <https://www.ibef.org/blogs/exploring-the-surge-in-mobile-device-production-in-india-implications-and-opportunities>

4.2. Surge in mobile phones production in India

The India Cellular and Electronics Association (ICEA) announced big growth in India's mobile phone production. From 2015 to 2024, the industry grew by 40.76% each year. By 2024, the industry was worth US\$ 49.55 billion, or Rs. 4,10,000 crore. International companies have built factories in India, making the local mobile phone industry stronger. Now, India is the second-largest producer of mobile phones, right behind China. Back in 2014, India relied on imports for 78% of its mobile phones. But now, due to the 'Make in India' initiative, India makes 97% of its phones in the country. In 2011, India was the world's eighth-largest importer of mobile phones. This importing trend continued, and by 2014-15, India was importing smart phones worth almost US\$ 8 billion. Because of this high import level, the government realized it needed a plan to boost local phone manufacturing.⁶ This plan aimed to reduce imports by producing more phones in India to satisfy local demand. (**Figure 1**).

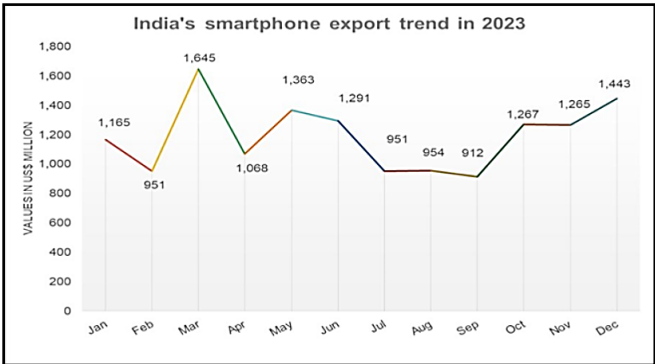


Figure 1: India’s smart phone export trend

Source: <https://www.indiabusinessstrade.in/blogs/indias-smartphone-exports-are-customs-duty-reductions-the-answer/>

In exports, India’s ranked has improved from 11th in 2011 to 6th in 2022, which further improved to 5th position in 2023 and 4th in 2024 (**Figure 2**).

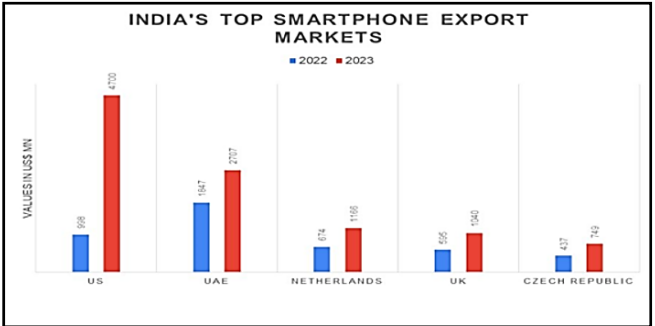


Figure 2: India’s top smart phone export markets

Source: <https://www.indiabusinessstrade.in/blogs/indias-smartphone-exports-are-customs-duty-reductions-the-answer/>

4.3. Export trends

As consistent with available information for 2022, China became the topmost exporter of smart phones (HS 851713) with a price of US\$ 138.Eight billion. It have become accompanied via way of Vietnam (US\$ 33.33 billion), Hong Kong, China (US\$ 27 billion), UAE (US\$ 20.6 billion) and Czech Republic (US\$ nine.6 billion). India become then ranked seventh globally. However, in 2023, India’s phone exports had been well worth US\$ 14.27 billion, registering a increase of ninety eight% YoY. This should catapult its rank to the 5th function above the Czech Republic at some stage in the 365 days. Top export markets in 2023 have been the US, UAE, Netherlands, UK and Czech Republic. India has witnessed robust top notch growth in all its top 10 markets except Germany (decline via 14.Seventy three% YoY). Turkey has seen the quickest boom in exports (524.Five% YoY) accompanied through the US (371.1% YoY), UK (74.7% YoY), Netherlands (seventy two.9% YoY) and Czech Republic (71.Five% YoY). Now even as you study smart mobile phone imports via america, that is the arena’s pinnacle

marketplace, you could further be aware the quantity to which marketplace percent has swung in India's favour. US clever phone imports from the top 5 suppliers fell to US\$ 45.1 billion in April-December from US\$ 40 9.1 billion in FY23. China exported US\$ 35.1 billion in clever phones to the US marketplace among April and December, a lower from US\$ 38.26 billion the previous year. Vietnam's telephone shipments fell to US\$ 5.47 billion in April-December 2023, up from US\$ 9.36 billion the previous one year. Lower taxes in China and Vietnam boosted their exports. In 2023, exports accounted for handiest 25% of India's clever smart phone manufacturing, in comparison to 63% for China's US\$ 270 billion and 95% for Vietnam's US\$ 40 billion. The different fundamental smart phone exporters to America are South Korea and Hong Kong.⁷ South Korea's exports to America progressed to US\$ 858 million from US\$ 432 million, whilst Hong Kong's income fell to US\$ 112 million from US\$ 132 million in April-December 2022-23. India's smart phone exports to the United States, as an alternative, extended to US\$ 5.01 billion in 2023, a stunning boom of 327.5% YoY. According to the Ministry of Commerce and Industry, clever telephone exports stood at US\$ 11.80 billion, marking a increase of 41.5% YoY in April-January, 2024, up from US\$ 8.35 million within the same length final year. With this growth in exports, India has become the 1/3-biggest clever telephone exporter to the US. Looking earlier, the Indian government wants to position America as a key detail of global deliver chains, imparting its strong manufacturing abilities as an opportunity to China. Initiatives including the Production-Linked Incentive (PLI) Scheme, Phased Manufacturing Programme (PMP), and Foreign Direct Investment (FDI) incentives help to foster a favourable surroundings for electronics production. Despite the top notch improvement, India faces numerous demanding situations in establishing itself as a primary clever smart phone exporter. On the turn side, for example, home market is showing signs and symptoms of a slowdown. According to the Indian Cellular and Electronics Association (ICEA) of India, trendy rate of domestic phone earnings in 2023-24 stood at US\$ 33 billion, the identical level as FY23.⁸ One key reason will be mobile penetration, which has already crossed 83%. The mounted base (function and smart phones) is now touching 1.15 billion in a population of 1.4 billion. Export percent disparities persist, with lower tax regimes in competing international locations which include China and Vietnam giving them a aggressive gain. Furthermore, immoderate charge lists on precise components and rising production charges hinder India's export interests. Data suggests that India has the excellent tariffs among key manufacturing locations, which constrains businesses from de-risking their supply chains past China. According to a file through ICEA, India's clean not unusual tariff is 8.5%, at the same time as that for China is three.7%. Similarly, in the case of FTA weighted average rate lists, India's average is 6.8% in contrast to 0.7% for Vietnam. ICEA cites two elements why increasing tariffs on inputs does not improve

localization. Firstly, India might not have the abilities or era to make those additives yet. Second, there wouldn't be sufficient call for those factors in India on my own at gift to make building them worthwhile. Right now, India is making an attempt to grow with the useful resource of promoting telephones to other countries. But excessive taxes on parts make Indian telephones pricier, thereby hurting each export possibilities and home manufacturing.⁹ Building export scale is vital to improve funding and scale, with a view to therefore cause acquisition of needful technology and talents. ICEA in fact claims that reduction in import fee lists have to decorate India's smart cellular telephone exports by way of almost 3 instances to US\$ 39 billion through 2027. Earlier these 12 months, the Centre cut import duties on cellular spare elements from 15% to ten%. The factors in question covered battery covers, primary lenses, back covers, and specific mechanical gadgets crafted from plastic and metallic. According to an analyst, the elements contain spherical 20-25% of the invoice of materials (BOM), and consequently must have a superb effect at the fee. Import percentage of the cost chain remains very high at around 90 5% of the BOM in premium iPhones. In his view, it is crucial that import fee lists remain excessive on components to make sure such surroundings are permitted to broaden. Furthermore, the likes of Apple and Samsung get overall import obligation exemption when they export that merchandise, because of the reality their gadgets (of contract producers like Foxconn and Wistron) are based totally in SEZs. The import obligations are applicable at the same time as the companies are selling that merchandise to the home market. An instance of this is the Apple iPhone 15, which turned into launched in September final one year, retailed for Rs 134,900, which became higher than the charges in distinct locations like US, Dubai and Singapore.¹⁰ For the components that Apple imports, it pays an import duty of 22%, although the smart cellular telephone is 'Made in India'. Combined with GST, it's far a whopping 40% of the value. However, if one seems at value addition traits of clever phones in India over the previous couple of years, there seems to be particular development. Local charge addition for smart phones in India has progressed step by step from round 6% in 2016 to 16% in 2023. In fact, Samsung is doing a splendid deal better than Apple constant with the record through Counterpoint, with a nearby rate addition of 25-30% of the retail rate, as compared to 6-8% for the latter. While there may be a contradiction in the views, one difficulty is apparent, that decreasing fees of additives will deliver the value down inside the home marketplace, therefore making it a better opportunity for 'Sold in India' smart phones. That may additionally definitely help build scale inside the home market. But India cannot moreover forget about the need of building a strong element manufacturing base, to be able to reason a truly sustainable and sturdy 'Made in India' smart phone surroundings. There has been a few development on this regard steady with records, and we have to now not lose sight of this goal both. At the give up of the decade from 2014 to

2024,¹¹ India has emerged as the arena's 2nd-largest manufacturer of cellular phones. This achievement marks an enormous transition in electronics production zone.

4.4. Reduced import dependence

As per the India Cellular and Electronics Association, the mobile phone industry evolved from being 78% reliant on imports in 2014 to reaching 97% self-reliance by 2024. Merely 3 percent of the entire mobile phones sold in India are presently imported.

India made 20 lakh crore rupees from phones this fast-growing ten years. In the last decade, the nation made 2.45 billion mobile phones, just short of the goal of 2.5 billion.

4.5. Thriving manufacturing ecosystem

This exquisite achievement highlights the increase of India's electronics manufacturing environment. The USA has efficiently decreased its reliance on imports and fostered a self-sufficient mobile phone manufacturing industry. India's rise as the second-biggest cellular telephone manufacturer globally is a testimony to the United States' dedication to developing a strong production quarter. With decreased import dependence and extensive production volumes, India has set up itself as a prime player within the international mobile smart phone market, contributing to its economic growth and technological improvements. Major clever cell phone agencies together with Apple (Factories in Tamil Nadu and Karnataka) and Samsung (Noida) have performed a significant position in growing cell smart phone exports from India, with a big amount being sent to markets inclusive of UK, Netherlands, Austria, Italy, the Middle East, North Africa, and South America. Apple is predicted to make a contribution maximum to this boom, accounting for 65% or round US\$ 10 billion of the entire exports, marking a doubling from US\$ five billion in FY23. This fulfillment may be notable as Apple has become the first clever cell phone logo to reap this level of exports from India.¹² Apart from those gamers, corporations like Xiaomi, Oppo, and Vivo also are manufacturing mobile telephones in India. This shift in the direction of making matters regionally will no longer just be beneficial to the economy but will create many possibilities for humans of the state.

4.6. Factors driving growth

Implications and opportunities

1. Growing export ability- Mobile cell phone exports, which stood at US\$ 186 million in 2014-15, reached US\$ 14.5 billion in FY24, indicating an excellent CAGR of 62% over the last decade. With tech organizations throughout the globe looking to diversify their supply chain, an inclusive mobile tool manufacturing enterprise in India can capitalize on the rising trend.

2. Improving exchange balance- As per the Commerce Ministry, India's cell phone exports to America expanded US\$ 3.53 billion during the April-December period of the FY24, marking a big boom from US\$ 998 million within the corresponding duration of the previous 12 months.
3. Boost to financial system employment/Contribution to the GDP- With improved demand and boom within the manufacturing of cellular phones, the arena has employed around 12,00,000 personnel and will create 2,80,000-3,00,000 lakh new jobs at once or circuitously in the next 12-16 months.
4. Infrastructure Development- To aid the accelerated production of cellular phones, authorities is calling toward growing pinnacle end infrastructure, along with production centers, logistics networks, and strength supply. Dixon Technologies, a main Indian corporation, has invested US\$ 30.93 million to build its Noida manufacturing facility. The increasing infrastructure spends to aid increase in cell manufacturing offers an opportunity for the ancillary sector to expand and attain market size.
5. Supporting Industries boom- The growth of cell telephone production stimulates growth in related industries which include electronics components manufacturing, software development, telecommunications, retail, and e-trade. These assisting industries advantage from increased call for, collaboration opportunities, and era spillovers, fostering a multiplier impact on the financial system.

4.7. Outlook

India Smartphone Market became worth US\$ 44.15 Billion in 2023 and is predicted to reach US\$ 88.99 Billion with the aid of 2032, at a CAGR of 8.1% at some stage in the length 2023 – 2032. Further, ICEA expects Mobile telephones to make a contribution extra than USD 50 billion in exports with the aid of 2025-26. India's rise as a global chief in cellular manufacturing is amazing, supported with the aid of the 'Make in India' plan and other authorities projects and strategies to reinforce the manufacturing sector that position it as some of the desired locations for electronics tool manufacturing.¹³ As India is now the second-biggest smart telephone marketplace across the world, India is restructuring mobile production dynamics, drawing the eye of pinnacle groups, and presenting substantially to the worldwide deliver chain.

4.8. Challenges:

Electronics exports are in large part pushed by worldwide fee chains (GVCs), which contain a couple of ranges of assembly and diverse talent necessities. To enhance production and exports, India desires a strategic medium-term technique focused on growing strong home surroundings. By

encouraging the important capabilities and technological capabilities, neighbourhood businesses can better combine into GVCs, accordingly strengthening their function. A thriving home environment can even permit companies and international brands to scale production and exports successfully. India faces opposition from nations like China and Vietnam that have mounted themselves as global leaders in electronics exports. In 2022, digital exports accounted for about 27% of China's overall exports and around 40% of Vietnam's, in comparison with India's 4.7%. This difference highlights the large ability for India to increase its electronics exports via optimising operations inside the USA. By that specialize in competitive production and building a supportive environment, India can purpose to advantage a larger share of the global electronics marketplace.

5. Conclusion

With authorities target of achieving US\$ 300 billion in manufacturing with the aid of 2025-26, India's electronics region is well positioned for growth. And a primary contribution of this boom to be cellular telephones production, that's anticipated to account for 40% of this output. For the first time in 2021-22, India's mobile phone exports crossed US\$ five billion, and reached US\$ 5.8 billion, and nearly doubled in next year. In 2023-24, India's mobile cell phone exports elevated by way of 42% in comparison to the preceding year, continuing the upward trend. The export levels from 2021-22 to 2023-24, with the advent of the PLI scheme for smart telephones, had been notable, showing a miles stronger growth push than in advance years. Additionally, India has transitioned from a scenario of excessive imports and comparatively low exports to at least one wherein exports now exceed imports each year. The government's tasks to enhance production and exports are critical for positioning India as a international production hub. This strategic method no longer only supports home growth however complements India's competitiveness in the global electronics market.

6. Source of Funding

None.

7. Conflict of Interest

None.

References

1. Sonwaney V. Can India Emerge as An Alternate Hub for Cell Phone Manufacturing Post Covid 19?. *Psychology Educ J.* 2021;57(9):6107-14.
2. Mobile phone manufacturing in india: a study of few characteristics <https://cds.edu/wp-content/uploads/2014/10/WP502.pdf>
3. Mobile manufacturing path for India: Lessons from other Asian countries. *Indian Public Policy Review* 2024;5(4):105-28.
4. India's mobile phone production capacity: Unutilised potential amidst declining demand. Available From:
5. <https://m.economictimes.com/industry/cons-productselectronics/indias-mobile-phone-production-capacity-unutilised-potential-amidst-declining-demand/articleshow/117063840.cms>.
6. An Analysis of Manufacturing Sector Performance: During Pre and PostPandemic COVID-19 in India. Available From: https://saudijournals.com/media/articles/SJHSS_96_177-80.pdf
7. Economic Survey. Available From: <https://static.pib.gov.in/WriteReadData/userfiles/file/EconomicSurvey2023Q44O.pdf>.
8. India Smartphone Market Share: Available From: Quarterly. <https://www.counterpointresearch.com/insights/india-smartphone-share/>
9. Mobile Phone Manufacturing in India. Available From: <https://www.epw.in/journal/2022/8/special-articles/mobile-phone-manufacturing-india.html>
10. 2 yrs since Make in India launch, only smartphones thrive in manufacturing sector. Available From: <https://www.hindustantimes.com/business-news/two-years-since-make-in-india-launch-only-smartphones-thrive-in-manufacturing-sector/story-FYmdkYHSpCvasavyTUZLRL.html>.
11. Exploring the Surge in Mobile Device Production in India: Implications and Opportunities. Available From: <https://www.ibef.org/blogs/exploring-the-surge-in-mobile-device-production-in-india-implications-and-opportunities>
12. Mobile Phone Manufacturing in India: Towards A Brighter Future!. Available From: <https://www.ibef.org/blogs/mobile-phone-manufacturing-in-india-towards-a-brighter-future>.
13. Apple, Samsung boost India's mobile phones exports to ₹1.2 trillion. Available From: <https://www.livemint.com/industry/apple-samsung-boost-india-s-mobile-phones-exports-to-rs-1-2-trillion-11709828095219.html>.

Cite this article: Karunakaran N. Mobile phone manufacturing in India: A pre-post pandemic comprehension. *J Manag Res Anal.* 2025;12(2):138-143.