Aatmanirbhar Bharat
India's turning point

An agenda for manufacturing laptops and tablets for India and the world

2021-26 US$ 100 bn opportunity

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INDIA CELLULAR & ELECTRONICS ASSOCIATION

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Executive summary

Electronic products are ubiquitous to modern life. While an ever connected and ever-changing digital world is continually driving the growth in their consumption, these products in turn are the wheels steering the digital transformation of economies.

Over the decades, this symbiotic relationship has led to a potentially large market. The global market for electronics is approximately US$ 2.1 trillion. Electronics has now become the world's leading traded commodity, along with oil. Among electronic products, mobile phones, laptops, and tablets serve as the primary instruments for communication. While several policy measures have been taken to promote the manufacturing and export of mobile phones, this report discusses about laptops and tablets in particular. The global market for these two products is expected to be largely around US$ 220 billion per year over the next five years. In India, the market size is estimated to continue to be around US$ 7 billion for the same period.[1]

However, India continues to import most of these products, and mostly from China--87% of laptops and 63% of tablets. It is no surprise then that the growth in computer hardware manufacturing in India has been abysmal. The Compounded Annual Growth Rate (CAGR) during the periods 2014-15 and 2019-20 for computer hardware was 3.8% in comparison with 64% for mobile phones and 23.5% for overall production in the electronics industry.[2,3] This shows that there is tremendous scope for policy intervention on the one hand, and on the other, for the industry to step up not only to manufacture in India but also for the world. Furthermore, India currently suffers a cost disability of 7.52%-9.8% vis-à-vis Vietnam and 17.32%-19% vis-à-vis China for the manufacturing of these products locally.

This presents an opportunity for India to ramp up the export of 'Made in India' laptops and tablets. The need of the hour is a calibrated approach aimed at the promotion of exports through incentivizing manufacturers, addressing disabilities, and attracting global value chains. This will achieve the twin objectives of reducing dependency on China and making in India for the world to obtain a sizable share of the global market, besides other benefits--such as employment creation by way of 5 lakh additional jobs; 1.26% contribution to India's GDP by 2025; a cumulative inflow of foreign exchange to the tune of US$ 75 billion; and investment of over US$ 1 billion. This may result in manufacturing value of US$ 100 billion.[4]

1 http://idctracker.com/
2 https://www.meity.gov.in/writereaddata/files/MeiTY_AR_2018-19.pdf
3 https://www.meity.gov.in/writereaddata/files/MeiTY_AR_2018-19.pdf
4 ICEA estimates

With this objective, this report makes the following recommendations:

Introduction of a Production-Linked Incentive (PLI) scheme for the manufacturing of these devices, along the lines of the one introduced for mobile phones in April 2020.

Creation of a conducive policy environment under Special Economic Zones (SEZs) to enable fast-paced electronics manufacturing relocation to India.

Addressing disabilities beyond the PLI scheme through Centre and state coordination.

02

Laptops and Tablets landscape: A brief overview

Undisputedly, mobile phones, laptops, tablets, and desktop computers are the pillars of today's information era (supported by backend infrastructure), facilitating a connected world and contributing to economic development. The ongoing pandemic has further underlined their importance, from interacting with the rest of the world to seeking information and services on a real-time basis.

Recognizing the potential of electronics manufacturing, the government, in recent years, has launched several flagship programmes such as Digital India and Make in India. In fact, the National Policy on Electronics (NPE), 2019,[5] lays down the vision of the government to promote domestic manufacturing and export of these products.

> 3.2.1 Transform India into a destination for manufacturing and exports in pre-identified, high growth electronics sector by encouraging and incentivizing large ESDM [Electronics System Design and Manufacturing] eco-system to achieve net positive Balance of Payments.[6]

'Electronic systems' is among the priority sectors under the Make in India initiative. Coupled with this, the NPE 2019 hopes to turn India into a global hub for ESDM by encouraging and driving capabilities in the country for developing core components, including chipsets, and creating an enabling environment for the industry to compete globally.

While substantial gains on the policy front have been made to encourage the manufacturing of mobile phones in the country, the other important segment--laptops, tablets, and desktop computers--has been lagging and requires more focus.

Why this is important is because this segment is expected to play a crucial role in achieving NPE's target of US$ 400 billion by the year 2025. Of this target, US$ 190 billion pertains to mobile phone manufacturing and the remaining US$ 210 billion can be addressed through the production and export of laptops and tablets, amongst others. NPE 2019 aims at providing fiscal incentives for boosting exports and transforming India into a manufacturing and export hub.

Despite the overall growth of the Indian electronics industry, that of the computer hardware segment has remained largely insignificant over the years, with more imports and negligible exports. In part, the reason being[7] that these devices fall under the category of Information Technology Agreement-I (ITA-1) products. Thus, the Basic Customs Duty (BCD) on their import is zero. Duties cannot be imposed on such imports as they will be in violation of ITA-1 (signed under the aegis of WTO). There is an inherent cost arbitrage and benefit to importing these devices as against their manufacturing in India. Therefore, unless exports are promoted, it is unlikely that the domestic market will offer any additional growth for companies aspiring to manufacture in India. On the contrary, rising imports are likely to further inflate the import bill and negatively impact the balance of trade situation.

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5 https://www.meity.gov.in/writereaddata/files/eGazette_Notification_NPE%202019_dated%2025022019.pdf

6 "3.1 Promote domestic manufacturing and export in the entire value-chain of ESDM for economic development to achieve a turnover of US$ 400 billion (approximately INR 26,00,000 crore) by 2025 [. . .]
"4.6 Provide fiscal incentives and support for export-led growth, including significantly enhancing economies of scale in electronics manufacturing [. . .]
"3.2 Strengthen India's linkages with global trade, integrate with global value chains and build facilitative programmes and incentive framework to boost Indian ESDM exports."

7 Department of Commerce Data https://commerce-app.gov.in/eidb/icomxcnt.asp

Table 1: Production Profile of the Electronics Sector in India (in INR Crore)[8]

S. No.	Item/Vertical	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	CAGR
1	Mobile Phones	18,900	54,000	90,000	1,32,000	1,70,000	2,25,000	64.11%
2	Industrial Electronics	39,374	45,083	62,214	69,057	80,850	92,200	18.55%
3	Consumer Electronics	55,806	55,765	64,742	73,524	77,000	84,000	8.52%
4	Electronic Components	39,723	45,383	52,099	59,132	67,706	75,800	13.80%
5	Strategic Electronics	15,700	18,055	20,760	23,562	28,270	32,800	15.88%
6	Computer Hardware*	18,691	19,885	20,382	21,401	21,180	22,500	3.78%
7	Light Emitting Diode (LED) Products	2,172	5,092	7,134	9,630	13,000	16,250	49.55%
	Total	**1,90,366**	**2,43,263**	**3,17,331**	**3,88,306**	**4,58,006**	**5,48,550**	**23.57%**

*Computer hardware comprises desktops, laptops, notebooks, tablets/net books, servers, other computing devices, microprocessor-based systems like customer-premises equipment, security hardware and appliances, storage devices, and computer peripherals like scanners and imaging devices, standalone printers and thin-clients.

Manufacturing Process of Laptops and Tablets: A Brief Overview[9]

A product such as a laptop or tablet is made up of around 20 components and assemblies that are sourced from around the world. A bare chassis forms the outer shell and the first thing that is installed in the chassis is the motherboard (Printed Circuit Board Assembly or PCBA), which is the heart of the product. All other components and assemblies--the hard drive, memory, keyboard, LCD assembly (including the webcam), Bluetooth PCBA, and battery--are connected to it.

After the product is assembled, it goes through rigorous testing processes to make sure it is functioning as per the specifications and is ready for market consumption. Parts and assemblies are checked for correct installation and functionality. The processor, memory, battery, hard drive, power adaptor, webcam, etc., are checked, so is the LCD assembly for colour calibration, brightness, sharpness, resolution, and touch functionality. Functioning of all ports, buttons, keys, and mechanical functionality is checked. Laptops and tablets undergo drop tests to ascertain that the impact resistance of the devices is as per their designs. The product is then sent to a run-in area where the operating system and other necessary software are loaded, and extended hardware testing is undertaken. It is also checked for overheating. To ensure quality and reliability, the product is assembled in an air-conditioned environment, with anti-static flooring, air curtains, etc.

Once the process is complete, the product goes through a quality check. After clearing that, the product is packed, along with the accessories, and is ready for dispatch to the customer.

8 MeitY Annual Report 2019-20 https://www.meity.gov.in/writereaddata/files/Annual_Report_2019%E2%80%9320.pdf
9 ICEA

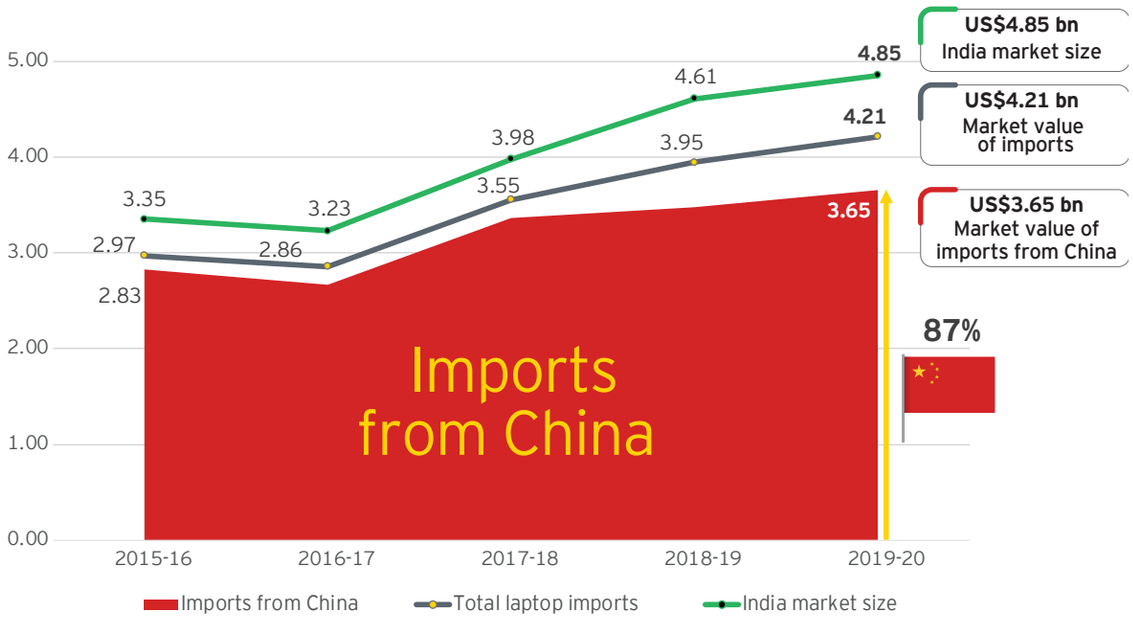
As incentives are provided for the manufacturing of this target segment, the Indian ecosystem is expected to witness the localization of sub-assembly components, such as PCBAs. The industry expects localization between 25% and 30% in the next five years.[10]

Fact-file of India's imports and exports of laptops and tablets

Laptops

India's import of laptops has increased by 42%--from US$ 2.97 billion to US$ 4.21 billion[11]--in value terms, in the last five years--87% of which continues to come from China. In absolute terms, India's dependency on China is very high--it has increased from US$ 2.83 billion to US$ 3.65 billion during the last five years. In fact, for the quarter ending July 2020, India's import of laptops was close to US$ 1.2 billion.[12] For the year ending March 2021, India's import of laptops is estimated to reach close to US$ 5 billion, wherein those from China are expected to hit US$ 4.35 billion.[13]

Figure 1: Laptop Imports and Imports from China*



*Import values in each case have been taken from the Department of Commerce, Ministry of Commerce and Industry, Government of India. The sales and distribution margins as per ICEA estimates have been added to arrive at the proportion of imports as a part of the overall market size.

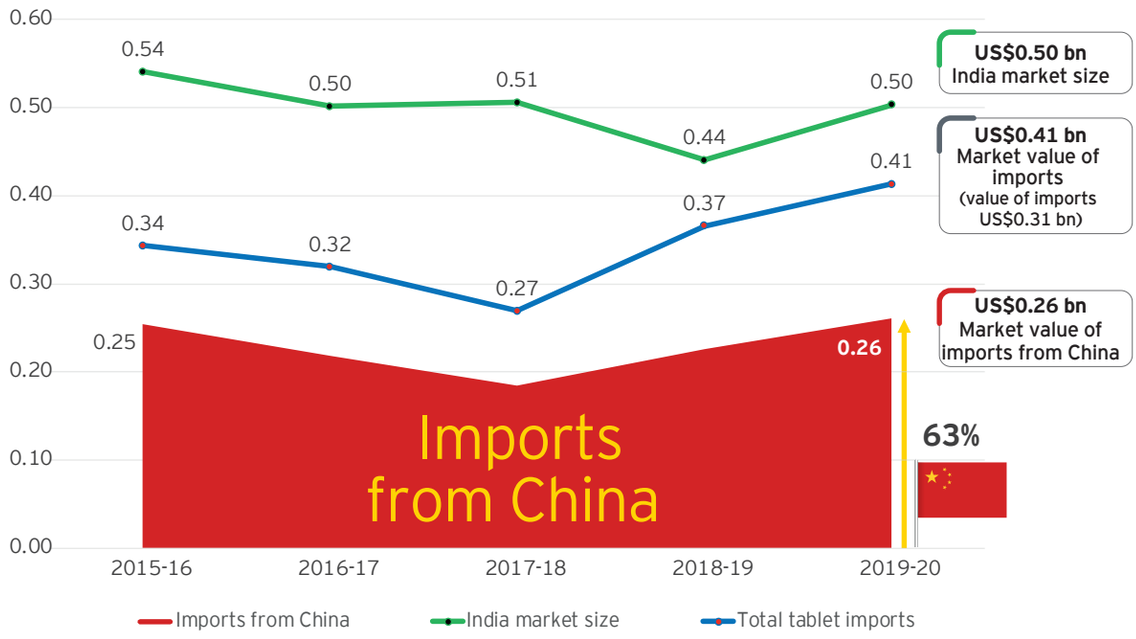
10 ICEA
11 Department of Commerce Data https://commerce-app.gov.in/eidb/icomxcnt.asp Inclusive of ICEA Estimates for Sales and Distribution Margins
12 Department of Commerce Data https://commerce-app.gov.in/eidb/icomxcnt.asp
13 ICEA Estimates

Tablets

The import-export imbalance is even more stark when it comes to tablets. Five years ago, imports were US$ 0.34 billion. This increased by approximately 20% to US$ 0.41 billion for the year ending 31 March 2020. Just like laptops, two-thirds of all tablets sold in India are imported from China.[14]

Exports in comparison have more than halved over the last five years, from US$ 0.06 billion to US$ 0.024 billion--over a 50% drop![15] For the year ending 31 March 2021, India's import of tablets is estimated to be in the range of US$ 0.35 billion, while exports are unlikely to cross even the US$ 0.02 billion mark.[16]

Figure 2: Tablets Imported from China*



*Import values in each case have been taken from the Department of Commerce, Ministry of Commerce and Industry, Government of India. The sales and distribution margins as per ICEA estimates have been added to arrive at the proportion of imports as a part of the overall market size.

It is noteworthy that India's highest trade deficit is with China, amounting to US$ 51 billion approximately.[17] Saudi Arabia and Iraq are distant second and third, respectively, and contribute to the trade deficit mainly on account of crude oil imports. Therefore, it is the wide-ranging category of imports from China--the largest comprising chapters 85 and 84 products, amounting to US$ 20 billion and US$ 14 billion approximately, respectively[18]--and others that may serve as the focus of Prime Minister Narendra Modi's Aatmanirbhar Bharat Abhiyaan.

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14 Department of Commerce Data https://commerce-app.gov.in/eidb/icomxcnt.asp Inclusive of ICEA Estimates for Sales and Distribution Margins
15 Department of Commerce Data https://commerce-app.gov.in/eidb/icomxcnt.asp
16 ICEA Estimates
17 https://comtrade.un.org/data/
18 https://comtrade.un.org/data/

In order to become self-reliant, the government needs to position India as a global hub for all finished electronics products and core sub-assemblies and components for laptops, tablets and desktop computers. Considering that the global addressable market is over US$ 220 billion, there is a need to proactively incentivize the set-up of manufacturing facilities with a predominant focus on exports. This way, the domestic manufacturing industry would become globally competitive and an integral part of the global supply chain.

The Pressures of ITA-1 Shall Be Addressed/Offset by Promoting the Manufacturing of Electronic Goods

India signed the ITA-1 agreement on 25 March 1997.[19] Back then, the computer market in India was small, the manufacturing environment was full of pitfalls, the cost of manufacturing was uncompetitive, and ITA-1 allowed easy import of completely built units (CBU) at zero import duty. The multinational companies preferred to address the market in India from their overseas bases in Taiwan and China.

Twenty-five years later in 2020, the market size has expanded to around US$ 7 billion and India can no longer continue to import these products unhealthily.

The NPE aptly recognizes this impediment in Para 5.1.2 and states, "[. . .] *to devise suitable methods for promotion of manufacturing of electronic goods covered under the Information Technology Agreement (ITA-1) of WTO*."

Consequently, domestic manufacturing for export of these products will meet three policy objectives:

01 Export competitiveness and foreign exchange earning

02 Address domestic demand through local manufacturing

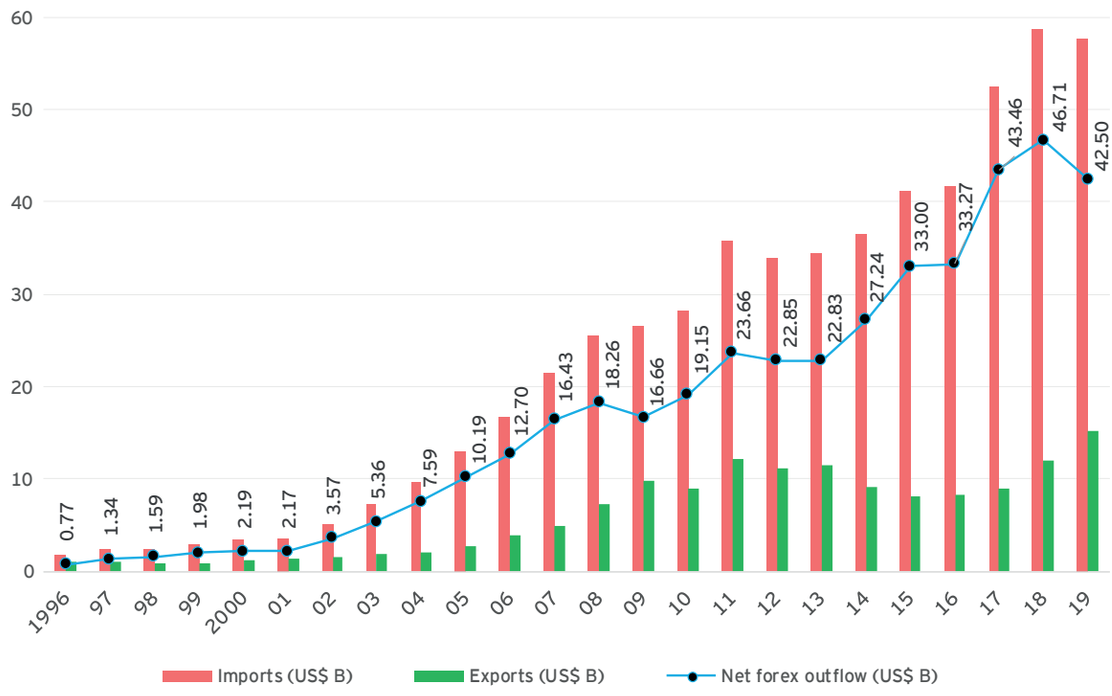
03 Reduce imports and foreign exchange outflow

It is evident from Figure 3 below that there has been a sharp increase in the import of electronics over the years vis-à-vis export, leading to massive forex outflow.[20]

Year	1996-2013	2014	2015	2016	2017	2018	2019
Imports (US$ B)	273.84	36.45	41.15	41.61	52.40	58.76	57.62
Exports (US$ B)	84.55	9.21	8.15	8.34	8.94	12.05	15.12
Net forex outflow (US$ B)	189.29	27.24	33.00	33.27	43.46	46.71	42.50
YoY imports growth (%)		6.00	12.87	1.13	25.94	12.12	-1.93
YoY exports growth (%)		-20.33	-11.53	2.33	7.27	34.71	25.51

19 Each signatory to this agreement was bound to eliminate customs duties and other duties, and charges of any kind, on many information technology products, including laptops, tablets, and desktop computers.
20 UN Comtrade Data https://comtrade.un.org/data/

Figure 3: India's Forex Outflow on Account of HS 8471 and Chapter 85 Products (1996-2019)[19]



Potential for 5 Lakh New Jobs

A manufacturing ecosystem is estimated to create immense potential for jobs. For instance, the recently announced PLI scheme for mobile phones by the Ministry of Electronics and Information Technology (MeitY) aims at generating 2 lakh direct and 6 lakh indirect jobs in the next five years.

These jobs will be linked to the production of INR 10.5 lakh crore (including exports of INR 6.5 lakh crore) over the next five years. The additional investment is estimated to be INR 11,000 crore.[21]

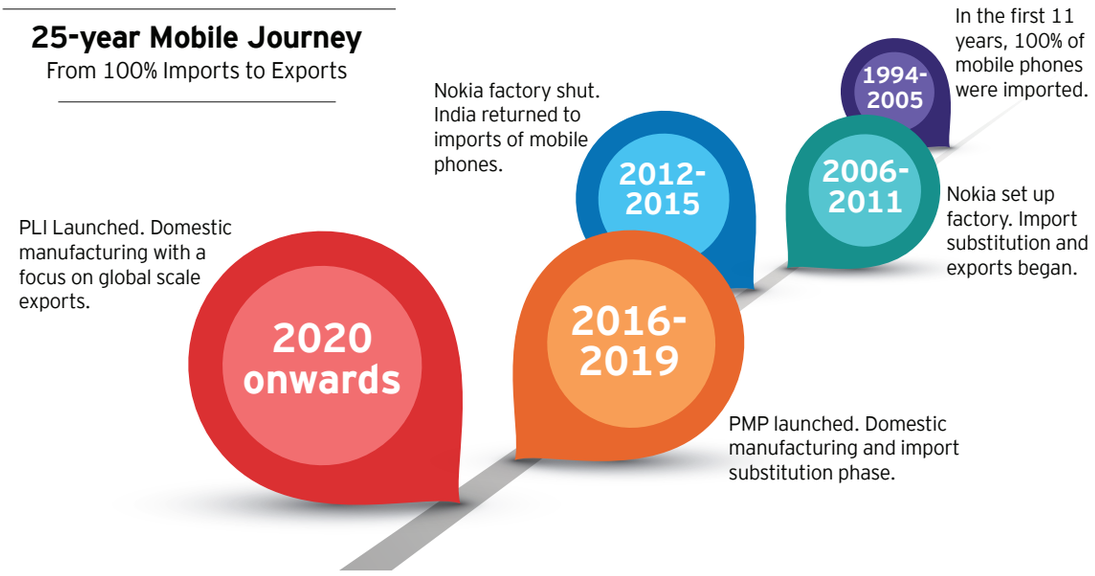
The manufacturing of laptops, tablets, and desktop computers requires establishment of new plants, work assemblies, multiple components (>15) and processes (>10). This will require an additional workforce for the infrastructure thus created and will thereby create more jobs.

The total investment required over the next five years is expected to be over US$ 1 billion (over INR 7500 crore).[22] This is aimed at facilitating the manufacturing of US$ 100 billion (INR 7.5 lakh crore) (including exports of US$ 75 billion) of this product category.[23] Unlike the mobile phone sector, the existing manufacturing capability of laptops and tablets is limited and hence, the investment is expected to be proportionately higher. This is expected to generate employment opportunity in terms of direct (1 lakh) and indirect (4 lakh) jobs in next five years.[24]

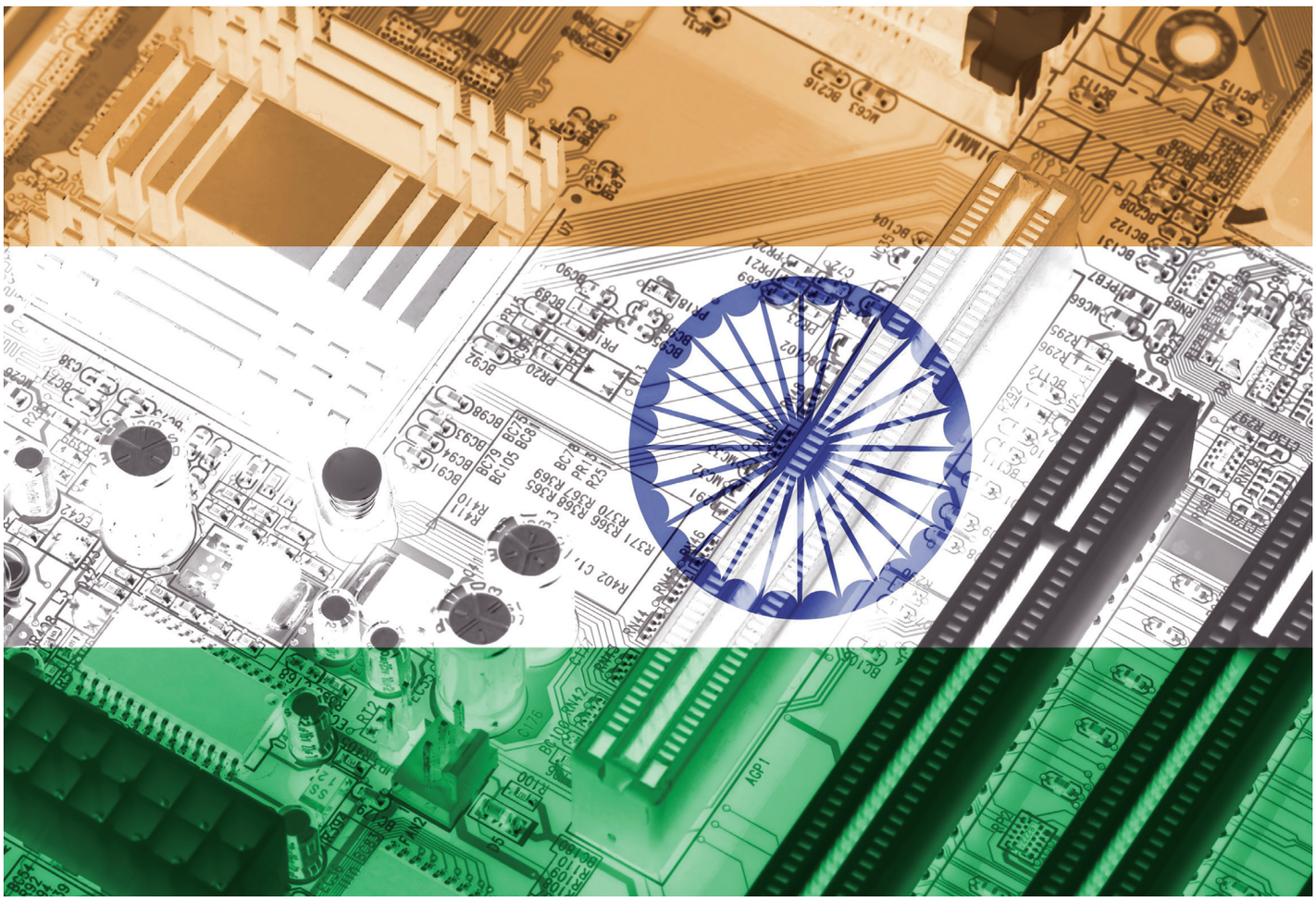
21 https://pib.gov.in/PressReleasePage.aspx?PRID=1662096
22 Based on capital turnover ratio derived through financials of industry players (accessed via Ministry of Corporate Affairs)
23 ICEA Estimates
24 ICEA Estimates

Leapfrogging from Imports to Exports (Mobiles Phones vis-à-vis Laptops and Tablets)

In the case of mobile phones, India started with the import of feature phones (1994–2005). Later, with the establishment of the Nokia factory, India shifted to import substitution and exports (2006–11). When the Nokia factory shut down, our economy reverted to imports (2012–15). Later, after the Government launched the PMP scheme, India returned to import substitution (2016–19). Eventually, following NPE 2019, the PLI scheme aimed at manufacturing with a focus on exports from India starting 2020.



However, the strategy for import substitution by itself does not hold good for laptops and tablets nor is it possible to implement. The facts that duties cannot be imposed due to multilateral obligations and that there is reduced scope for non-tariff barriers have impeded the growth of the domestic manufacturing ecosystem. Therefore, the only viable option is to shift directly from imports to exports by incentivizing manufacturers to make in India for the world. This, in turn, is estimated to address import substitution to the tune of nearly US$ 4.5 billion per annum in good measure, as per industry estimates.



MeitY's Progressive Approach to Electronic Manufacturing

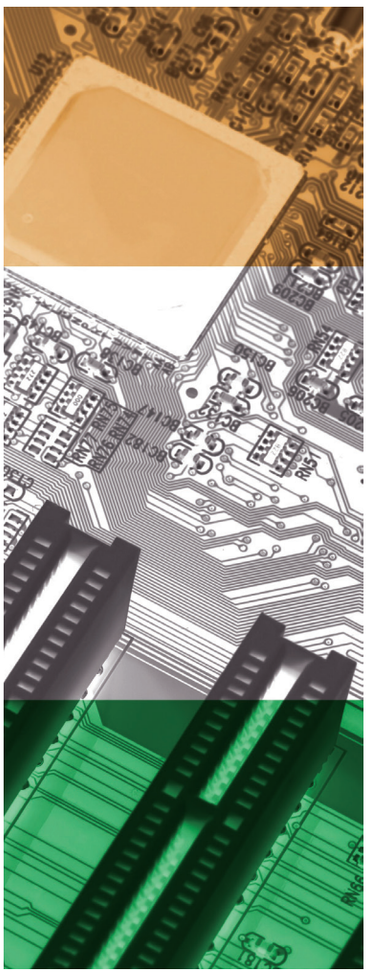
The role of MeitY in promoting electronics manufacturing in the country has been instrumental and impressive. In order to augment electronics manufacturing capabilities and develop a robust mobile manufacturing ecosystem, the trilogy of PLI, EMC (Electronics Manufacturing Cluster), and SPECS (Scheme for Promotion of manufacturing of Electronic components and Semiconductors) was launched in April 2020. The response to these schemes has been impressive, and they are expected to significantly ramp up manufacturing and export of mobile phones. The PLI scheme is considered a game changer and should be expanded to other sectors.

Even with such an emphatic response from manufacturers, China still accounts for a majority of global electronics manufacturing, as compared to India's meagre 3%,[25] which further drops to 1% in the case of laptops and tablets.[26] Domestic manufacturers may not expand substantively as domestic sale/range-bound market size offers limited opportunities. More so, a sizable portion of domestically produced laptops is also being catered to by the unorganized sector.[27] This repeatedly leads us to the conclusion that India needs to focus on exports and do so on an urgent basis.

The Opportunity is Here and Now

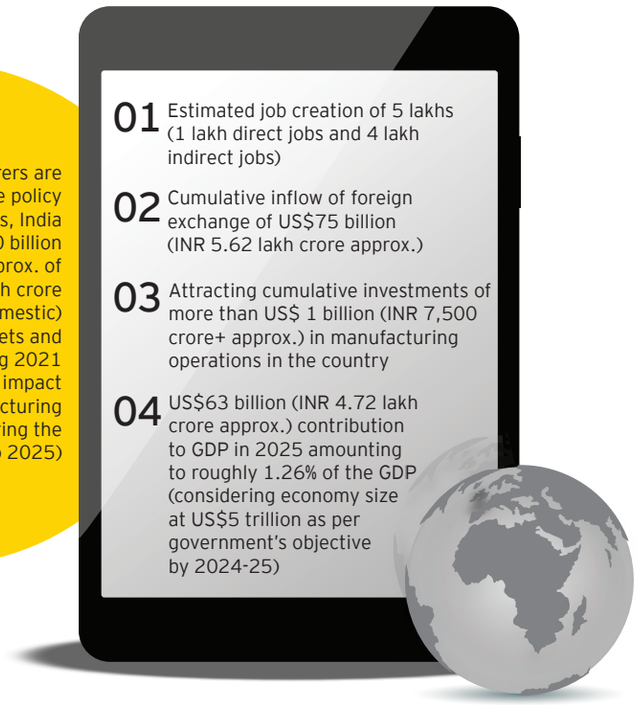
The role of manufacturers is instrumental in catalysing the development of the ecosystem. Increasing labour costs in China, the geopolitical trade and security environment, and the Covid-19 outbreak are compelling global electronics majors to look at alternative manufacturing destinations and diversifying their supply chains. Further, India will build massive capability and an ecosystem for producing mobile phones, not just for the domestic industry but for global exports. This can be harnessed for related sectors, especially laptops and tablets.

25 Report Titled 'Dixon Technologies (India) Ltd: Initiating Coverage' by Ambit Capital, June 2020, https://amr.thomsonone.com/thomson_financial_research_web_ui_banker/3_21/Resources/Loading.html
26 ICEA Estimates and IDC Tracker https://idctracker.com/
27 ICEA Estimates



Furthermore, EMS companies, such as Foxconn, Flextronics, Jabil, Wistron, Dell, Lenovo, and HP, already have a presence in India--primarily foraying into mobile phone manufacturing/assembly. Global brands such as Samsung, Apple, HP, Dell, ACER, Lenovo and ASUS are also expanding their presence in India.[28] Domestic companies are building capacities in the mobile manufacturing space. Incentivizing them and the Original Equipment Manufacturers (OEM) players to undertake manufacturing of this product category appears to be not just a logical step but a once-in-a-lifetime geopolitical opportunity for India to seize a sizable share of the global market. Global manufacturers' focus on producing at scale, combined with their need to diversify, augurs well for them to set up base in India and develop a component ecosystem to make products in India for the world. This may fructify provided India offers an incentive plan over the next 4–6 years that may compel companies to shift their production from competing East Asian destinations such as Thailand, Indonesia, Vietnam and Philippines, etc.

If the manufacturers are provided with conducive policy environment and incentives, India may manufacture US$100 billion (INR 7.50 lakh crore approx. of which 25% or INR 1.87 lakh crore is estimated to be for domestic) worth of laptops, tablets and desktop computers during 2021 to 2025[29]. The economic impact of this growth in manufacturing may be summarized (during the period 2021 to 2025)



Therefore, the benefits are compelling enough to incentivize the manufacturing of laptops, tablets, and desktop computers in India.

28 ICEA estimates
29 ICEA Estimates

03

Global market opportunity. Why now?

As per IDC estimates, the global market for laptops, tablets and desktop computers has grown from US$ 229.38 billion in 2018 to US$ 240.99 billion[30] in 2019 and is expected to stabilize around US$ 220 billion by 2025. In volume terms, from 2018–19, the market size has expanded from 401 to 406.47 million units and is expected to be around 370 million units by 2025. While detailed projections have been provided in the sections below, the key highlights are as under:[31]

01 — The global market size is expected to remain above US$ 220 billion till 2025

02 — Only 6 global players comprise 89% of the market shipments for laptops and 81% for tablets

03 — United States and European Union together represent more than 40% of the global market size

04 — The global manufacturing hubs are limited to a handful of countries with China being the predominant supplier to the world (66% market share (2019); US$ 100 billion in value)

05 — By capturing a sizable share of the global market, significant forex inflows can be realized by India. Subject to credible incentives, India's share of global manufacturing may reach 26% in 2025

06 — At the same time, it would negate imports of target products from China leading to reduced trade deficit and greater self-reliance

This market has remained entirely outside the reach of Indian manufacturers. India's total exports in 2019 for laptops and tablets together comprised a mere 0.015% of the US$ 240 billion.

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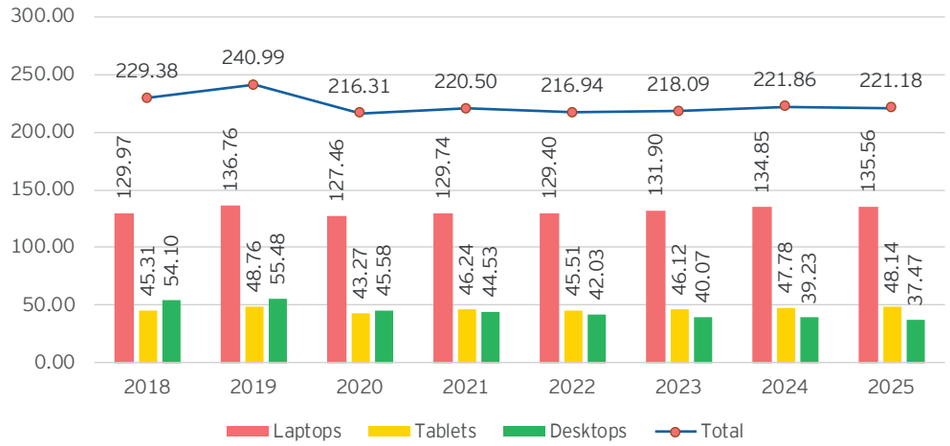
30 http://idctracker.com/

31 ITC Trade Map https://www.trademap.org/Country_SelProduct_Map.aspx?nvpm=1%7c%7c%7c%7c%7c%7c847130%7c%7c%7c6%7c1%7c1%7c2%7c1%7c1%7c2%7c1%7c%7c3

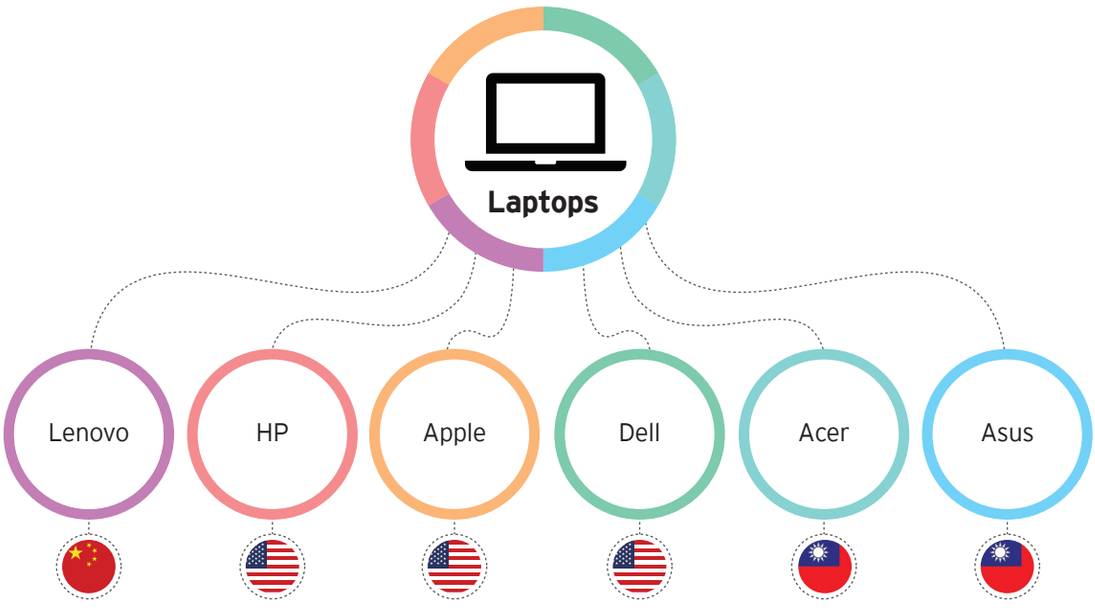
A. Trends in Global Market

The global market in terms of volume and revenue, after registering growth in 2019, is expected to remain largely stable between 2020–25, as exemplified in the figures below. Despite this, a US$ 220 billion global market presents a massive opportunity for India to export. Even at 15% of the global market, laptops and tablets can become one of India's high-ranking exports by 2025.

Figure 5: Current and Future Market Size in Value Terms (US$ Billion)[32]

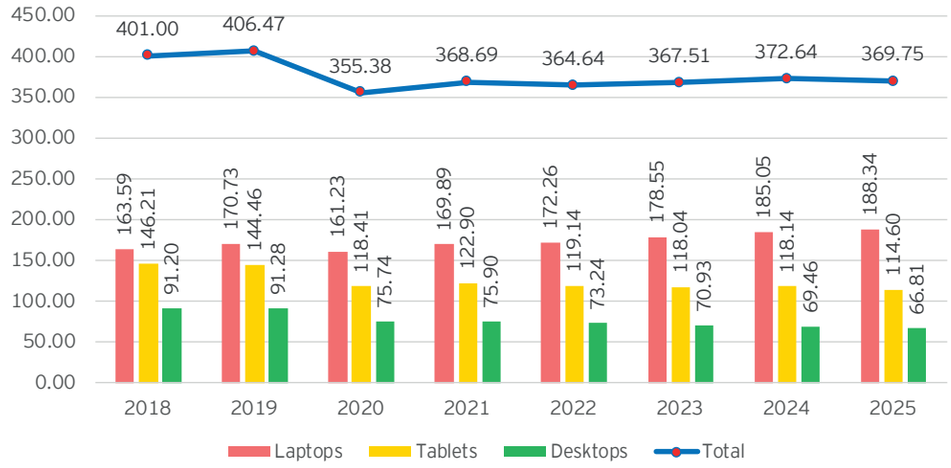


Six global supply chains lead manufacturing of laptops[33]

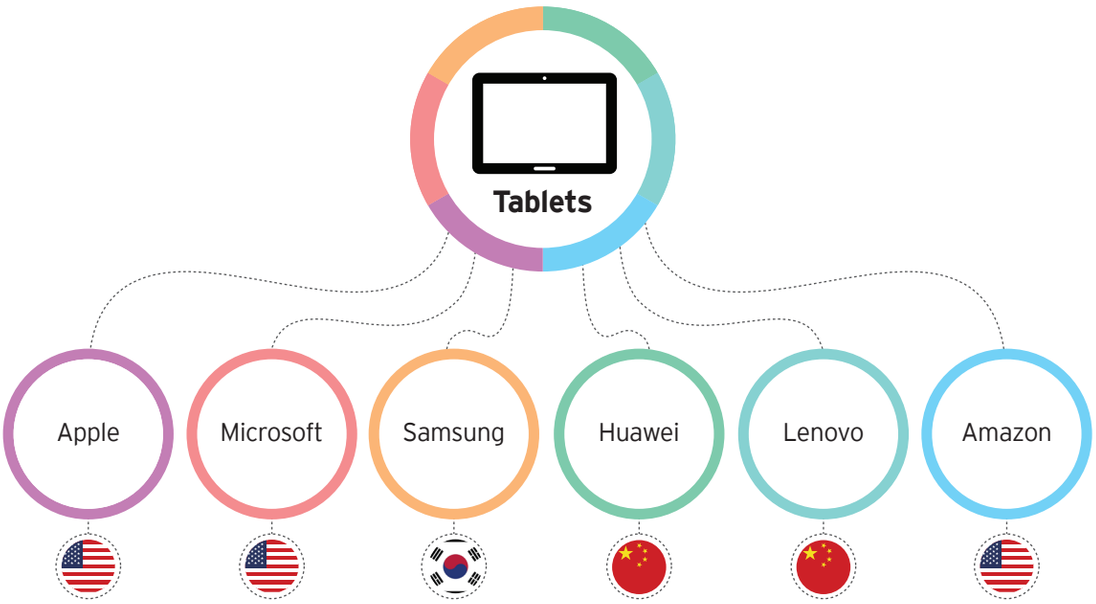


32 http://idctracker.com/
33 http://idctracker.com/

Figure 6: Current and Future Market Size in Volume Terms (Million Units)[34]



Six global supply chains lead manufacturing of tablets[35]



The introduction of the PLI scheme for mobile phone manufacturing is expected to augment the electronics manufacturing ecosystem, which includes parts and components. With adequate incentives and a policy framework, new domestic companies must be encouraged for manufacturing laptops and tablets.

34 http://idctracker.com/
35 http://idctracker.com/

B. Biggest Markets by Region (2019)[36]

The US remained the largest market for laptops, tablets, and desktop computers in 2019, accounting for over a quarter of the combined sales globally, followed by the European Union (~16%).

Table 3: Biggest Markets by Region in 2019 (US$ Billion)

Country/Country Groups	Laptops	Tablets	Desktops	Total
United States	34.98	16.16	11.31	62.45
European Union	22.52	7.85	7.68	38.05
China	17.40	7.76	10.99	36.15
Japan	14.94	4.26	6.38	25.58
United Kingdom	6.06	2.49	1.74	10.29
Latin America	5.50	0.88	2.32	8.71
India	4.85	0.50	1.77	7.13
South East Asia	3.70	1.13	1.99	6.82
Canada	3.84	1.06	1.40	6.31
Australia	3.46	1.21	0.99	5.66
Brazil	3.03	0.45	1.06	4.53
Korea	2.09	0.99	1.17	4.25
Russia	2.01	0.51	1.00	3.52
Gulf Cooperation Council	1.40	0.55	0.56	2.50
Indonesia	1.47	0.15	0.66	2.28
Africa (excluding South Africa)	0.94	0.55	0.59	2.08
Switzerland	1.12	0.33	0.35	1.80
Eastern Europe	0.97	0.22	0.39	1.58
Turkey	0.87	0.24	0.36	1.46
South Africa	0.73	0.16	0.19	1.07
Norway	0.79	0.11	0.15	1.06
New Zealand	0.53	0.13	0.19	0.84
South Asia (excluding India)	0.29	0.04	0.18	0.51
Others	3.27	1.04	2.05	6.36
	136.76	48.76	55.48	240.99

36 IDC Personal Computing Device Tracker; IDC Tablets Tracker http://idctracker.com/

C. India's Biggest Trading Partners Constitute the Biggest Markets for Laptop and Tablet Imports

India's top trading partners are the US, EU, Korea, Gulf Cooperation Council, Indonesia, and Switzerland (apart from China).[37] India may capitalize on the existing trade relationship with these countries/country groups to export laptops and tablets.

Figure 9: India's Top 5 Trading Partners Consume 71% of the Global Laptop Market[38]

India's top five trading partners--the US, EU, UK, Japan, and China--consume 71% of the global laptop production--58% by four who are net importers and the remaining 13% by China.

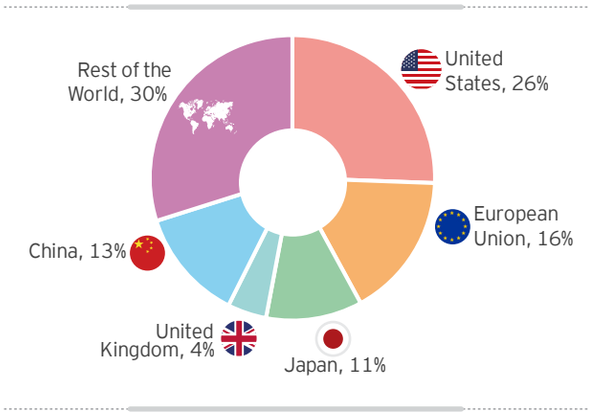
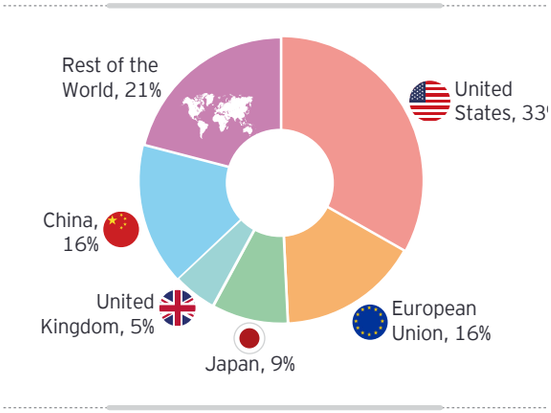


Figure 10: India's Top 5 Trading Partners Constitute 79% of the Global Tablet Market[39]

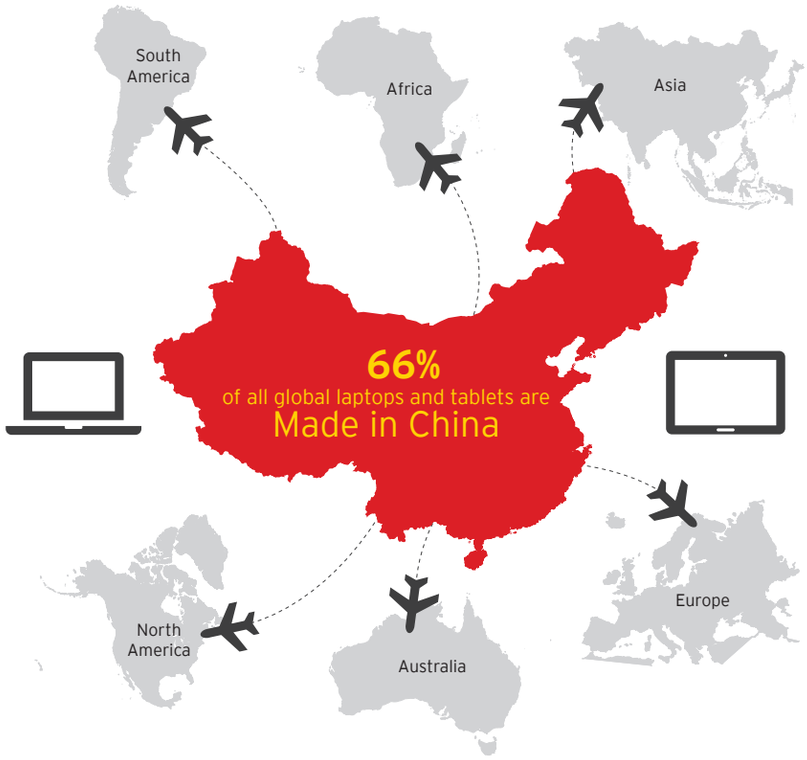
Similarly, these five countries also consume 79% of the global tablet production, including exports--63% by the four who are net importers and the remaining 16% by China.



37 UN Comtrade Data https://comtrade.un.org/data/
38 IDC Tracker (https://idctracker.com), UN Comtrade Data (https://comtrade.un.org/data/)
39 IDC Tracker (https://idctracker.com), UN Comtrade Data (https://comtrade.un.org/data/)

D. Global Manufacturing Hubs and Largest Exporting Nations/ Regions

Among the exporters of this target segment, China appears to be the leading manufacturing hub-- accounting for 66% of the world exports.[40]



Further, based on our interaction with leading industry players, Vietnam, Thailand, Malaysia, Mexico, Brazil, Poland, and Ireland may be considered as important competing destinations.

E. Cost Disabilities to Manufacture in India

To ascertain the factors that impede the creation of a sizable manufacturing ecosystem in India, it is imperative to analyse the disabilities faced by Indian manufacturers vis-à-vis China and Vietnam. Based on a report published by ICEA,[41] Table 4 summarizes these disabilities. Further, these problems are common for mobile phones, laptops, tablets, and desktops, accommodating for minor variations, if any, as per ICEA estimates.

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40 ITC Trade Map https://www.trademap.org/Country_SelProduct_Map.aspx?nvpm=1%7c%7c%7c%7c%7c%7c847130%7c%7c%7c6%7c1%7c1%7c2%7c1%7c1%7c2%7c1%7c%7c3

41 'Making India a Global Hub for Handset Manufacturing' by ICEA

Table 4: Factors that Lead to Cost Reduction in Electronics Manufacturing[42]

S. No.	Factor Resulting in Cost Reduction	India	Vietnam	China
1	Corporate income tax exemption/reductions	0.73%–0.95%	1.5%–2%	2%
2	Subsidy for machinery and equipment	Nil	0.2%	3%
2A	State subsidies in India for capital investments	0.6%–1.2%	NA	NA
3	Cost of power	0%	1%	1%
4	Interest subvention on working capital	0%	1.5%–2%	3%–3.5%
5	R&D subsidy	0.15%	0.4%–1%	2%
6	Incentive for supporting industry	0%	0.5%–1%	0%
7	Manufacturing incentives	-	0%	1%–2%
8	Exemption/reduction of land rental	0%	0.5%	0.6%
9	Industrial land development support	0.4%	0.5%	0.6%
10	Building (or plug and play)	Negligible	0.3%	1%
11	Labor subsidy	Negligible	0.5%	2%
12	Logistics	0%	0.5%	1%
13	Factors aecting 'Ease of Doing Business'	-	1.5%–2.5%	2%–3%
14	Duty-free imports for creating fixed assets, and of inputs not available domestically	0%	0.5%	-
Total		**1.88%–2.7%**	**9.4%–12.5%**	**19.2%–21.7%**
Cost disability differential for India vs. Vietnam and China		**-**	**7.5%–9.8%**	**17.3%–19.0%**

F. Role of Manufacturers in India

The global EMS industry reached US$ 542 billion in 2018 and is expected to grow at a CAGR of 7.5% till 2023, as it continues to play a vital role in the electronics value chain by providing contract manufacturing.[43] As a result, the share of EMS players in global electronics assembly, 42% in 2018, is expected to increase to 52% in 2023. Through EMS, brands and OEM players can gain access to the latest equipment and manufacturing know-how without significant capital investment, leading to cost savings and reduced time-to-market for newer products.

The increasing trend of mobile phone manufacturing in India and its ripple effect on the development of the component ecosystem may provide the necessary push for the domestic production of laptops and tablets as well.

As mentioned earlier EMS and OEM companies such as Samsung, Foxconn, Flextronics, Jabil, Wistron, Lenovo, Dell and HP already have a manufacturing presence in India. They usually have a leaner cost structure, better economies of scale, understanding of core operations and technology and invest heavily in R&D. Global brands may leverage the manufacturing set-up of EMS players to produce and market their products competitively.

Besides global brands, domestic manufacturers are also expected to play a crucial role in augmenting the manufacture of this segment.

Therefore, the incentivization of the manufacturing of laptops and tablets in the country appears to be a logical step to achieve the objectives of a robust electronics manufacturing ecosystem, become a crucial part of the global supply chain and earn foreign exchange through exports. This would be in line with Aatmanirbhar Bharat and the Make in India initiatives of the government.

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42 Report Titled 'Making India a Global Hub for Handset Manufacturing' by ICEA

43 Report Titled 'Dixon Technologies (India) Ltd: Initiating Coverage' by Ambit Capital, June 2020, https://amr.thomsonone.com/thomson_financial_research_web_ui_banker/3_21/Resources/Loading.html

04

Make in India.
Reduce imports and dependence on China

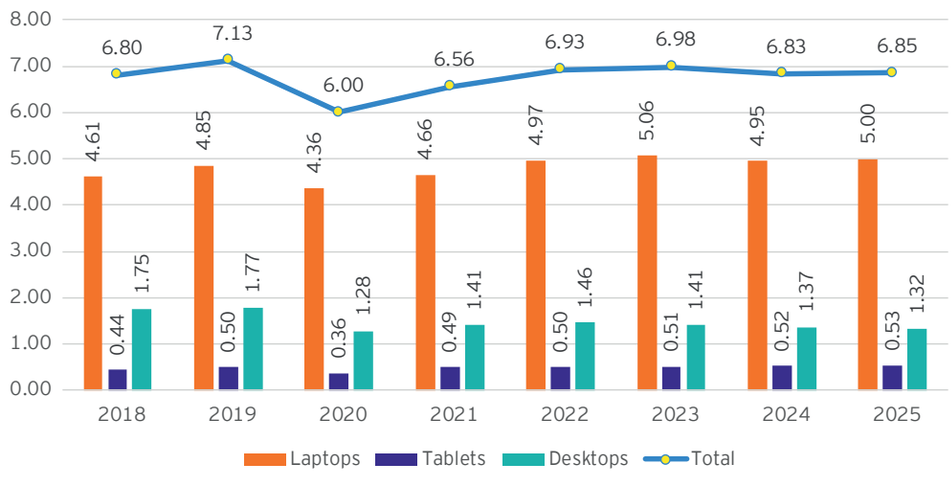
The domestic market is expected to remain largely stable at US$ 6.85 billion till 2025, according to IDC.[44] However, there are other estimates that expect this demand to increase by at least 30% over the next five years as India's per capita increases, digitization becomes deeper and the overall ecosystem for electronics manufacturing led by PLI for smartphones takes roots. In effect, the market could be closer to US$ 9 billion by 2025.[45]

Whether conservative or aggressive, the domestic market growth alone may not be sufficient to shift large-scale manufacturing to India. Therefore, focus on exports to global markets will be the key to successfully establishing a manufacturing base in India. The trends have been discussed in greater detail in the following sections.

The domestic market is expected to witness a decline in 2020, post growth in the previous year. Subsequently, the market size is estimated to remain rangebound between US$ 6.850 billion–7.0 billion from 2022 onwards. However, the projections appear to be conservative in the backdrop of expansion of the domestic market, low per capita distribution of laptops and tablets, and increasing digitization of the Indian society. The Digital India initiative of the government is also expected to boost the demand for such products, whereas the ongoing Covid-19 pandemic may further speed up the process. However, this will require cost-efficient scale of production, which can only be supported by an export-led market. This will in turn cater to the domestic sector as well.

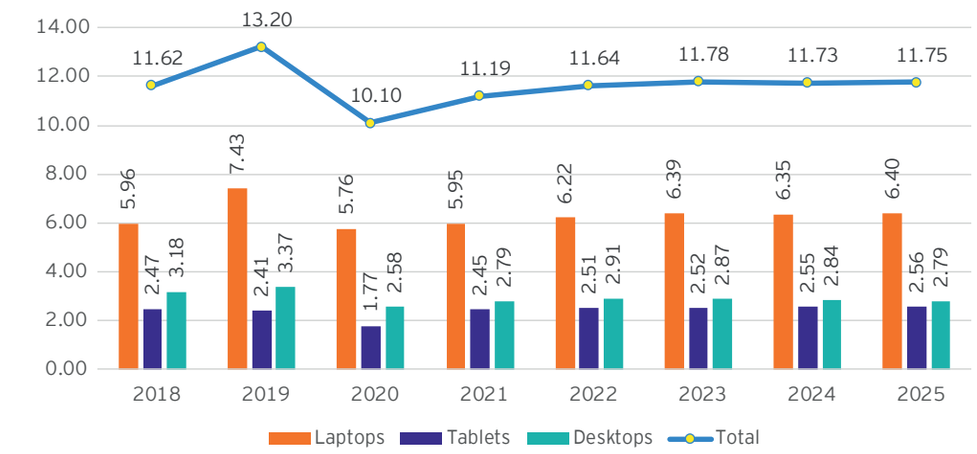
Just like a stable market size in terms of revenue, volumes are also estimated to remain steady after registering a decline in 2020 vis-à-vis 2019.

Figure 11: Current and Future Market Size in Value Terms (US$ Billion)[46]



44 IDC Personal Computing Device Tracker; IDC Tablets Tracker http://idctracker.com/
45 ICEA Estimates
46 IDC Personal Computing Device Tracker; IDC Tablets Tracker http://idctracker.com/

Figure 12: Current and Future Market Size in Volume Terms (Million Units)[47]



Domestic Market Segment

As per ICEA estimates and feedback from industry players, the domestic market may be broadly categorized under the following segments from an end-user perspective:

Government: Government mandates the procurement of goods for its departments or agencies with preference to higher local content

Large Enterprises (B2B): Large enterprises are a crucial segment for laptops, tablets and desktop computers since their workforce is highly dependent on electronic hardware

Consumer (B2C): Retail consumers comprise another significant segment of the market

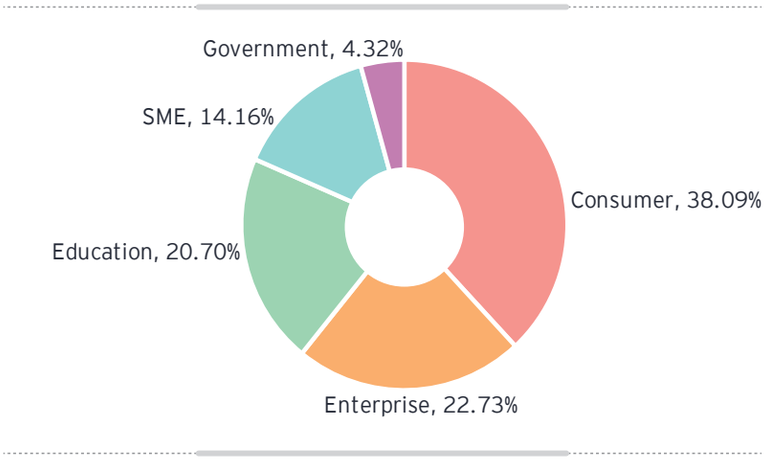
Education: This sector comprises around one-fifth of the market segment in India

Small and Medium Enterprises (SMEs): SME is another segment that caters to the demand of small and medium enterprises.

All these segments are expected to gain momentum post Covid-19 as entities move to an online mode for conducting their business and providing services. However, the requirements of the target segment are estimated to continue to be met by large imports from China, unless export-led policy initiatives in the form of incentives are provided.

47 IDC Personal Computing Device Tracker; IDC Tablets Tracker http://idctracker.com/

Figure 13: India's Laptops, Tablets, and Desktop Computers' Market Segmentation[48]



As of 2019, India's exports as a percentage of the world market constituted a paltry 0.015% in 2019. Among the major importers from India are Singapore, UAE, and China (which comprises roughly half, 46%, of the entire exports).

Table 5: India's Export of Laptops, Tablets, and Desktops Country-Wise (2019)[49] in US$ Million

Country	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Singapore	10.10	8.77	6.09	4.67	1.76	1.34	0.91	4.59	11.07	6.84	56.13
United Arab Emirates	4.94	8.14	10.33	16.69	4.89	7.58	8.22	14.08	25.99	5.27	106.12
China	0.27	1.89	1.50	4.34	2.65	0.28	0.98	7.85	22.27	5.30	47.32
United States of America	1.90	3.64	2.50	1.42	2.37	1.40	1.33	7.10	3.43	3.32	28.41
Russian Federation	0.00	0.02	0.00	0.00	0.10	0.19	0.00	0.00	0.00	1.88	2.18
Mauritius	0.17	0.02	0.20	0.04	0.02	0.05	0.00	8.73	2.86	1.61	13.69
Bangladesh	0.09	0.08	0.05	0.10	0.12	0.12	0.17	0.19	0.10	1.47	2.48
Netherlands	0.02	0.04	0.04	0.04	0.01	0.20	0.17	4.71	1.85	1.05	8.12
Others	11.61	17.62	12.68	7.84	19.06	64.87	7.08	5.09	8.26	8.54	162.65
Total	29.09	40.21	33.38	35.14	30.97	76.01	18.86	52.34	75.82	35.27	427.09

Most of the domestic market demand is met by importing these goods from China (and Hong Kong)--a dependency to the tune of 87%.

48 IDC http://idctracker.com/
49 ITC Trade Map, Exports by India https://www.trademap.org

Table 6: India's Import of Tablets, Desktops and Laptops Country-Wise (2019)[50] in US$ Million

Country	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
China	958.95	1,161.97	1,694.34	2,225.20	2,052.17	2,415.42	2,059.15	2,588.58	2,814.79	3,022.82	20,993.40
Singapore	66.86	75.47	79.93	81.66	104.09	118.30	137.14	134.39	258.20	368.89	1,424.92
Taiwan	2.59	14.05	13.43	7.83	10.62	14.84	11.08	11.87	62.91	82.59	231.82
Malaysia	14.09	48.61	17.27	5.39	19.66	8.10	40.70	44.36	44.39	53.46	296.02
Vietnam	0.00	4.74	18.73	124.81	52.15	18.07	0.05	0.03	0.01	23.47	242.05
United States of America	13.76	46.47	36.82	6.20	8.83	9.89	5.63	6.41	7.84	11.67	153.52
Korea, Republic of	0.45	25.32	20.62	6.95	8.18	2.76	1.32	0.92	5.27	6.25	78.04
Germany	7.31	40.07	33.94	5.21	3.19	5.87	5.86	5.64	3.70	5.57	116.36
Others	17.63	121.06	107.91	11.90	10.06	9.22	7.96	8.30	13.91	13.98	321.93
Total	**1,081.64**	**1,537.75**	**2,022.98**	**2,475.14**	**2,268.96**	**2,602.47**	**2,268.89**	**2,800.49**	**3,211.01**	**3,588.71**	**23,858.05**

50 ITC Trade Map, Exports by India https://www.trademap.org

Manufacturing in India[51]

As per ICEA estimates, India manufactured 4.36 million units and made production worth US$ 1.54 billion. (2019-20)

Table 7: India's Trend of Target Segment Manufacturing

Year	Value (US$ Million)	Volume (Units)
2014-15	1,428	50,49,079
2015-16	1,539	54,43,804
2016-17	1,471	56,38,181
2017-18	1,559	48,32,028
2018-19	1,583	37,73,677
2019-20	1,545	43,60,586

Incentives available[52]

In the past, the Government of India has taken several measures by way of providing incentives, to promote domestic manufacturing in India.

Following incentives were/are in place broadly, among others, for enabling manufacturing in the country:

S. No.	Particulars
1	Modified Special Incentives Package Scheme (M-SIPS)
2	Merchandise Exports from India Scheme (MEIS) *(likely to be withdrawn w.e.f. 1 January 2021)*
3	Special Economic Zones (SEZ)
4	Production-Linked Incentive Scheme (PLI) for mobile phones
5	Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS)
6	Modified Electronics Manufacturing Cluster (EMC 2.0) Scheme
7	Remission of Duties or Tax on Export Product (RoDTEP) (w.e.f. 1 January 2021)

These incentives assisted manufacturers to offset some disabilities. However, the tangible push in enhancing manufacturing capabilities did not come as expected due to competitiveness of our Asian peers (China and Vietnam) that provide wide-ranging fiscal and non-fiscal incentives. Taking note of this, Para 5.1 of NPE 2019 identifies a strategy for 'creating eco-system for globally competitive ESDM sector by incentivizing domestic manufacturing and exports to compensate for disabilities'.

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51 IDC http://idctracker.com/; Department of Commerce Website, https://commerce-app.gov.in/eidb/

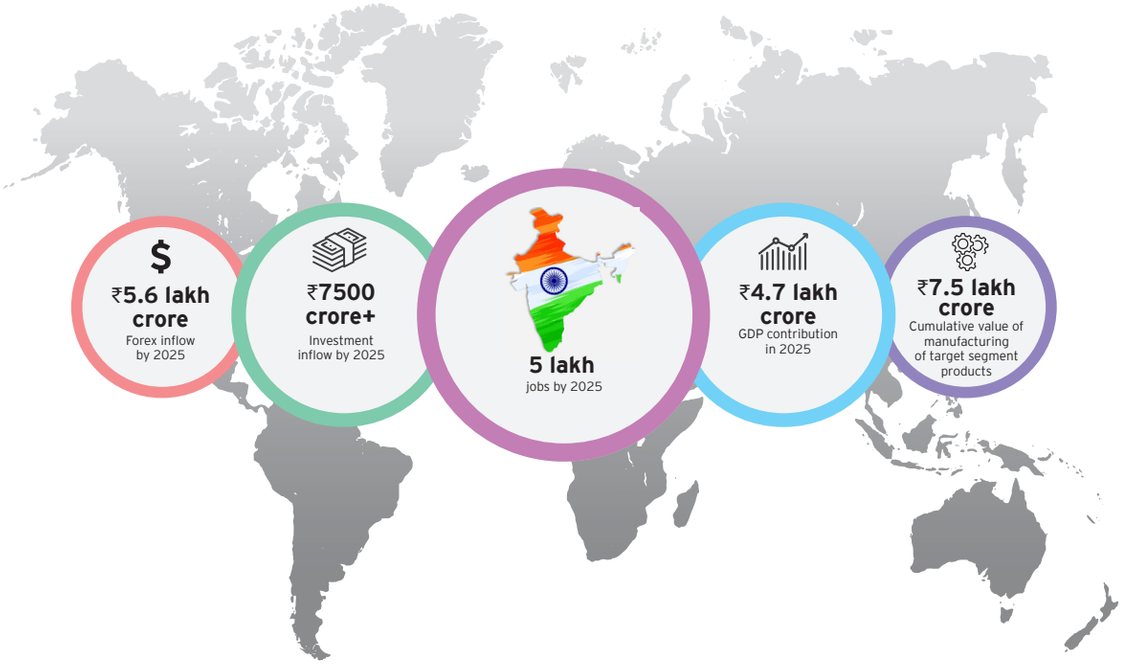
52 https://www.meity.gov.in/esdm/pli; https://www.meity.gov.in/esdm/SPECS; https://www.meity.gov.in/esdm/emc2.0; https://economictimes.indiatimes.com/news/economy/policy/special-scheme-on-cards-to-promote-component-manufacturing/articleshow/71671166.cms; MeitY Annual Report 2018-19, https://www.meity.gov.in/writereaddata/files/MeiTY_AR_2018-19.pdf; MeitY Presentation June 2020, https://www.meity.gov.in/writereaddata/files/Presentation-Electronics_Manufacturing_Schemes.pdf

05

Make in India for the world. Address a US$ 75 bn opportunity

As the indispensability of electronics in modern life is indisputable, the idea of encouraging their manufacture appears to be a no-brainer.

Given the above, India is well positioned to leverage its inherent advantages and capture a sizable share of the global market.



A. India's roadmap to manufacture US$ 100 billion worth of target segment products by 2025 (cumulative basis)

The momentum of growth in electronics manufacturing in India, with large-scale production expected in mobile phones, is estimated to create the necessary base to attract the additional ecosystem needed to kickstart large-scale manufacturing of laptops and tablets.

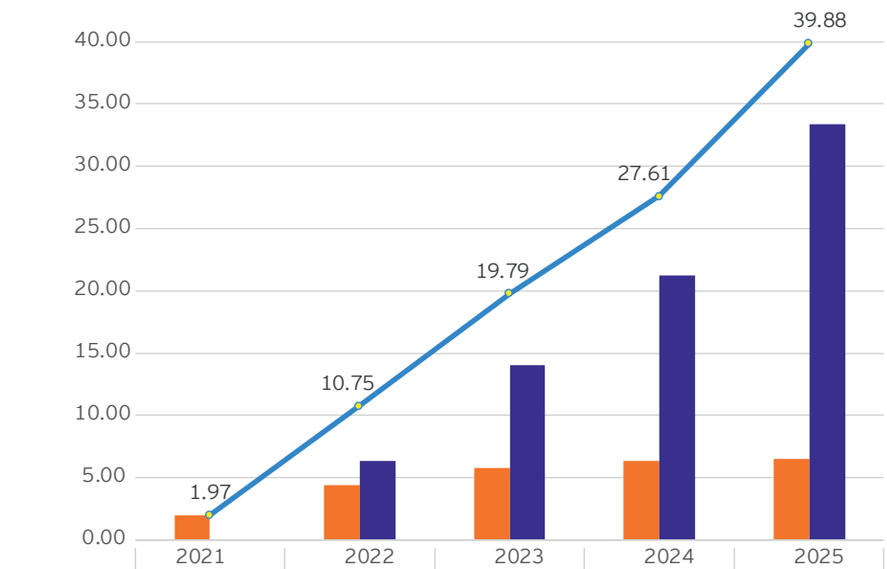
The Indian presence of global manufacturers and brands serves as a foundation for building other blocks to embark towards large-scale manufacturing. The existing facilities set up by industry players have mainly catered to the domestic market on a small scale (including the fulfilment of government orders requiring higher local production element). However, with a renewed focus to make in India for the world and to become competitive as part of the process, it is imperative to aim for a sizable share of the global market.

As per ICEA estimates, if the industry is suitably incentivized, India may well be manufacturing US$ 100 billion (INR 7.50 lakh crore approx.) worth of target segment products during 2021 to 2025 on a cumulative basis.

Figure 14: India's Roadmap to US$ 100 Billion Worth Manufacturing in 2021–25

Since the domestic market is estimated to remain rangebound between US$ 6 billion–7 billion (approximately),[53] focus shall be on making in India for the world and becoming an integral part of the global supply chain.

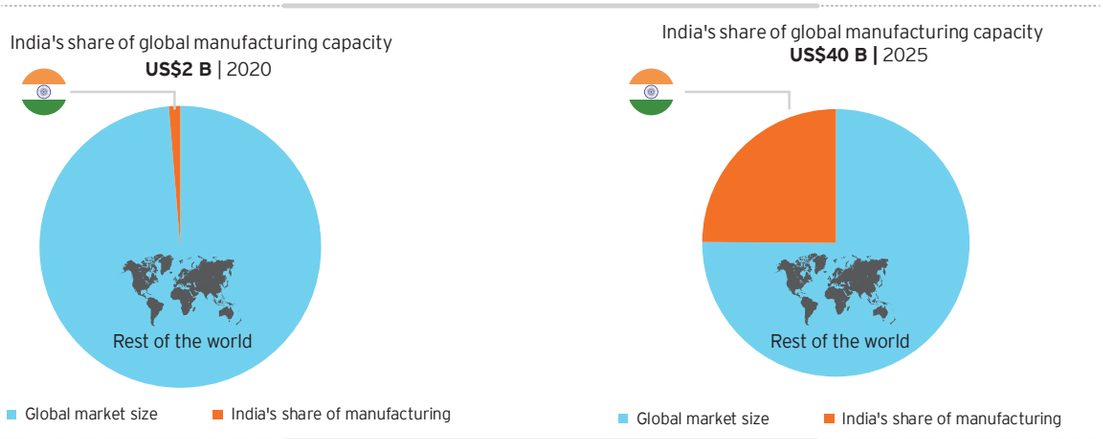
Laptops, tablets and desktop computers manufacturing (US$ billion)



	2021	2022	2023	2024	2025
Domestic	1.97	4.40	5.79	6.37	6.47
Exports	0.00	6.35	14.00	21.24	33.41
Total	1.97	10.75	19.79	27.61	39.88

53 IDC Personal Computing Device Tracker; IDC Tablets Tracker http://idctracker.com/

Figure 15: Increase in India's Share to 26% of Global Manufacturing Capacity | Today vs 2025[54]



Several factors favour India to become the global manufacturing hub for electronics in general and for laptops, tablets, and desktop computers, in particular, availability of labour at competitive wages (being 80% cheaper vis-à-vis China on GDP per capita basis[55]) and a demographically young workforce in the decades to come,[56] aided by geopolitical factors.

This calls for proactive policy initiatives on account of the following:

1. High potential for exports

Laptops and tablets have a large global demand compared to India's own. India may target to occupy 26% of the global supply base of laptops and tablets by 2025, which will deepen its penetration into the global value chains for these electronics. USA and Europe offer high ASP markets for manufacturers established in India. The export potential of these products far exceeds their domestic demand. Therefore, a policy push is required that encourages large-scale manufacturing in India for the world.

2. Building a world-class holistic electronics industry

The creation of a holistic electronics manufacturing industry is integral as well as crucial to the objective of NPE 2019. As mentioned earlier, the vision of NPE 2019 is to position India as a global hub for ESDM by encouraging and driving capabilities in the country for developing core components, including chipsets, and creating an enabling environment for the industry to compete globally.

The manufacturing of laptops, tablets and desktop computers is a naturally extended outcome of the policy initiatives taken for mobile handsets and specified components. Therefore, it is imperative to promote manufacturing and export of this segment as part of the efforts to build a world-class holistic electronics industry. This is expected to further augment the manufacturing capabilities, incentivize industry players to bring in technical know-how and achieve economies of scale, thereby making manufacturing in India more competitive. The trickle-down effect would be increased exports due to enhanced competitiveness.

54 ICEA
55 https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=IN-CN
56 International Labour Organization Projections https://www.ilo.org/shinyapps/bulkexplorer1/?lang=en&segment=indicator&id=EAP_2EAP_SEX_AGE_NB_A

3. Capturing the momentum of PLI

The PLI scheme, notified on April 2020, laid down the foundation for a sector of electronics, namely mobile phones and specified components, and rightly aimed at creating a large capacity and scale of production by 2025. This has garnered huge interest among mobile phone manufacturers (global and domestic brands alike). MeitY has recognized the initial success of the scheme.[57]

Union Minister Ravi Shankar Prasad in a recent press conference highlighted that India looks forward to integrating with global value chains for strengthening the electronics manufacturing ecosystem in the country. MeitY granted approvals to 16 companies under the PLI scheme on 6 October 2020. Production worth INR 10.5 lakh crore has been proposed by the approved companies--those under the mobile phone (invoice value INR 15,000 and above) segment have proposed over INR 9,00,000 crore; those under the mobile phone (domestic companies) segment have proposed INR 1,25,000 crore; and those under the specified electronic components segment have proposed over INR 15,000 crore.[58] It is crucial to keep this momentum going and expand the coverage to laptops, tablets, and desktop computers as well.

57 https://pib.gov.in/PressReleasePage.aspx?PRID=1642823
58 https://pib.gov.in/PressReleasePage.aspx?PRID=1662096

4. Job creation

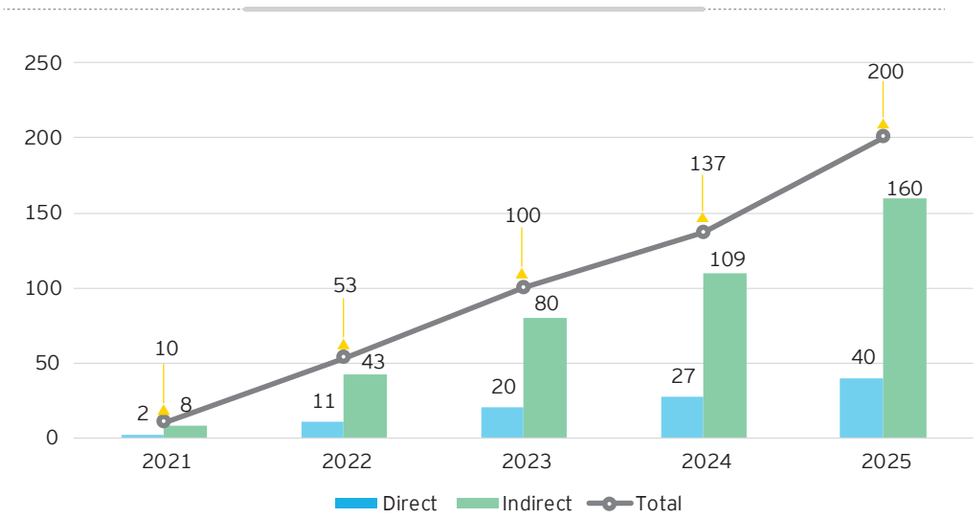
Manufacturing operations in the electronics industry in general and in the target segment specifically are expected to create significant employment opportunities.[59]

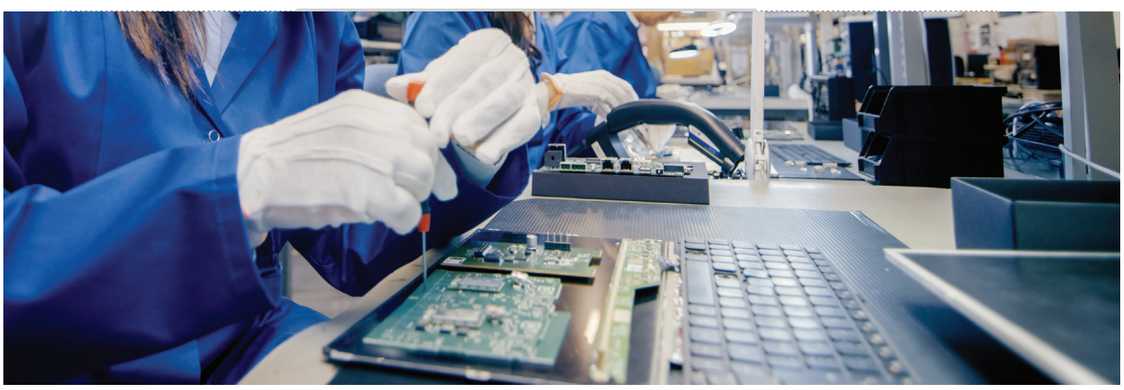
It may also be noted that jobs would not only be created from the manufacture and assembly of target segment products but also at suppliers of components to the assembly unit, after sales supplies and sales promotion of manufactured products in India. This would also lead to a large creation of indirect and induced jobs in the country due to increased manufacturing activity.

Based on our analysis of various studies, the job multiplier effect of direct jobs on indirect and induced employment has been derived to be 4.[60]

As per ICEA estimates, the target segment has immense job potential and cumulative job creation over the next five years could be as high as 5 lakh (direct employment of 1 lakh and indirect jobs to 4 lakh people).

Figure 16: Number of Jobs Estimated to be Created (in 000)





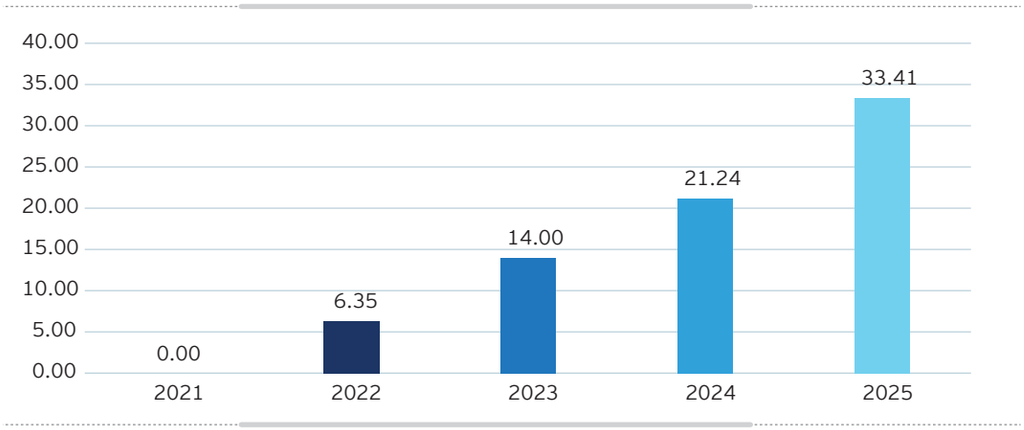
59 ICEA Estimates

60 Nasscom-Ficci-EY Report on 'Future of Jobs in India: A 2022 Perspective' https://www.ey.com/Publication/vwLUAssets/ey-future-of-jobs-in-india/%24FILE/ey-future-of-jobs-in-india.pdf; MeitY Annual Report 2018-19: https://meity.gov.in/writereaddata/files/MeiTY_AR_2018-19.pdf; IIM Bangalore Counterpoint Research Report: http://repository.iimb.ac.in:8080/bitstream/123456789/7791/1/WP_IIMB_528.pdf

5. Increase in foreign exchange inflow

As per ICEA, if the right policy initiatives as recommended are undertaken to incentivize manufacturing and offset cost disabilities, India can export US$ 75 billion (INR 5.62 lakh crore approx.) worth of laptops and tablets between 2021 and 2025.

Figure 17: Foreign Exchange Earnings through Exports of Laptops and Tablets (US$ Billion)[61]



Therefore, attraction of global value chains and establishment of large-scale manufacturing operations aimed at exports may lead to significant foreign exchange inflow over the years.

61 ICEA Estimates

6. Investments

To facilitate manufacturing and export of target segment products from India, investments would be required in the manufacturing facilities as well as to augment the entire infrastructure. Based on the financials of leading industry players having manufacturing operations in India, a capital turnover ratio of 2.07% has been arrived at.[62] Juxtaposing the ratio over the estimated production trend of US$ 100 billion (INR 7.5 lakh crore approx.) during 2021–25, **investment is expected to be over US$ 1 billion (over INR 7500 crore, approx.)**.

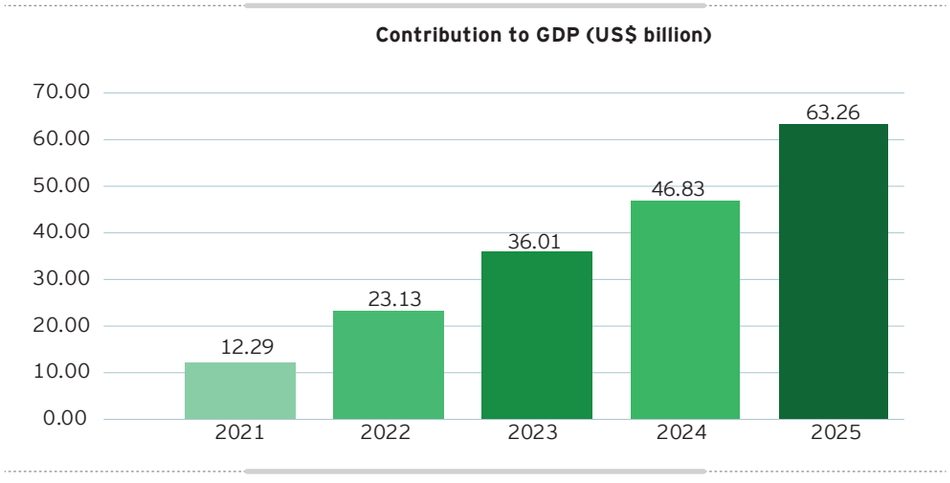
7. Contribution to GDP

Economic activity--right from the construction of a manufacturing facility to the production of goods and services to the selling of the manufactured goods-- drives economic activity which helps contribute immensely to the GDP of a country. For instance, building a manufacturing facility leads to employment for construction workers, suppliers of raw materials, logistics service providers, etc.

Due to the size and scale of the electronics industry and the interlinkage of one ecosystem with another, it is likely to have a trickle-down effect on the economy, thereby leading to increased economic contribution to the GDP.

The potential GDP contribution is estimated[63] to be US$ 12.29 billion in 2021, which can increase to US$ 63.26 billion (INR 4.62 lakh crore approx.) if India is able to achieve manufacturing scale of US$ 100 billion (INR 7.50 lakh crore approx.) worth of target segment products during 2021–25. Considering the stated objective of the Government of India to make India a US$ 5 trillion economy by FY 2024–25,[64] this translates to approx. 1.26% of GDP in 2025.

Figure 18: Contribution to GDP on Account of Laptop and Tablet Manufacturing (US$ Billion)



62 Financials of Industry Players Accessed through Ministry of Corporate Affairs
63 ICEA Estimates
64 IDC Personal Computing Device Tracker; IDC Tablets Tracker http://idctracker.com/

B. Make in India for the world: Become an integral part of global supply chain; obtain a sizable share of the estimated US$ 220 billion market

The export of goods and services is important for the growth of any industry and in turn, the economy. More exports lead to a more competitive, technologically mature, productive, and rapidly growing economy. Given that the global market size of this target segment is estimated to remain above US$ 220 billion, India has an opportunity to manufacture laptops, tablets, and desktop computers for the world market. Manufacturing for the domestic market alone may not be sufficient to attract the scale of operations needed to be competitive which will help foster innovation.

Since the domestic market is estimated to remain rangebound US$ 6 – 7 billion, focus shall be on making in India for the world, become an integral part of the global supply chain and capture 26% share of the global market by 2025.

C. Target countries/regions based on ASP segmentation

As per ICEA estimates, with the right initiatives to attract global value chains, the country's exports may reach US$ 75 billion by 2025. This essentially translates to one-fourth of the market share in the global supply chain. To do so, targeted manufacturing and sale may be undertaken, wherein global brands manufacture in India and cater to the global market based on their ASP range:

Table 8: Average Sales Price[65] across Global Regions (2019; in US$)

Region	Laptops	Tablets	Desktops	Who Can Export?
European Union	846	364	634	Dell, HP, Apple, Lenovo, Asus, Coconics, RDP
United States	718	363	629	Dell, HP, Apple, Lenovo, Asus, Coconics, RDP
Japan	1363	556	1061	Dell, HP, Apple, Lenovo, Asus, Coconics, RDP
Australia	1132	518	830	Dell, HP, Apple, Lenovo, Asus, Coconics, RDP
South East Asia	748	345	573	Dell, HP, Apple, Lenovo, Asus, Coconics, RDP
Turkey	816	174	653	Dell, HP, Apple, Lenovo, Asus, Coconics, RDP
Latin America	818	147	663	Dell, HP, Apple, Lenovo, Asus, Coconics, RDP
Eastern Europe	681	209	546	Dell, HP, Apple, Lenovo, Asus, Coconics, RDP
Gulf Cooperation Council	672	184	559	Dell, HP, Apple, Lenovo, Asus, Coconics, RDP
South Asia	648	204	518	Dell, HP, Apple, Lenovo, Asus, Coconics, RDP
Africa	651	195	503	Dell, HP, Apple, Lenovo, Asus, Coconics, RDP
Russia	586	202	525	Dell, HP, Apple, Lenovo, Asus, Coconics, RDP
Indonesia	480	142	558	Dell, HP, Apple, Lenovo, Asus, Coconics, RDP

India may target export to these countries/country groups by nurturing and encouraging the domestic manufacturing ecosystem accordingly.

65 IDC Personal Computing Device Tracker; IDC Tablets Tracker http://idctracker.com/

D. Opportune time for India to leverage new export opportunity in view of current global scenario

1. Effects of Covid-19 pandemic

The ongoing pandemic and subsequent lockdowns disrupted supply chains and brought global economic activity to a standstill. This led to corporations deliberating on diversifying their supply chains to mitigate such risks. Of late, companies are keen to reduce their reliance on China as a manufacturing base and explore possibilities to other countries by de-risking out of China. This may lead to shifting of supply chains to alternative locations, post the Covid-19 outbreak. With the right policy initiatives, India may attract global value chains and become more integrated in the global supply network.

2. Geopolitical events and security

The imposition of tariffs and counter-tariffs by the US and China, respectively, led to a trade war between the countries starting May 2018. This escalated in September 2018 with the announcement of fresh tariffs and the raising of tariff rates in the subsequent months. Though the countries signed a partial trade agreement, 'Phase One' of the trade deal, on 15 January 2020 for rollback of tariffs, among others,[66] it is estimated that negotiations for further rounds/phases of the deal are likely to be tough and the possibility of further tariffs cannot be ruled out.

Additionally, there exists a low level of strategic trust between the US and China, which could make bilateral relations more turbulent. In recent years, allegations of Intellectual Property theft and forced technology transfer from Western companies by local Chinese firms have also led to a growing mistrust between China and the Western economies (the US and EU, in particular).

India has an opportunity to proactively take steps towards attracting global value chains and bolster the manufacturing capabilities for laptops, tablets, and desktop computers to address and serve the global market.

66 https://ustr.gov/sites/default/files/files/agreements/phase%20one%20agreement/Economic_And_Trade_Agreement_Between_The_United_States_And_China_Text.pdf

06

Policy Roadmap for an Aatmanirbhar Bharat

Despite a rising focus on exports, the domestic electronics manufacturing sector does not have a level playing field vis-à-vis competing nations. The target segment suffers disabilities on account of lack of adequate infrastructure, domestic supply chain and logistics, high cost of finance, inadequate availability of quality power, limited design capabilities and focus on R&D by the industry and inadequacies in skill development. This disability becomes even more stark when India wants to position itself as an alternative destination for global supply chains. Global companies compare their current locations' costs and infrastructure with that of India's. This is where India is found wanting in competitiveness.

To tackle this situation, offset such disabilities and help achieve a self-reliant India, the government needs to position India as a global hub for all finished electronics products and core sub-assemblies and components, to name a few.

The primary step will be to encourage manufacturers in driving assembly capabilities, followed up by the development of core components for the industry to compete globally.

Address cost disabilities and incentivize exports

To cater to the global market, India needs to address cost disabilities and promote exports from the country. It is estimated that the country suffers from various disabilities like high cost of power, tax, and ease of doing business. This renders India almost 10%–20%[67] less competitive than Vietnam and China, respectively. India must address these issues in the long run. Meanwhile, the government should endeavour to offset these disabilities by providing incentives that are WTO-compliant, easy to implement and help India take off from the export runway.

As discussed in the previous sections, the right policy initiatives can lead to the following benefits during 2021–25

1. Estimated job creation of 5 lakh (1 lakh direct and 4 lakh indirect jobs)
2. Cumulative inflow of foreign exchange of US$ 75 billion (INR 5.62 lakh crore, approx.)
3. Attracting cumulative investments of more than US$ 1 billion (over INR 7,500 crore, approx.) in manufacturing operations
4. US$ 63 billion (INR 4.72 lakh crore, approx.) contribution to the GDP by 2025, amounting to roughly 1.26% (considering the economy size is at US$ 5 trillion as per government's objective by 2024–25)

In view of the above, it is recommended to introduce a suitable incentive policy that catalyses and promotes large-scale manufacturing. This will assist in offsetting disabilities vis-à-vis China and Vietnam and encourage industry players to set-up large-scale manufacturing facilities in India. It will also ensure a stronger interest generation amongst Indian contract manufacturers apart from global ones to foray into the production of such devices.

This will be instrumental in achieving our aim of a self-reliant India in all respects--net foreign exchange positive, huge job market, higher GDP, trusted global electronics supplier--while reducing our dependency on China.

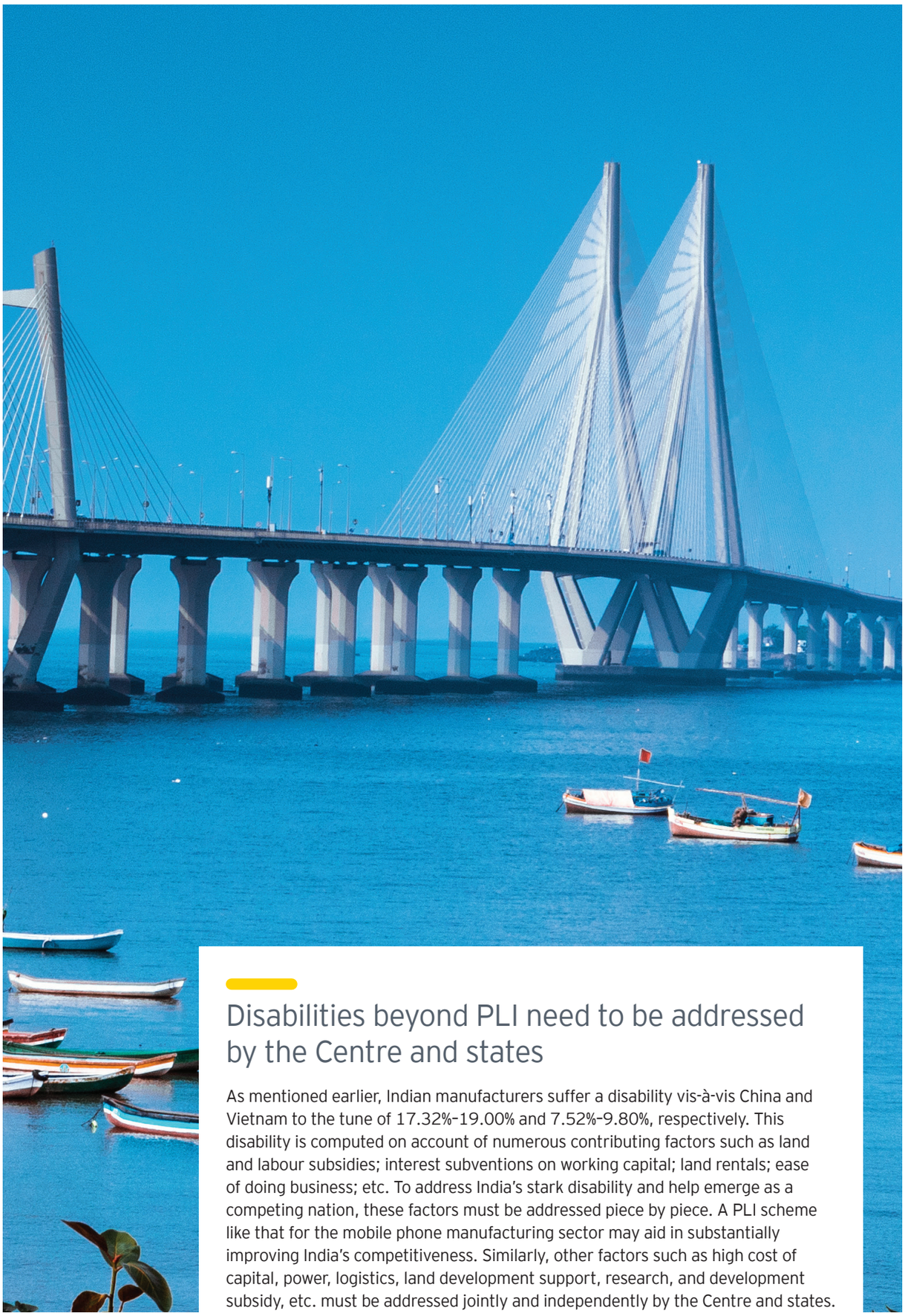
67 Report Titled 'Making India a Global Hub for Handset Manufacturing', by ICEA.

Create a conducive policy environment under SEZs to enable fast-paced electronics manufacturing relocation to India

With NPE 2019, our country has taken the first firm step towards the export of electronics. With the introduction of PLI for mobile phones, SEZs have now gained more importance for electronics manufacturing, with exports being of paramount importance.

SEZs allow for a faster set up of manufacturing plants and ease of doing business with duty-free import of capital machinery and components required for such goods. However, the sale of finished goods from SEZs into the Indian market is treated on a par with the import of the same products to India. This places SEZs at a disadvantage since they attract customs duties. Thereby, the lines for exports as well as domestic production perforce must efficiently be divided into Domestic Tariff Area (DTA) and SEZs. This will lead to an efficient utilization and sub-optimal use of production lines.

Similar to the policy of permitting manufacturing for the domestic market through the Manufacturing and Other Operations in Warehouse Rules (MOOWR), the benefit of manufacturing should be extended to SEZs by allowing Basic Customs Duties to be applied on inputs/components rather than any import duty on the finished product manufactured within India. All finished products manufactured within India irrespective of the industrial zone should be accorded the same treatment in terms of import duties. An SEZ can also be considered a bonded manufacturing zone serving the same objective. This will bolster our endeavour to make India a global manufacturing hub. Currently, the policy is such that it is beneficial for companies to import from countries with whom India has a Free Trade Agreement (FTA), rather than manufacture in an Indian SEZ. It reduces the incentive both for the domestic market and to manufacture for exports markets. This anomaly needs to be corrected.



Disabilities beyond PLI need to be addressed by the Centre and states

As mentioned earlier, Indian manufacturers suffer a disability vis-à-vis China and Vietnam to the tune of 17.32%–19.00% and 7.52%–9.80%, respectively. This disability is computed on account of numerous contributing factors such as land and labour subsidies; interest subventions on working capital; land rentals; ease of doing business; etc. To address India's stark disability and help emerge as a competing nation, these factors must be addressed piece by piece. A PLI scheme like that for the mobile phone manufacturing sector may aid in substantially improving India's competitiveness. Similarly, other factors such as high cost of capital, power, logistics, land development support, research, and development subsidy, etc. must be addressed jointly and independently by the Centre and states.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