

# Mobile manufacturing in a post COVID-19 world

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# 01

## Introduction - where do we stand?

As the world tries to recover from the COVID-19 pandemic, work and lifestyle choices may substantively change for people around the world. It would prompt increased usage of mobile devices, not just for entertainment or communication, but also for performing core functions. While the global demand is expected to lull across all industries in 2020<sup>1</sup>, certain sectors may pick up in the last quarter of 2020 post phased lifting of lockdown. Between a declining domestic<sup>2</sup> and global demand during 2020<sup>3</sup>, now more than ever, countries may need to seize global markets, as GDP of individual nations is expected to slow down, including that of India. By several estimates, India's GDP may be below 2% for 2020-2021<sup>4</sup>.

Exports of goods and services is important to the growth of any economy. Greater exports lead to a more competitive, technologically mature, productive and rapidly growing economy. When domestic manufacturers have to sell their products in global markets, it forces them to become more competitive and to adopt or innovate new technology more rapidly. Exporters can exploit economies of scale given their access to large world markets. Increasing exports facilitate improved access to international capital and intermediate goods for domestic firms. This may lead to productivity gains and expansion of the economy. An expanding economy creates increased employment and higher growth.

This means India ran a forex loss of USD 185.1 billion on account of net imports. India incurred a forex bill of US\$ 40.6 billion on account of electronics in year<sup>6</sup>. This amounted to approximately 22% of total merchandise bill in 2018. Further, India spent US\$ 18.7 billion on import of mobile phones and parts compared to paltry exports of US\$ 2.0 billion of mobile phones and parts<sup>7</sup>. In 2018, the forex bill on account of mobile phones and parts constituted 26% of the total electronics forex spends<sup>8</sup>.

In the last 5 years, India has tried substituting imports of mobile phones and parts by imposing duties on imports of finished mobile phones and parts like batteries, chargers, wired headsets under the Phased Manufacturing Program. While import substitution partially arrested the import of finished mobile phones due to shift of assembling operations to India, the imports of parts and components continued due to lack of volumes within India. The plausible way through which India can increase volumes leading to build up of the domestic ecosystem appears to be exports.



*The total merchandise exports of India stood at US\$ 322.5 billion and total merchandise imports were at US\$ 507.6 billion<sup>5</sup>*”

In order to become a net exporter of mobile phones, India may have to devise a strategy to catapult itself into the global arena. More than 80 percent of the mobile phone revenues are split between five companies in the world namely, Samsung, Apple, Huawei, Oppo and Vivo. The assembling of mobile phones is yet again centered in two countries China (including Hong Kong) and Vietnam. The five major mobile phone brands have made a beginning in India over the last five years to primarily serve the domestic market. However, these brands are keen and capable to provide India with global market access. Some of these global brands have begun smartphone exports from India since 2018. They await policy certainty to increase global supply from India. India can ride on the distribution and retail networks of these companies to plug into the global value chain. India has a young population that is willing to work and the manufacturing sector can provide them with job opportunities. Currently, India does not have in-house technology and R&D. Global lead firms can bring in advanced and cutting-edge technology that may not only aid the production processes of global lead firms but also domestic firms. Domestic companies can initially begin by becoming white label suppliers to some of the global lead firms and in turn, improve their production systems. With the right policy environment and stimulus, these Indian companies could reach global scale.

The spread of COVID-19 and the subsequent lockdown of countries has brought economic activity to a standstill across the globe. Resultantly, supply chains stand disrupted globally. The increased number of cases and casualties without a foreseeable cure/solution has added to the uncertainty in dealing with the pandemic. Against the backdrop of limited economic activity and disruptions to the traditional trade mechanism, global firms have been forced to de-risk manufacturing out of China and diversify across multiple countries, as against reliance on a single

source of production/procurement. The post COVID-19 era might thus present India an unprecedented opportunity to establish itself as an alternative destination for manufacturing to follow on the path of becoming a net exporter.

In addition, the ongoing crisis has also highlighted the vulnerability of the domestic mobile phone manufacturing system being heavily dependent on import of parts and components for undertaking manufacturing/assembly operations in India. This calls for proactively seeking investments through global lead firms and re-orienting supply chain from being import-led to domestic production.

However, it is also relevant to highlight the importance of exports in the creation of a domestic manufacturing ecosystem and the economic advantages it holds. The present crisis may provide a conducive environment for global firms to diversifying the supply chains and establish production capabilities in India.

Furthermore, the recent trade dispute between US and China gave India an opportunity to plug itself as the third mobile phone assembler in the world (apart from China and Vietnam). The COVID-19 crisis has opened yet another short-term window for India to attract manufacturing operations in the country. These opportunities may not last forever, nor will they automatically move manufacturing to India. Therefore, India needs to move purposefully, approaching companies and supply chains in a targeted manner and address their particular concerns with alacrity.

“

*The first step in this direction was signaled by the government through National Policy on Electronics 2019 ('NPE 2019') dated 25 February 2019 that ushered in a change. NPE 2019 emphasized on exports versus import substitution.*”



The document also shifted the needle from punitive measure like duties to incentivizing the mobile phone industry. Value addition in feature phone is expected to be 70-80% and for smart phones, likely to be upwards of 35% by 2025 if we achieve NPE targets. After NPE 2019, the Government, on various fora, recognized the potential of India to become a major exporting hub for mobile phones. The Honorable President of India's speech laid down the government's intent and direction of the policy wherein he said that NPE 2019 has been formulated to give further impetus to the manufacturing of mobile phones, televisions and other electronic devices<sup>5</sup>.

“

*This was followed by the Economic Survey 2020-21 having an entire chapter dedicated to the exports of network products. The Economic Survey focused on India's need to build its exports capability*

”

It emphasized in great length about the network product economy, of which mobile phones are a significant constituent. The Economic Survey recognized that in order for 'Make in India' to be successful, India will have to focus on areas where its strength lies. India is a labor-intensive country and therefore, it should

focus on those activities and jobs that will bring its surplus labor job opportunities. The Survey articulated an export-focused strategy.

The emphasis on electronics manufacturing in India continued with the Budget Speech of Honorable Finance Minister wherein the role of electronics manufacturing and its job creation potential was recognized.

The Honorable Prime Minister, Mr. Narendra Modi delivered the keynote address on February 12, 2020, at the India Action Plan 2020 Summit in New Delhi, wherein he emphasized that India has become the second largest producer of mobile phones. He focused on the importance of the manufacturing sector and the role of exports.

Therefore, the environment appears to be conducive coupled with the existence of an economic opportunity and intent of the government in the right direction. The only piece that appears to be missing at the moment is the policy action to capitalize on these factors.

Post COVID-19, India shall pursue a three-stage strategy to compete with the best in the world. From May to July 2020, focus may be kept on restarting operations and reaching 100% capacity. From August to November 2020, India may aim to restore complete normalcy including supply chain, employee workforce, input imports, and normalise operations for both domestic supplies as well as export markets. In the period from December 2020 till 2025 (i.e. for the next 5 years), India needs to chart its path towards becoming a leading exporter of mobile phones in the world, while pushing mobile exports as a top ranking Indian export from where it currently stands. The government may be required to co-operatively work with the industry in the second half of 2020 during the restart and restoration stage wherein the industry might need additional help and reconsideration of targets, investments and other forms of stimulus till March 2021.



India aims to expand its economy to 5 trillion dollars in the next five years. It is better to set a target and strive towards it. This goal is not easy but not impossible to achieve. To achieve this goal, it is very important that the Manufacturing sector is strengthened in the country along with the increase in the country's exports and that the Government has taken several initiatives towards this.<sup>9</sup>

*The Honorable Prime Minister,  
Mr. Narendra Modi*



# 02

## What does it take to become a global player in mobile manufacturing?

In order to catapult India to become a leader in the mobile phone manufacturing industry, it is crucial to analyze the broad set of factors that are responsible for boosting export of mobile phones.

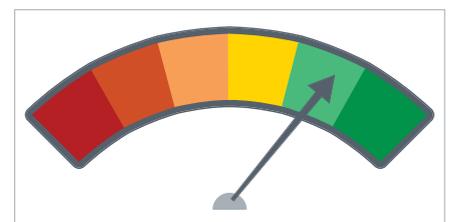
### Global market access

Mobile phones and electronics in general, are one of the largest imported categories in the world. In India, electronic items constitute the second largest imported category. The size of the global smartphone market was estimated at US\$ 495 billion in FY 2018 and is expected to reach US\$ 647 billion by FY 2025.\*

Therefore, the growth potential combined with the ability to export mobile phones worldwide indicates unfettered access to global markets and acts a crucial factor for manufacturing at scale and addressing global demand. India's ability to address this opportunity may be considered as high given the multitude of factors being favourable at the moment.

\*<https://www.idc.com/getdoc.jsp?containerId=US45009619>

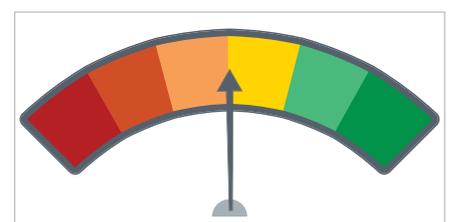
### How India fares



### Ability to attract large scale Global Value Chain ('GVC') investment

In order to achieve economies of scale and cost competitiveness to be able to compete globally and gain market share, the industry requires large scale investment.

While global lead firms have made initial investments, their operations have been limited to assembly operations so far. In order to attract and encourage investments to boost manufacturing and exports, global lead firms must be incentivized by India. This becomes more peculiar at a time when the domestic market is expected to saturate by growing roughly 3x by 2025 vis-à-vis the market size of 2018.

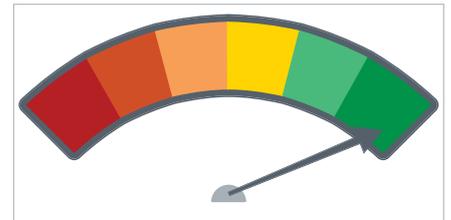


### Labor arbitrage

Despite requiring large scale investment, the industry may still be classified as labor-intensive due to the requirement of large amount of labor for manufacturing operations.

India appears to be well positioned on labor arbitrage with a burgeoning youth population and low per capita income translating to cheaper costs. However, such arbitrage reduces with complexity and high-end nature of mobile phones. Having said above, higher complexity leads to higher number of people being employed owing to testing, research and development.

Given that this advantage is not perennial, India must recognise this 10-year opportunity (until 2029-30). Focus must be on capitalizing labour arbitrage since both per capita income and age will increase subsequently.

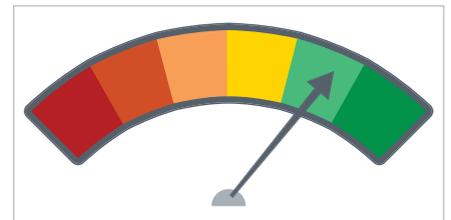


### Global brand presence

The top five handset suppliers accounted for 83%\* of the total market revenues in 2018. Therefore, the presence of global brands in the manufacturing value chain is vital to boost export of mobile phones. Global brands enjoy market access, advantages of a robust distribution network and worldwide recognition.

Most major global brands already have presence in India but not all are focused on exports. Moreover, India constitutes a relatively small percentage of their global volumes. There is a need to encourage global brands to move from mere assembly operations to full-fledged manufacturing with focus on exports. This shall aid export of mobile phones from India.

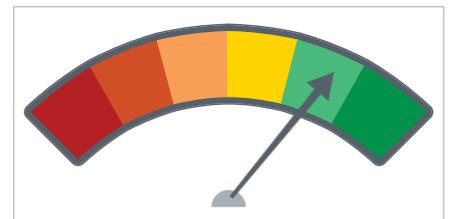
\*<https://www.idc.com/getdoc.jsp?containerId=US45009619>



### Technology

Mobile phone manufacturing is an interplay between design aspect, components and manufacture of the device. Technology plays a key role in the development of mobile phone manufacturing ecosystem.

While assembly operations have started in India, manufacturing at scale is required to take significant strides in global value chain. The presence of global lead firms coupled with an export-oriented policy may provide the necessary trigger to enable technology transfer.



### Low cost of inputs

The price at which parts, components and sub-components are procured plays a major role in cost competitiveness of mobile phones. Due to the presence of tariff barriers on imports, domestic players enjoy protection to an extent. Duty imposition on parts and components leads to higher costs for importers and in turn, leads to price hike for the end product.

India is at a disadvantage because of high cost of inputs resultantly. Though there exists a duty drawback mechanism for refund of duties suffered on imports, the pre-defined rate along with a capping of benefit may not be sufficient for export of high-end mobile phones.



## Domestic ecosystem

The presence of a mature ecosystem is a must to augment manufacturing capabilities that can cater to world markets and boost exports from the country.

In comparison to China, India does not have a large presence of manufacturing firms in the ecosystem. This indirectly affected the volume of production and hindered further growth. Limited number of companies also translated to limited production of parts, components and sub-components.

Adequate impetus on exports through policy initiatives may trigger development of domestic ecosystem.



## Competitiveness

The overall business environment supplemented by investor-friendly tax regime and conducive policy framework plays a significant role in attracting global lead firms and creation of manufacturing ecosystem thereto.

India's disabilities vis-à-vis China and Vietnam are quite high. To illustrate, assuming that the cost of production of a mobile phone is 100, the subsidies and incentives offered by India reduces such cost to the extent of 5.88% - 6.70% (when Merchandise Exports from India Scheme is accounted for); 9.40% - 12.50% in Vietnam and 19.20% - 21.70% in China\*. While recent measures such as corporate income tax rate reduction have enhanced the attractiveness of the country, India needs to continue to improve measures for competitive manufacturing vis-à-vis China and Vietnam.



\*ICEA's report titled "Making India a global hub for handset manufacturing"



# 03

## Post COVID-19 supply chains: India's time has come

In order to boost manufacturing of mobile phones and to cater to world markets, the factors enlisted below may provide India with a moment of reckoning:

### A. Impact of COVID-19 on global supply chains

In the wake of the COVID-19 pandemic, countries all across the world that were dependent on China have experienced palpable implications. The shutting down of factories in China impacted global supply chains of companies not just based out of there<sup>10</sup>, but also those around the world which were heavily reliant on China. China has witnessed several extended factory closures, including that of the world's leading mobile phone maker, Foxconn<sup>11</sup>. Consequently, with these widespread disruptions in businesses, there remains talk of companies keen to reduce their reliance on China as a manufacturing base, explore possibilities of de-risking out of China and diversify supply chains. This may lead to shifting of supply chains to alternative locations following the COVID-19 outbreak.

Recent reports confirm the trend with countries allocating economic stimulus packages to help their companies

shift production out of China,<sup>12</sup> either back to their home country or an alternative location. One such example is that of the Prime Minister Shinzo Abe-led Japanese Government, that has earmarked US\$ 2.2 billion of its record economic stimulus package to help its manufacturers shift production out of China. This was an outcome of supply chains disruptions between the major trading partners, starving Japanese manufacturers of necessary components. Similar sentiments are being witnessed amongst many other countries, including South Korea.

The electronics industry (mobile phones in particular) is witnessing similar trends too. Renowned manufacturers such as Wistron, Foxconn and Pegatron are mulling diversification/increase of production facilities outside of China<sup>13</sup>.

Considering the above factors, the outbreak may in turn provide an

unprecedented opportunity<sup>14</sup> to India to project itself as an alternative destination for manufacturers. With the right set of policy initiatives to attract global lead firms including scaling of their existing operations, India may capitalize on this opportunity. Though India has an advantage of cheap and skilled labour along with a large domestic market, other South East Asian peers such as Vietnam, Malaysia, Thailand and Indonesia may compete fiercely for seeking investments in their respective countries though attractive fiscal incentives, better infrastructure and tax breaks to multinational firms. In March 2020, India notified a trilogy<sup>15</sup> of schemes that are WTO compliant (being production linked incentives, capital subsidy for electronic components and electronic manufacturing clusters). However, these schemes will compete with offers from other countries. Their success will lie in a smooth, timely

implementation and a disbursement process that is efficient and without delay.

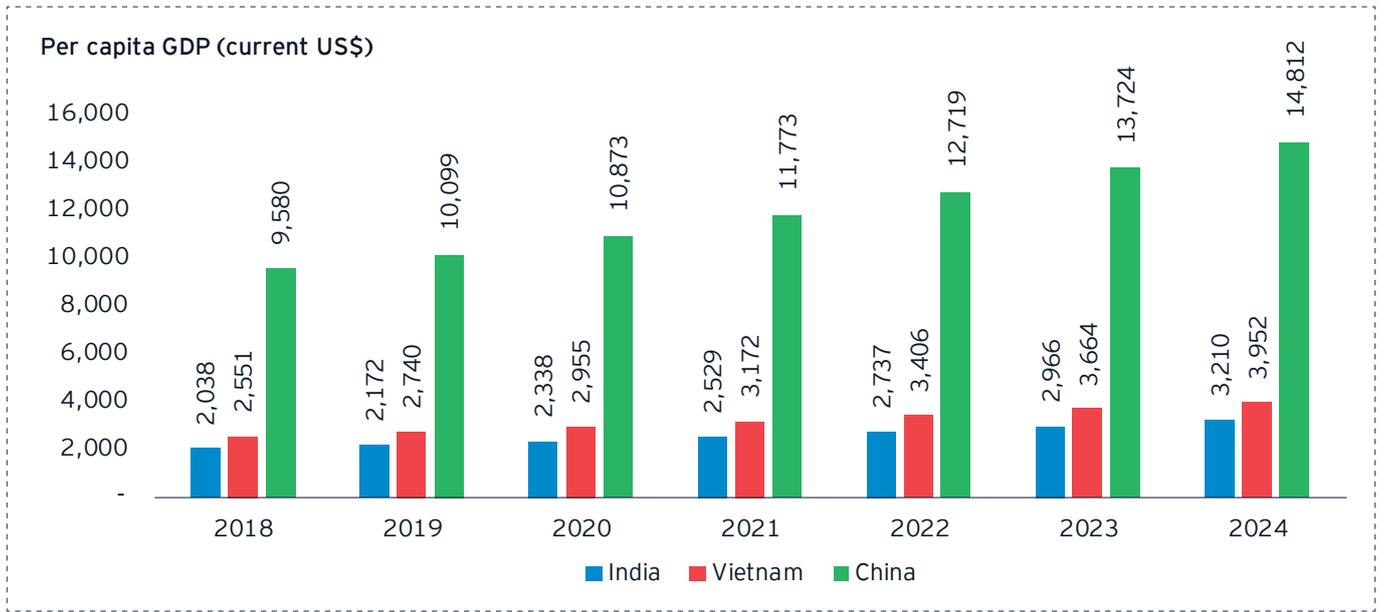
## B. Labor arbitrage and job creation potential

- 1 Availability of labor at competitive wages acts as a catalyst for any manufacturing activity. While certain aspects of mobile phone manufacturing/assembly are automated, a lot of processes still comprise labor-intensive activities.
- 2 Mobile manufacturing and consequently, exports market has been dominated by China and Vietnam till now. However, the overall increase in per capita GDP in these countries has made labor expensive.
- 3 India is witnessing an opportune time wherein the majority of India's population is young. India has its largest ever adolescent and youth population. According to United Nations Population Fund ('UNFPA'), "India will continue to have one of the youngest populations in the world till 2030. Moreover, India is experiencing a demographic window of opportunity, a "youth bulge" that will last till 2025."<sup>16</sup>
- 4 As per International Monetary Fund<sup>17</sup>, GDP per capita (nominal) for year 2019 is US\$ 2,172 for India as compared to US\$ 10,099 for China. Moreover, Vietnam has GDP per capita (nominal) of US\$ 2,740. This implies that hiring labor is roughly 80% cheaper in India compared to China. Moreover, the trend is expected to continue. This tantamount to availability of labor at lower cost in India.
- 5 India has an unprecedented opportunity wherein the mobile manufacturing industry may employ millions of workforce at low cost and manufacture mobile phones in India for the world.
- 6 Having said above, though India has labor arbitrage in its favor, such arbitrage reduces with complexity. In other words, more complex the product (high-end), labor arbitrage declines.
- 7 However, a positive aspect of manufacturing high-end products is the requirement of more people in other operations such as testing, research and development and thus, more job potential.
- 8 As per Economic Survey 2020-21, assembly of network products (of which mobile phones constitute a significant portion) for the world has the potential to create 4 crore jobs by year 2025.
- 9 To summarize, sizable global market share may be attained through production of high-end mobile phones. Since labor arbitrage declines for high-end products, India needs to address other issues hindering manufacture and exports than just relying on labor advantage alone.



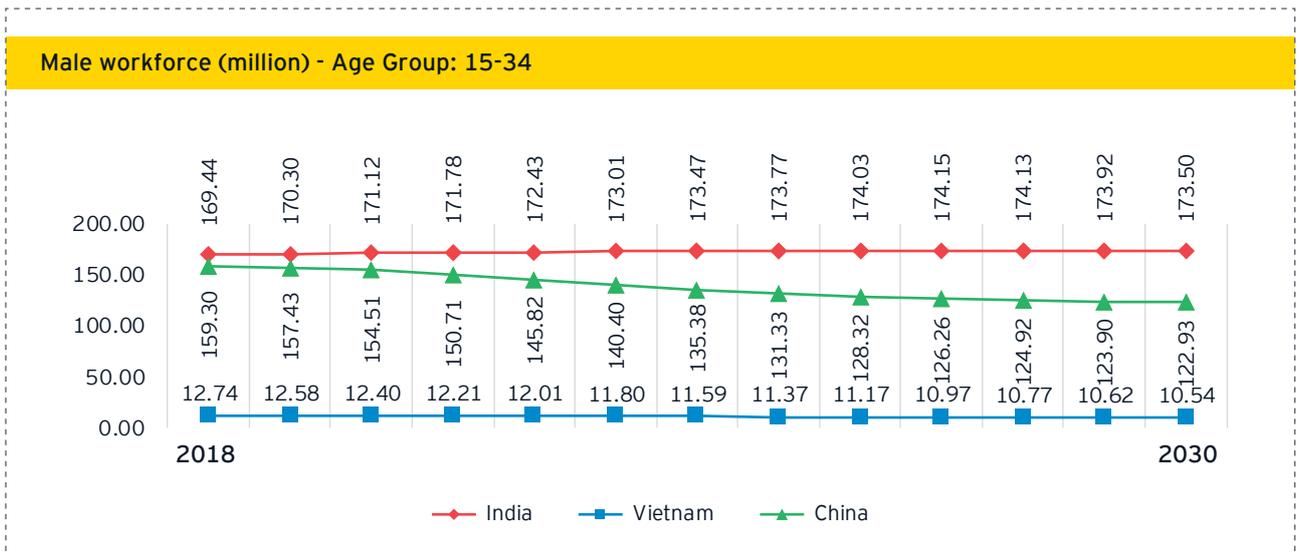


Exhibit 1: GDP per capita (US\$) comparison between India, China and Vietnam



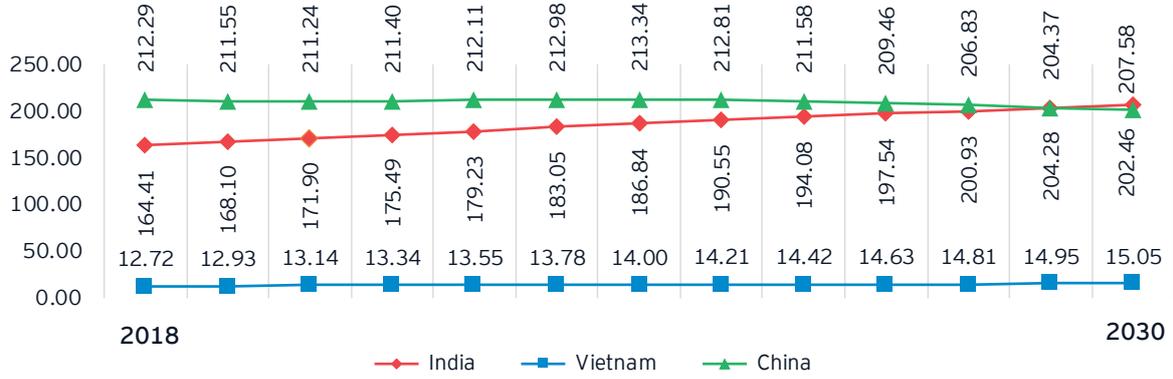
Source: International Monetary Fund projections<sup>18</sup>

Workforce projections for India, China and Vietnam by gender and age group<sup>19</sup>:

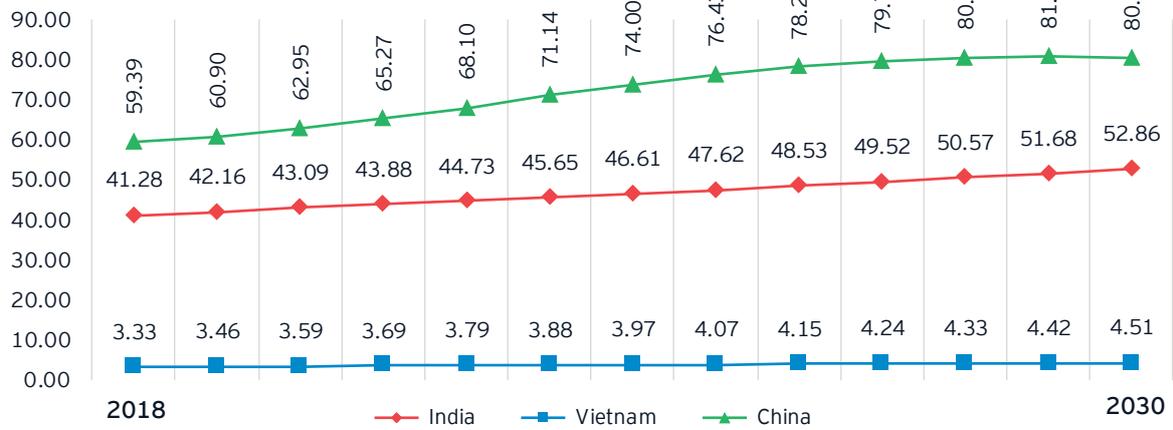




### Male workforce (million) - Age Group: 35-54

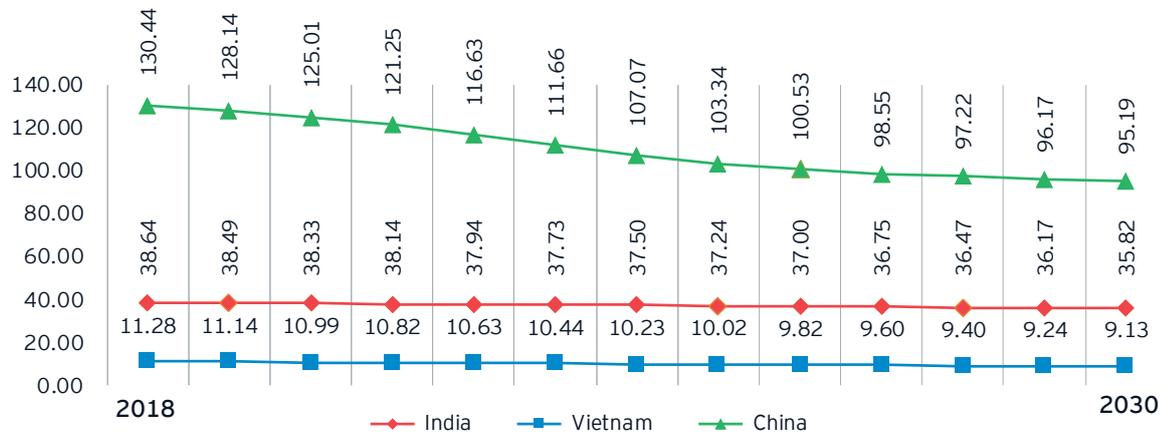


### Male workforce (million) - Age Group: 54-65



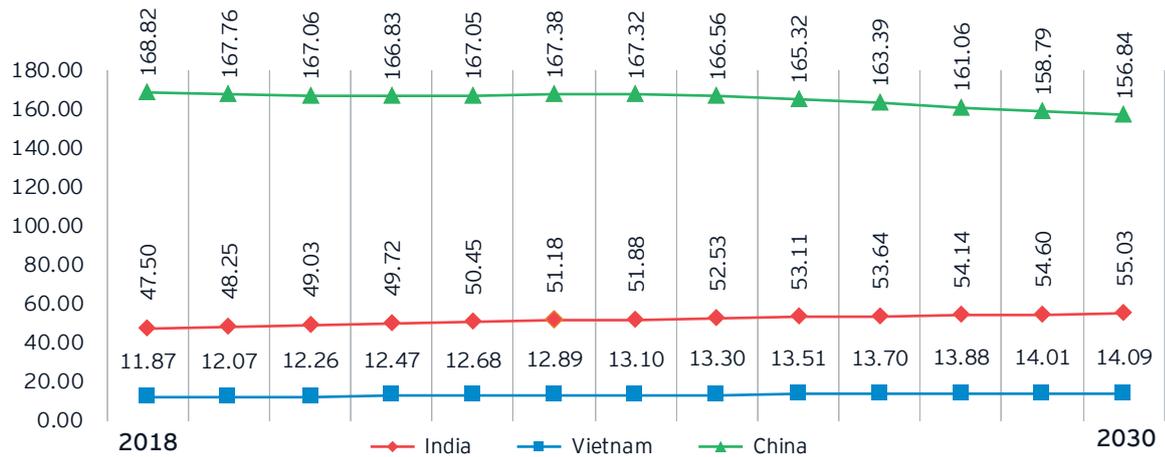
Female workforce (million) - Age Group: 15-34

2018 - 2030

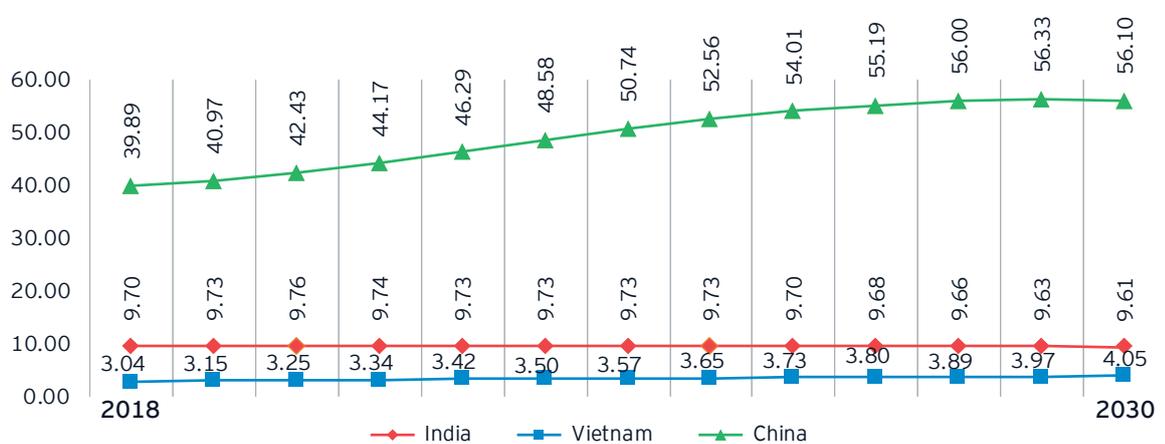


Female workforce (million) - Age Group: 35-54

2018 - 2030



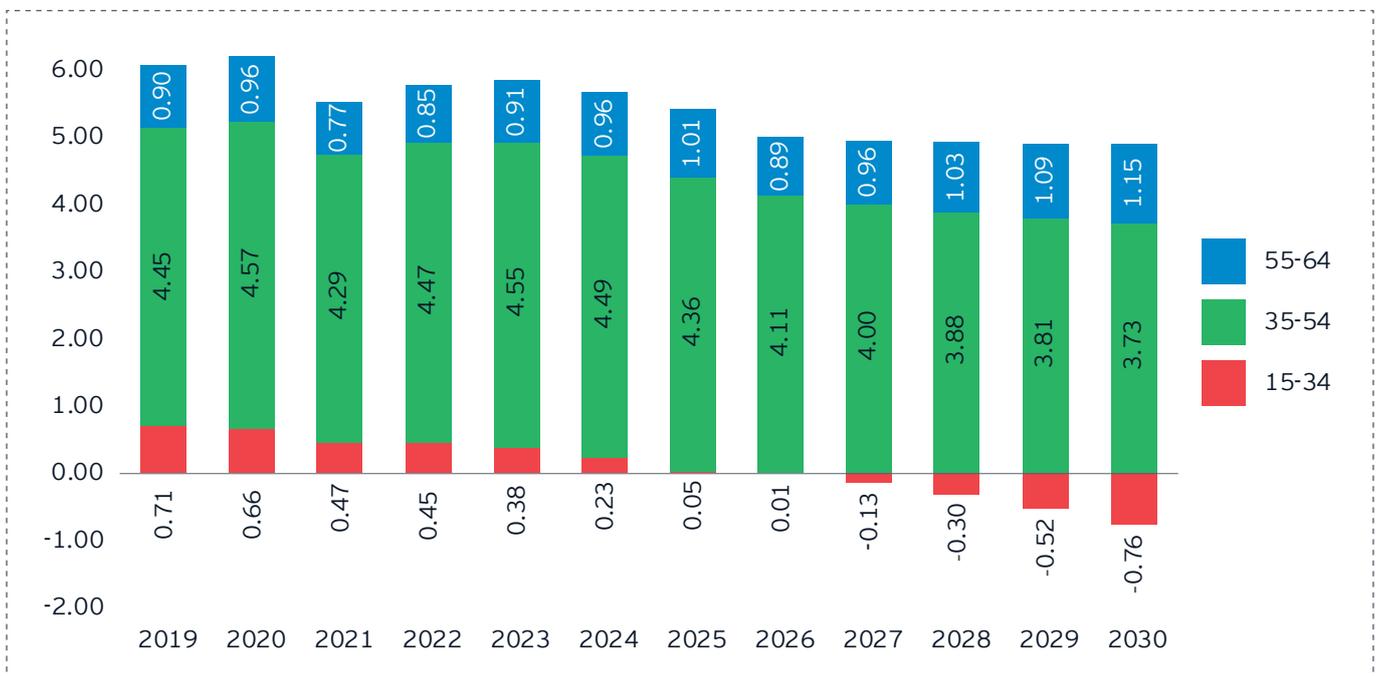
Female workforce (million) - Age Group: 54-65



As depicted in the data above, the working population of China is expected to decline and age subsequently whereas India is expected to be demographically young. However, the demographic dividend may not exist beyond the next decade when population starts to age (refer graph below)<sup>20</sup> and per capita income increases. While the number of people (cumulative of incremental additions) are expected to be 12 lakh in age group 15-34; the number stands at approximately 5 crore for age group 35-54 and 1.15 crore for age group 55-64.

Present times require policy initiatives to make the most of this opportunity.

Exhibit 2: India Incremental population in different age groups from 2019 till 2030 (million)



### C. Geopolitical issue (e.g. trade war)

In May 2018<sup>21</sup>, tariffs were announced by United States administration on goods imported from China effective 6 July 2018. In return, China announced retaliatory tariffs as well. Trade war escalated further in September 2018 with announcement of fresh tariffs and raising of tariff rates in June 2019. This was followed up with fresh imposition of tariffs again in September 2019.

Of late, there has been thaw in the stance of both countries viz. US and China.

While trade diversions happened across global supply chains (on account of trade war), India could not materialize the opportunity to gain market share or increase exports.

As per UNCTAD, trade war hurt both countries economically and forced global firms to look for alternative supply chains. UNCTAD research estimated that the trade war resulted in increased imports by US from countries not



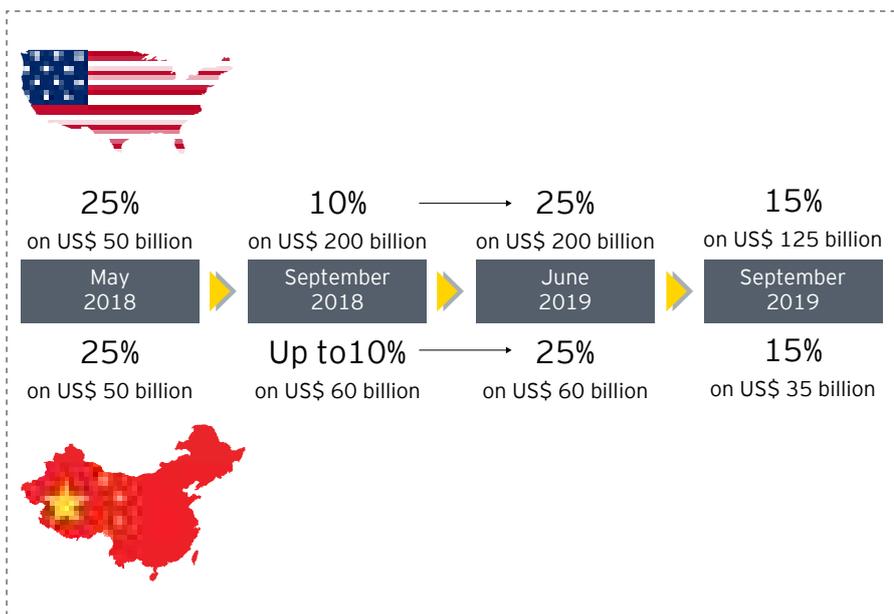
*The two signed a partial trade agreement namely “Phase One” of Trade Deal by officially agreeing to the rollback of tariffs, expansion of trade purchases, and renewed commitments on intellectual property, technology transfer, and currency practices<sup>22</sup>.”*

directly involved in the trade war - for the first half of 2019 at about US\$21 billion. As depicted in Exhibit 4, the trade war resulted in increased import of communication equipment from Vietnam and Taiwan whereas India could not materialize the opportunity to gain significant footholds. Resultantly, there was no tangible increase in the value of exports from India to United States or attraction of global lead firms to move upward in the supply chain ladder.

However, it is estimated that the negotiations for further rounds/phases of trade deal are likely to be tough and the possibility of further tariffs may not be ruled out.

In such a situation, there is an opportunity for India to proactively take steps towards attracting global lead firms and bolster the mobile phone manufacturing capabilities to address and serve the global markets.

Exhibit 3: Evolution of US-China trade war



Source: UNCTAD (United Nations Conference on Trade And Development)<sup>23</sup>

Exhibit 4: Trade diversion effects in the US market by economy and sector (in US\$ million)

1 Office Machinery	4 Chemicals	7 Precision Instruments	10 Furniture
2 Machinery Works	5 Communication Equipment	8 Agri food	11 Textiles and Apparel
3 Electrical Machinery	6 Metals and Ore	9 Transport equipment	12 Others

Country	1	2	3	4	5	6	7	8	9	10	11	12	Total
Taiwan (Province of China)	2,830	122	287	5	491	205	183	6	14	55	8	11	4,217
Mexico	420	407	876	127	-	373	166	599	456	99	47	-	3,570
European Union	108	739	422	324	-	96	371	215	285	-	66	55	2,681
Vietnam	60	8	400	134	1,106	130	18	14	52	665	4	10	2,601
Japan	63	997	-	342	10	62	-	21	1	-	12	32	1,540
Canada	39	307	110	-	416	83	62	21	76	-	-	83	1,197
Korea (Rep. of)	568	99	68	95	13	52	2	19	117	5	48	29	1,115
India	18	68	83	243	-	181	23	23	6	27	41	42	755
Thailand	-	124	25	243	-	58	-	-	4	22	4	1	481
Brazil	-	191	27	129	9	71	7	4	11	-	4	-	451
Russian Federation	-	-	19	143	-	54	-	56	1	-	-	74	347
Malaysia	12	-	12	40	-	50	76	-	1	58	2	1	251
Turkey	-	23	12	17	31	89	9	13	5	11	14	1	226
Indonesia	-	29	27	-	42	25	4	-	1	-	2	-	129
Australia	-	5	-	23	13	-	4	16	2	26	3	3	95
Argentina	-	22	1	8	-	27	-	9	-	3	1	3	75
South Africa	-	3	3	30	-	-	4	13	-	5	2	-	60
Pakistan	-	-	-	5	-	-	1	3	-	2	25	-	37
Rest of World	179	82	89	272	10	78	261	33	-	3	583	25	1,616
<b>Total trade diversion</b>	<b>4,297</b>	<b>3,226</b>	<b>2,461</b>	<b>2,179</b>	<b>2,142</b>	<b>1,635</b>	<b>1,190</b>	<b>1,065</b>	<b>1,031</b>	<b>981</b>	<b>866</b>	<b>371</b>	<b>21,443</b>

Source: UNCTAD<sup>24</sup>

As depicted in Exhibit 4, while other countries benefitted as a result of the trade war, India could not materialize the opportunity significantly. The situation was more peculiar with respect to communication equipment wherein export from India to United States did not witness any increase whatsoever while Vietnam gained US\$ 1.1 billion worth of market share.

The coronavirus outbreak has amplified the importance of diversification of supply chains among multinationals and presents an opportunity (albeit short-term) for India to attract and encourage investments by global lead firms proactively.

## D. Security

As per a report published by Carnegie Endowment for International Peace on US-China Security Perceptions Survey<sup>25</sup>, there exists a low level of strategic trust between the United States and China, which could make bilateral relations more turbulent. **1**

This has led the countries to re-evaluate their national security and commercial interests. **2**

The report titled "EU-China - A strategic outlook" published by European Commission in March 2019<sup>27</sup>, stated that "Foreign investment in strategic sectors, acquisitions of critical assets, technologies and infrastructure in the EU, involvement in EU standard-setting and supply of critical equipment can pose risks to the EU's security. This is particularly relevant for critical infrastructure, such as 5G networks that will be essential for our future and need to be fully secure." **3**

Similarly, in Europe, less than 20 percent of voters in each member state felt that their country's interests were well protected from Chinese competitive practices<sup>26</sup>. **4**

In today's digital era, data acts as the primary source of information basis which analytics are performed, meaningful inferences are drawn and actionable intelligence is embedded into systems. **5**

This scenario has been amplified in the United States as well due to the restriction imposed on its government agencies from dealing with Chinese conglomerate, Huawei<sup>28</sup>. Though the ban was lifted subsequently (for the time being), the security concerns leading to such decision persist. **6**

In recent years, allegations of Intellectual Property theft and forced technology transfer from western companies by local Chinese firms and the trade war initiated by US administration have led to growing mistrust between China and Western economies (United States and European Union, in particular). **7**

United States and European Union are increasingly cautious of the communication equipment being used in their country(ies) and the possible risks it poses to national security. **8**

India has an opportunity as a trusted partner to fill the void created by such security concerns. Being world's largest democracy, India has had cordial relationship with the world at large and is well positioned to seize the opportunity.



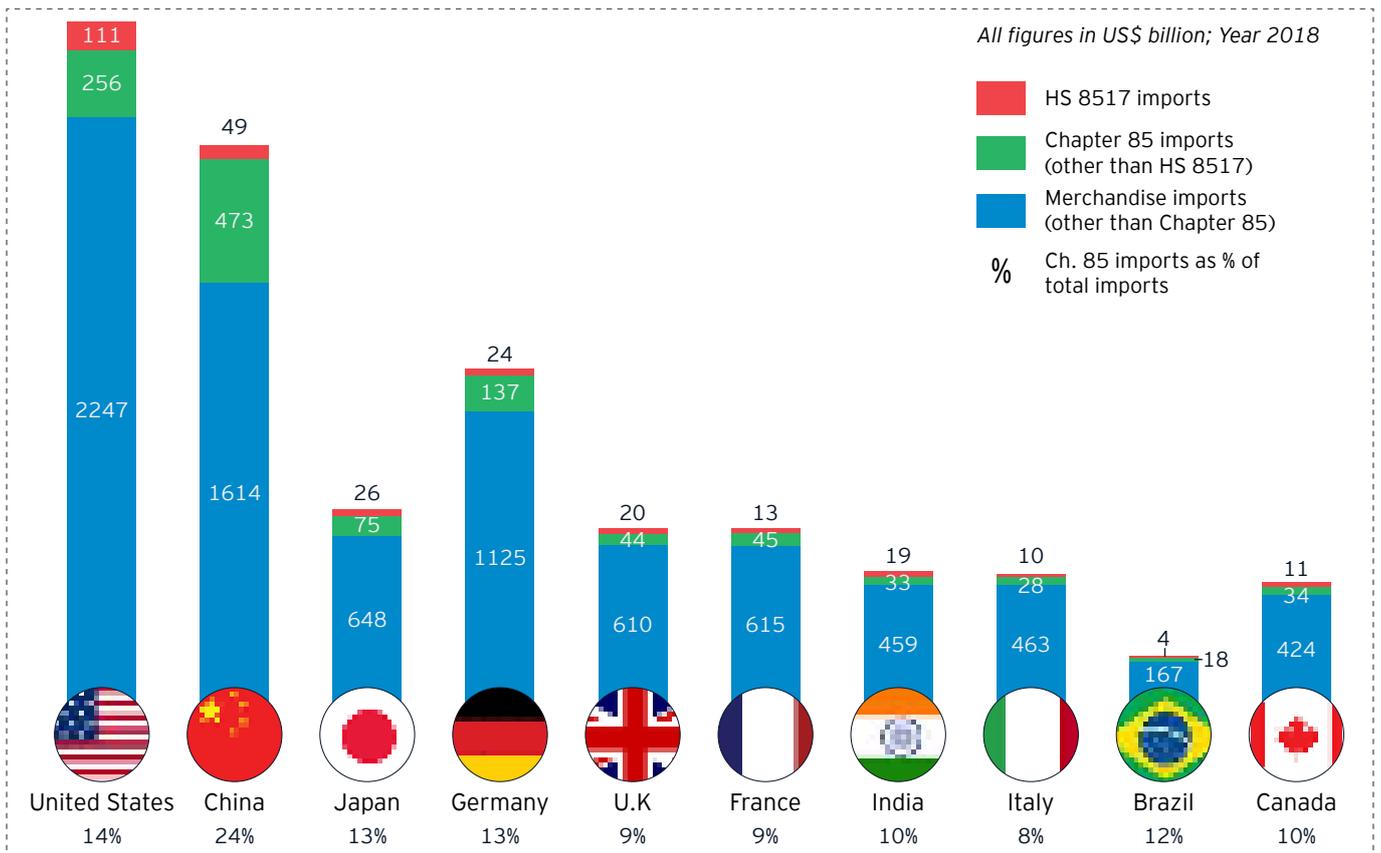
## E. Electronics becoming most traded item globally and among world's largest imports

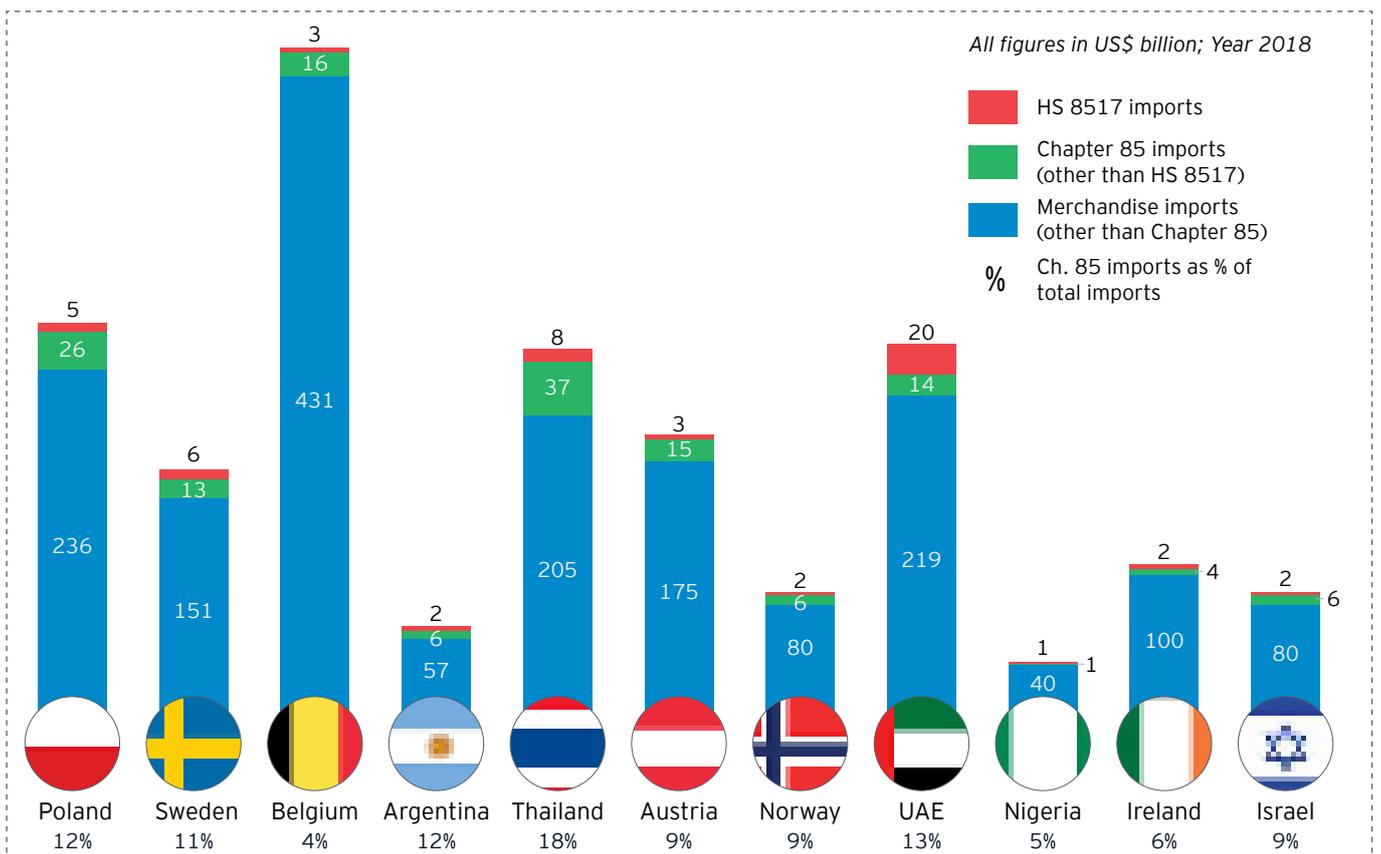
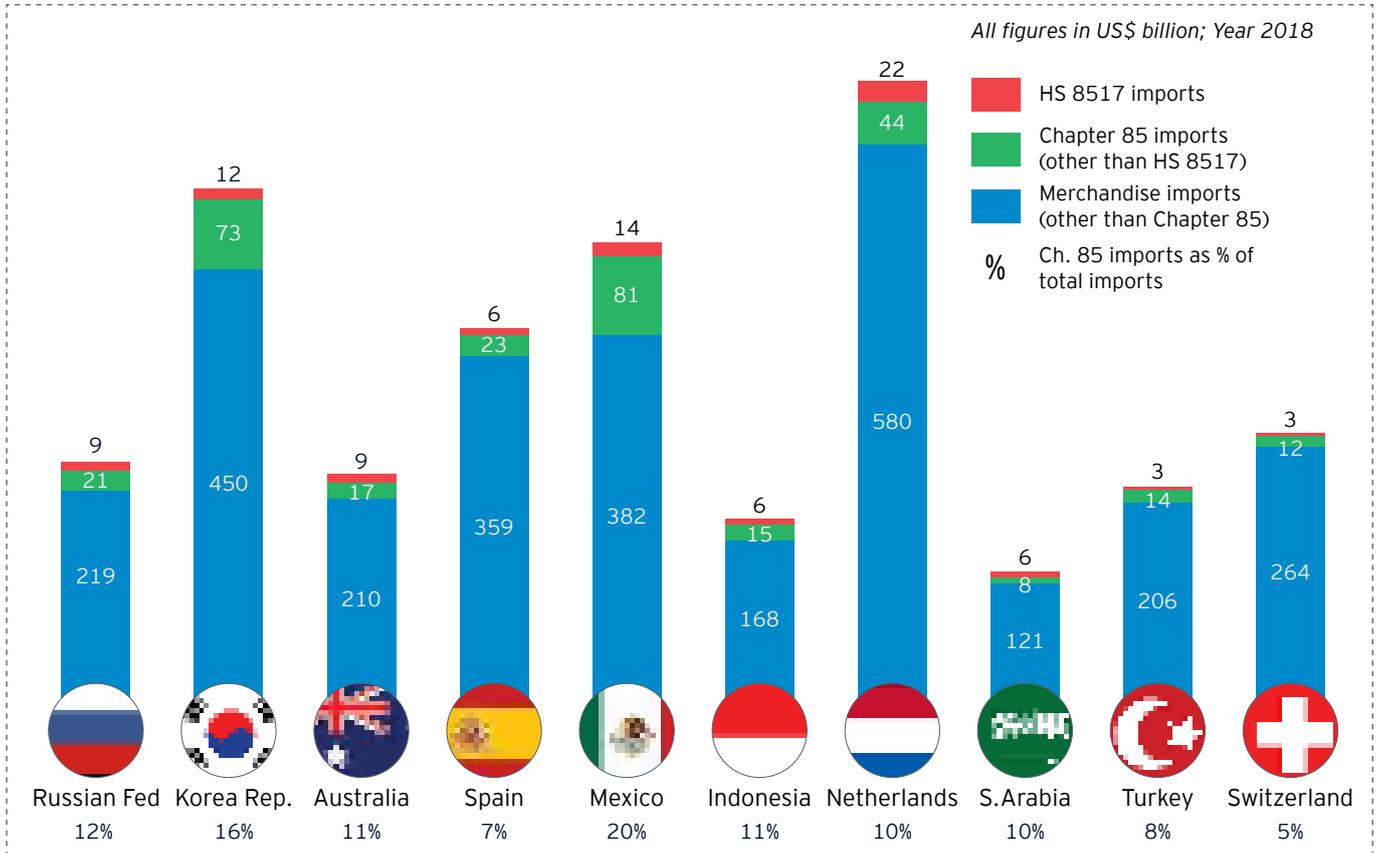
The electronics industry is among the fastest growing industries<sup>29</sup> in the world. As discussed in the earlier sections of the report, since only two countries cater to the global demand and export, rest of the countries import. This leads to a higher import share of electronics in general and mobile phones in particular

among global economies. As per data from UN Comtrade<sup>30</sup>, electronics imports (covered under Chapter 85 of Harmonized System of Nomenclature) rank in Top 5 imported goods of the Top 30 economies in terms of GDP size. On further analysis, it is evident that a major share of such electronics imports

constitute mobile phones. Therefore, considering the growth prospects of the industry and their import potential across the world, India shall prioritize manufacture of mobile phones at a scale large enough to address the import requirements of other countries while being competitive at the same time.

Exhibit 5: A comparison of GDP size, merchandise imports, chapter 85 and tariff 8517 imports for top 31 countries, including India [in terms of GDP (current US\$)]





Source: UN Comtrade<sup>31</sup> and World Bank<sup>32</sup>

Exhibit 5: Rank of Chapter 85 products vs. overall imports

Country	Rank of Chapter 85 imports to overall imports	Rank of HS 8517 imports vis-à-vis Chapter 85 imports
United States	2	1
China	1	2
Japan	2	1
Germany	2	1
United Kingdom	4	1
France	4	1
India	3	1
Italy	4	1
Brazil	2	2
Canada	3	1
Russian Federation	2	1
Korea, Rep.	2	2
Australia	4	1
Spain	4	1
Mexico	1	2
Indonesia	3	1
Netherlands	2	1
Saudi Arabia	2	1
Turkey	4	1
Switzerland	5	1
Poland	2	1
Sweden	3	1
Belgium	7	1
Argentina	3	1
Thailand	1	2
Austria	3	1
Norway	3	1
UAE	2	1
Nigeria	5	1
Ireland	5	1
Israel	3	1

An analysis of the above data indicates that electronic imports under Chapter 85 constitute roughly 13% of all imports combined (for all 31 economies, taken in aggregate) and within this import category, Chapter 8517 goods comprise more than one-fifth (21%) of such imports.

## F. COVID-19, GST increase and dollar appreciation likely to hit domestic demand in 2021

The outbreak of COVID-19 and the consequent extended lockdown pan India has halted manufacturing operations completely, with estimates of India's GDP expected to go below the 2% level<sup>33</sup>. Global shutdowns alongside, it may lead to diminishing availability of necessary inputs, disruption of manufacturing supply chains, unemployment and a resultant demand shock.

Further, the recent increase in the Goods and Services Tax ('GST') on mobile phones from 12% to 18%, may severely

affect demand for mobile phones in the domestic market. Mobile phones may become unreachable for consumers with the increased GST coupled with a decline in consumption due to increasing unemployment, salary cuts and general uncertainty. Further, the escalation in the US dollar by 6-8% may imply that input cost might also rise, thereby witnessing increase in prices from pre-April 2020 GST of 12% to a GST plus dollar hike cumulative impact of approximately 23%. With this kind of an

arbitrage, a major chunk of legitimate demand will very likely move to the grey market. Apart from a difficult phase for industry, government revenues are bound to suffer. This will imply that companies in India will need to chase global demand. Exports will become the mainstay of growth over previous years.

1

As per International Monetary Fund ('IMF')<sup>34</sup>, India's growth estimates for 2019 were pegged at 4.8 percent.

2

While IMF estimates were in contrast to Reserve Bank of India's Monetary Policy Committee's June 2019 resolution wherein real GDP growth for 2019-20 was projected at 7 percent<sup>35</sup>, these were in line with the first advance estimates released by the National Statistical Office ('NSO') on January 7, 2020 placing India's real gross domestic product ('GDP') growth for 2019-20 at 5 percent<sup>36</sup>.

3

The estimated growth rate is in stark contrast to the annual average rate of 7.5 percent in last five years<sup>37</sup>.

4

While smartphone sales growth have bucked the overall trend of economic slowdown at present<sup>38</sup>, growth may decline in future in view of the overall economic environment.

5

Having said above, the present times may prove to be promising if aided by adequate policy steps to prioritize manufacturing and exports in mobile phone manufacturing.

6

Considering the growth prospects of the industry and its economic potential, the industry may assist in reviving the economy by employing millions directly and indirectly, increase the tax collections and contributing to national GDP thereby.

7

Foreign exchange earnings on account of higher exports will further aid in reducing the trade deficit of the country.

8

Therefore, the mobile manufacturing sector may assist the economy to emerge stronger from the current and albeit temporary moderation in domestic demand.

## G. Forex outflow implications

As per a study undertaken in early 2020 by EY in collaboration with FICCI and ICEA titled “Mobile manufacturing industry: A US\$ 245 billion (INR 17 lakh crore) opportunity”, if the country does not create an ecosystem large enough to manufacture and export globally, the foreign exchange outflows are estimated to be significant. The situation becomes more precarious with electronics imports being the second largest import item after crude oil<sup>39</sup>. The peculiar aspect has also been highlighted in the NPE wherein concern was expressed on the higher foreign exchange outgo.

Thus, considering the growth prospects of the industry and its potential impact on the current account deficit of the country, it becomes highly important to prioritize the sector and encourage manufacturing as well as exports to reverse the forex outflow situation and instead, add to the crucial forex reserves of the country.

It may also be noted that until now, the focus of policymakers has been on enhancing local value addition through tariff based measures. While the measures did assist in development of the industry at nascent stage, limitations exist in terms of their effectiveness to nudge complete indigenization of the manufacturing activity.

As per NPE, the market size for domestic industry is expected to reach US\$ 80 billion by FY 2025-26. The market size was US\$ 25.71 billion in FY 2018-19<sup>40</sup>. Given the size and scale of investment required to achieve economies of scale and enhance export competitiveness, domestic market alone may not be attractive enough to encourage global lead firms to develop manufacturing ecosystem. Therefore, it becomes imperative to focus on encouraging manufacturing irrespective of the local value addition.

Moreover, a closer look at China's import and export data for mobile phones (Chapter 8517) indicates that the country, instead of promoting import substitution embraced the model of export promotion. An analysis of such data indicates that China did not appear to be troubled because of high levels of imports and even ran trade deficits in the category from year 1992 till 2001. Thus, despite popularly being called as “world's factory”, China's imports are significant and conveys that a country may not make everything. The correct approach appears to be to focus on promotion of exports as against import substitution.

Exhibit 6: China's import and export data pertaining to HS 8517

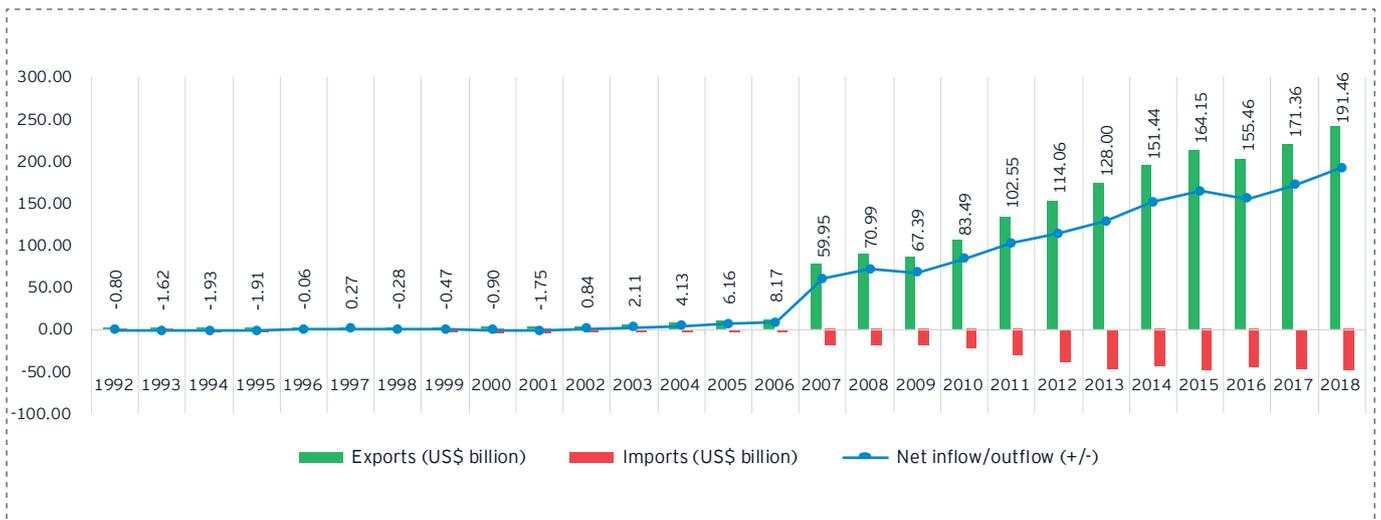
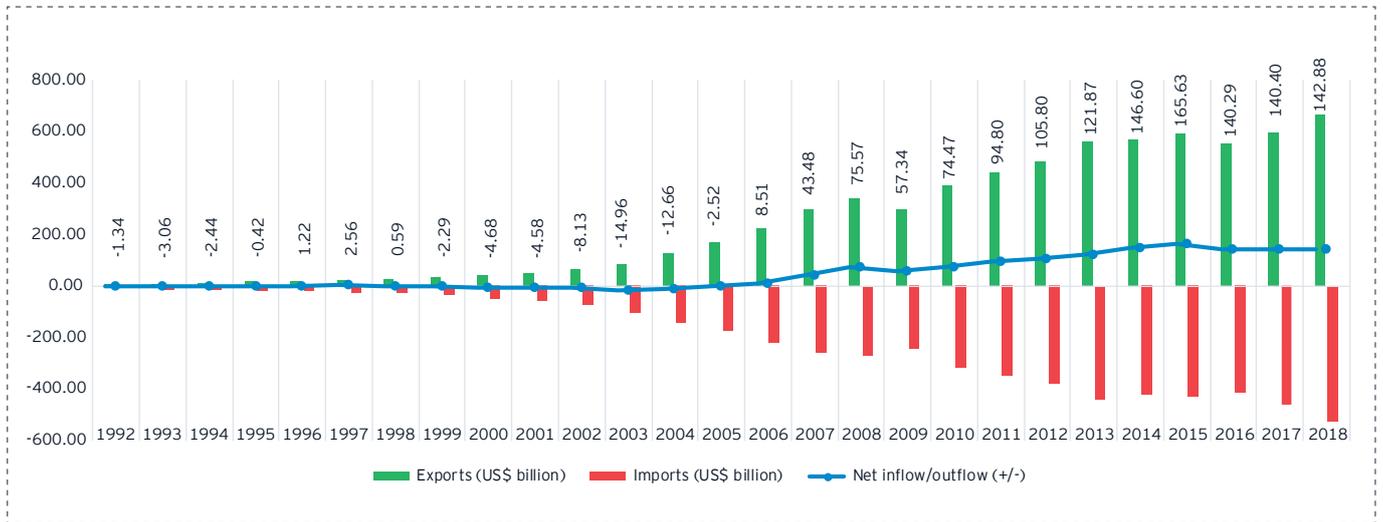


Exhibit 7: China's import and export data pertaining to Chapter 85

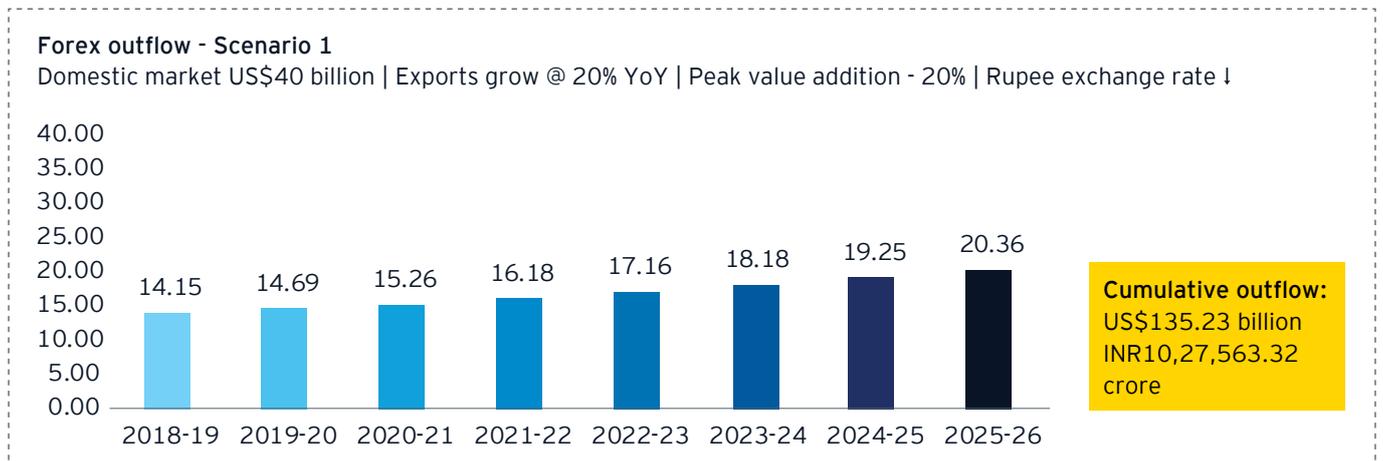


Source: UN Comtrade<sup>41</sup>

Considering that India exported mobile phones worth only US\$ 1.60 billion in FY 2018-19<sup>42</sup>, achieving the targets as per NPE would require unprecedented focus on boosting exports. Further, in order to quantify the impact on foreign exchange outflows in case if the targets as per the NPE are not achieved, following scenarios were considered in the aforesaid report of FICCI-ICEA-EY:

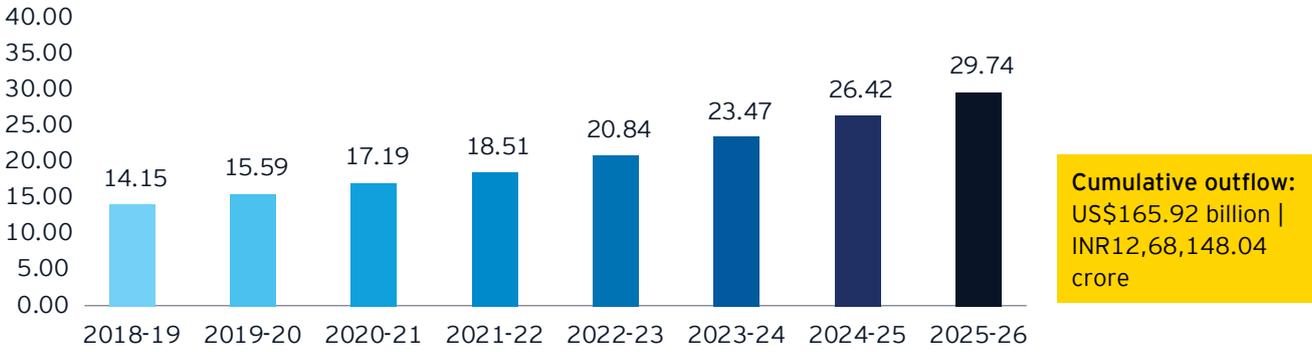
Particulars	Domestic revenue	Exports growth	Rupee value	Value addition
Scenario 1	US\$40 billion	20% YoY	Depreciates 2% YoY	From 18% presently to 20% by FY 2025-26
Scenario 2	US\$60 billion	20% YoY	Depreciates 2% YoY	From 18% presently to 22% by FY 2025-26
Scenario 3	US\$80 billion	20% YoY	Depreciates 2% YoY	From 18% presently to 25% by FY 2025-26

The estimated forex outflow on account of these scenarios was as under:



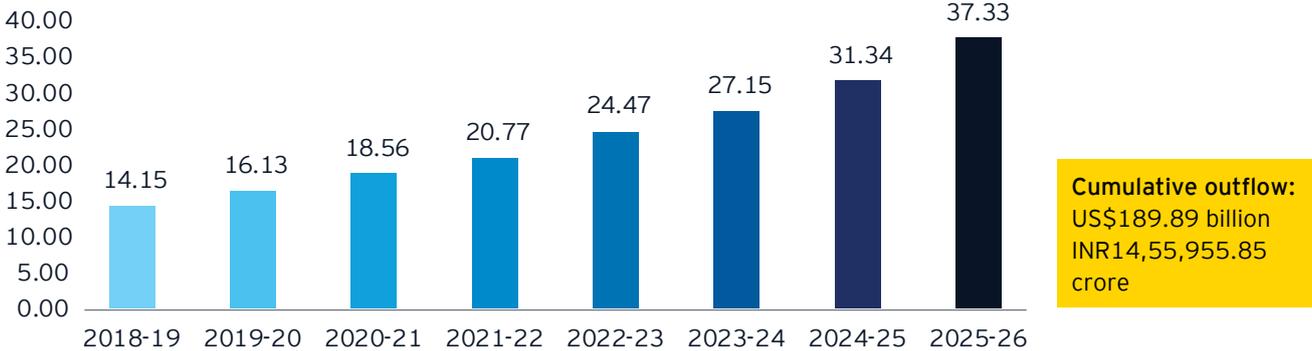
**Forex outflow - Scenario 2**

Domestic market US\$60 billion | Exports grow @ 20% YoY | Peak value addition - 22% | Rupee exchange rate ↓



**Forex outflow - Scenario 3**

Domestic market US\$80 billion | Exports grow @ 20% YoY | Peak value addition - 25% | Rupee exchange rate ↓



Therefore, without manufacturing and exporting at scale, the forex outflow is likely to aggravate further.



## 04

# Taking on India's competitors

In order to ascertain as to what factors impede creation of a sizable manufacturing ecosystem in India, it becomes imperative to analyze the disabilities faced by Indian manufacturers vis-à-vis China and Vietnam. As per a report published by ICEA<sup>43</sup>, Exhibit 8 summarizes the disabilities:

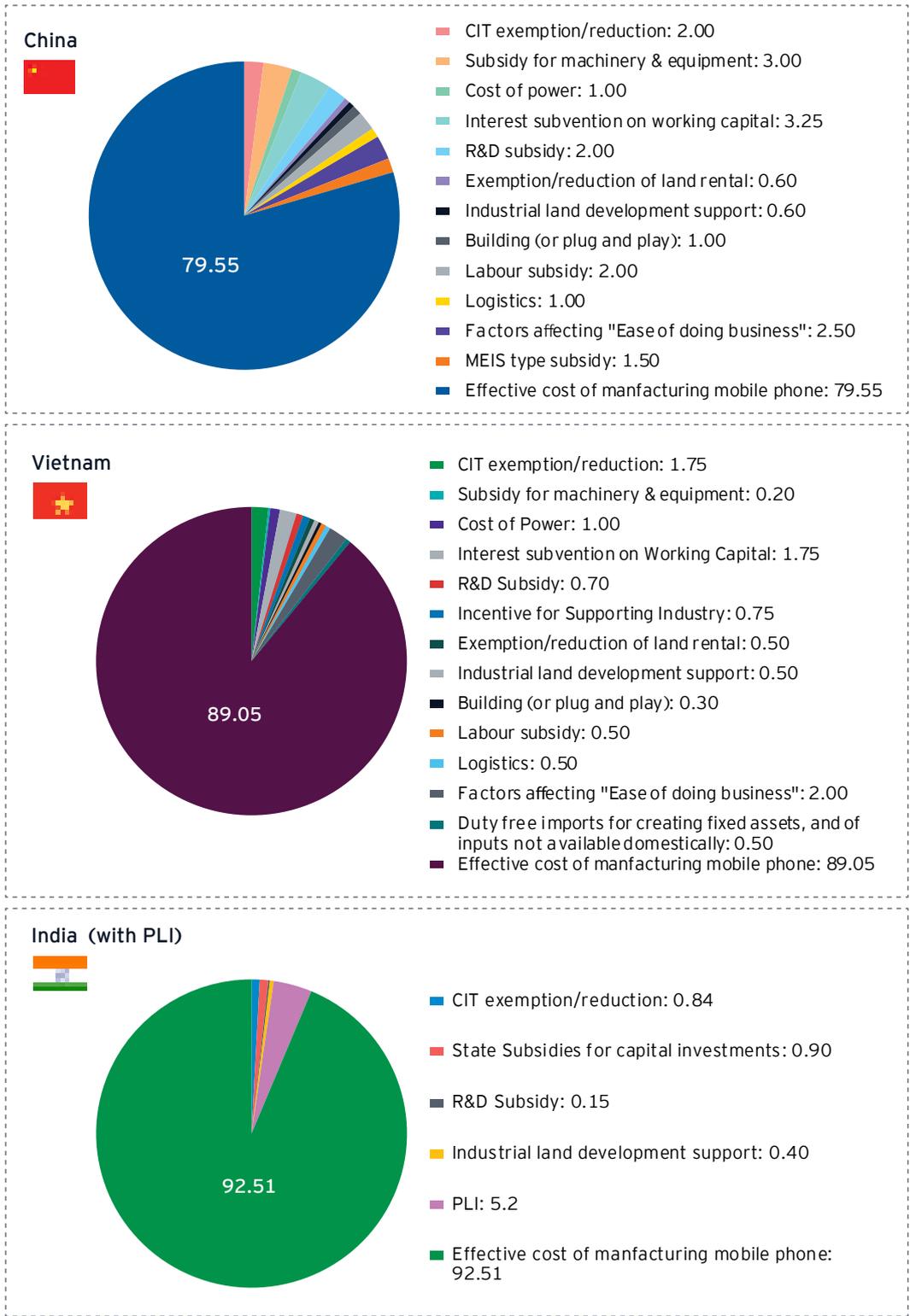
Exhibit 8: Factors that lead to cost reduction in mobile phone manufacturing

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	Exemption/reduction of land rental	0%	0.50%	0.60%
8	Industrial land development support	0.40%	0.50%	0.60%
9	Building (or plug and play)	Negligible	0.3%	1%
10	Labor subsidy	Negligible	0.50%	2%
11	Logistics	0%	0.50%	1%
12	Factors affecting "Ease of doing business"	-	1.5 to 2.5%	2 to 3%
13	Duty free imports for creating fixed assets, and of inputs not available domestically	0%	0.50%	
14	Production-Linked Incentive Scheme	4-6% of FOB value of exports	0%	1 to 2%
<b>Total</b>		<b>5.88%-8.7% (with PLI)</b>	<b>9.4%-12.5%</b>	<b>19.2%-21.7%</b>

Note: PLI scheme's overall budgetary allocation on total mobile phone production as per NPE target is less than 0.5% and is less than 1% if taken only on export value as per NPE target in year 2025. To illustrate, total allocation for PLI in year 5 is US\$ 1 billion (approximately) vis-à-vis total production target for mobile phones at US\$ 190 billion. Out of this, export target is US\$ 110 billion for the corresponding year.

Therefore, Indian manufacturers are at disadvantage vis-à-vis China and Vietnam wherein manufacturers enjoy cost competitiveness differential of 15% and 5.8% (for China and Vietnam respectively - considering higher end range).

**Exhibit 9: Factors affecting cost of production (assuming 100 as cost of production without subsidies) [based on mid-range figures of Exhibit 8]**



## India: Centre and state efforts to address disability

The Central Government and States must continue to actively address India's stark disabilities vis-à-vis China and Vietnam to become competitive with these nations and allow setting up a manufacturing base domestically. Currently, while some factors have been addressed by the Centre/State, there exists scope for further improvements. See Exhibit 8.1

to be wider participation of States in attracting electronics manufacturing to India. Currently, major concentration of electronics investments is across Tamil Nadu, Karnataka, Andhra Pradesh, Telangana and Maharashtra. In the north, Uttar Pradesh has made a serious effort to attract investments in mobile and component manufacturing. Punjab has also made some early efforts, though it is awaiting significant results. For further development, states in the remaining parts of the country may also proactively look at strategies to attract investment and address disabilities.

### Centre

The Production Linked Incentive ('PLI') Scheme notified in March 2020 is a laudable contribution of the Centre and encourages electronics manufacturers to shift manufacturing operations to India. Additionally, the Central Government's announcement in 2019 for reduction in corporate income tax has also been a welcome step and contributed to marginally reducing India's disability value. There has also been some relief provided by the Centre in areas such as logistics, and duty free imports of inputs not available domestically. However, much needs to be done in areas of interest subvention on working capital; R&D subsidy; incentive for supporting industry; industrial land development support; labour and logistics subsidy and ease of doing business.

### State

While States have aided in providing subsidies for capital investments, they must focus on reducing cost of power, providing interest subvention on working capital, incentive for supporting industry, reduction of land rentals/price, providing industrial land development support, labour and logistics subsidy, allowing plug and play, and improving ease of doing business. Further, there needs



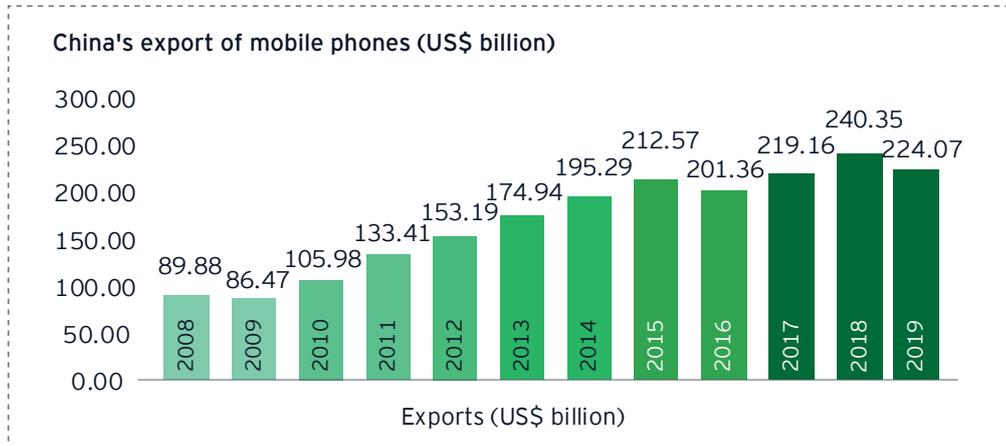
Exhibit 8.1: Centre and state efforts to address disability

S. No.	Factor resulting in cost-reduction	Centre		State	
		Responsibility	Status	Responsibility	Status
1	Corporate income tax exemption/reductions	✓	✓	NA	NA
2	Subsidy for machinery and equipment	✓	✓✓	NA	NA
2A	State subsidies in India for capital investments	NA	NA	✓	✓
3	Cost of power	NA	NA	✓	✗
4	Interest subvention on working capital/ capital availability	✓	✗✗	✓	✗✗
5	Research & Development subsidy	✓	✗✗	NA	NA
6	Incentive for supporting industry (supply chain, components, etc.)	✓	✗	✓	✗
7	Exemption/reduction of land rental/price	NA	NA	✓	✗
8	Industrial land development support	✓	✗	✓	✗
9	Building (or plug and play)	NA	NA	✓	✗✗
10	Labour subsidy	✓	✗	✓	✗
11	Logistics	✓	✓	✓	NA
12	Logistics subsidy	✓	✗	✓	✗✗
13	Factors affecting "Ease of doing business"	✓	✗	✓	✗
14	Duty free imports for creating fixed assets, and of inputs not available domestically	✓	✓	NA	NA
15	Production Linked Incentives ('PLI')	✓	✓✓	NA	NA

## Legend:

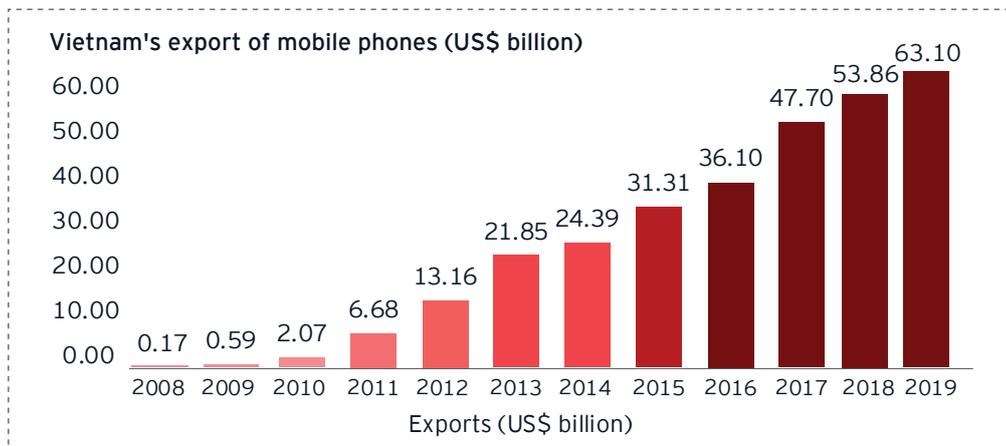
- ✓ Low efforts made
- ✓✓ High efforts made
- ✗ Partial efforts only
- ✗✗ No efforts

### A. China's export of mobile phones



Source: ITC Trade Map<sup>44</sup>

### B. Vietnam's export of mobile phones



Source: ITC Trade Map<sup>45</sup>

The dataset above and disabilities enlisted in Exhibit 8 indicate the strong correlation between cost competitiveness of China and Vietnam and their export numbers. The two countries cater almost exclusively to entire world's demand for mobile phones.

Moreover, in the post COVID-19 world, with global companies seeking to de-risk and looking to move manufacturing operations out of China, the Chinese Government is expected to sit up and take notice. China is expected to do a lot more for these companies in trying to retain their manufacturing operations from shifting out of China. To achieve this end, the Chinese Government might move aggressively and likely announce stimulus packages and respond in unconventional and unexpected ways. China is expected to do its best to keep global supply chains intact to try and retain value opportunities such as job creation, innovation, taxes, and positive multiplier for the GDP.



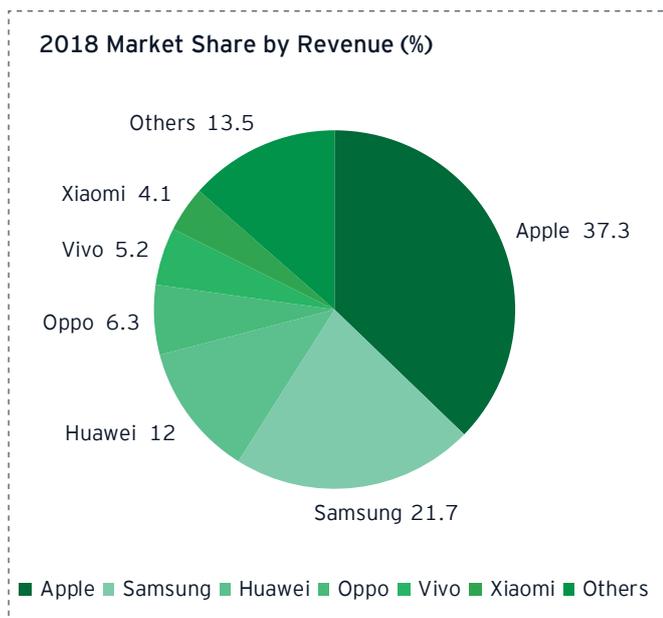


## 05

## Winner Takes All: India must!

Market share in mobile handsets industry is concentrated among a few brands. Thus, even as the market grows, it is likely to be served by limited players in medium to long term. Further, the top five handset suppliers accounted for 74% of the total market volume in 2018 and 83% of overall revenues<sup>46</sup>.

Exhibit 10: Market share of leading global brands



Therefore, in a market characterized by the dominance of few players, “winner takes all” principle applies to the industry as a whole. It is not a mere coincidence that only two countries and five companies control more than 70% the global trade in mobile phone industry.

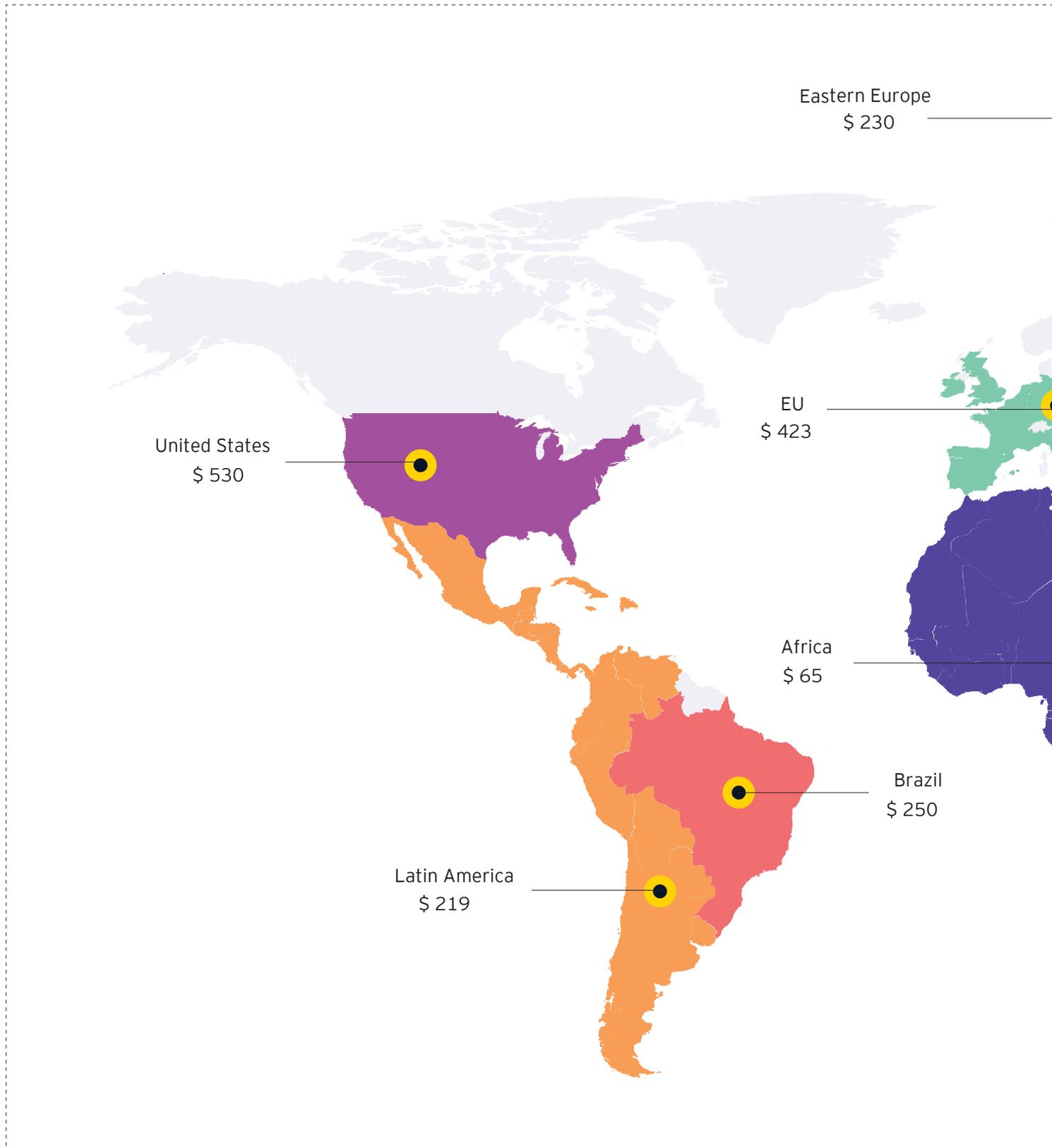
In view of the industry dynamics illustrated above, a country may either be a net importer or net exporter dependent on the factors at play. Given that a lot of factors favor India at the moment, it may be opportune time to capitalize on these factors and gain footholds in mobile manufacturing industry. While factors such as electronics being the most traded item and labor arbitrage may provide conducive environment to prioritize policy initiatives for encouraging the industry, the geopolitical (trade war) and security factors may promote acceptance for products manufactured in India on a global level.

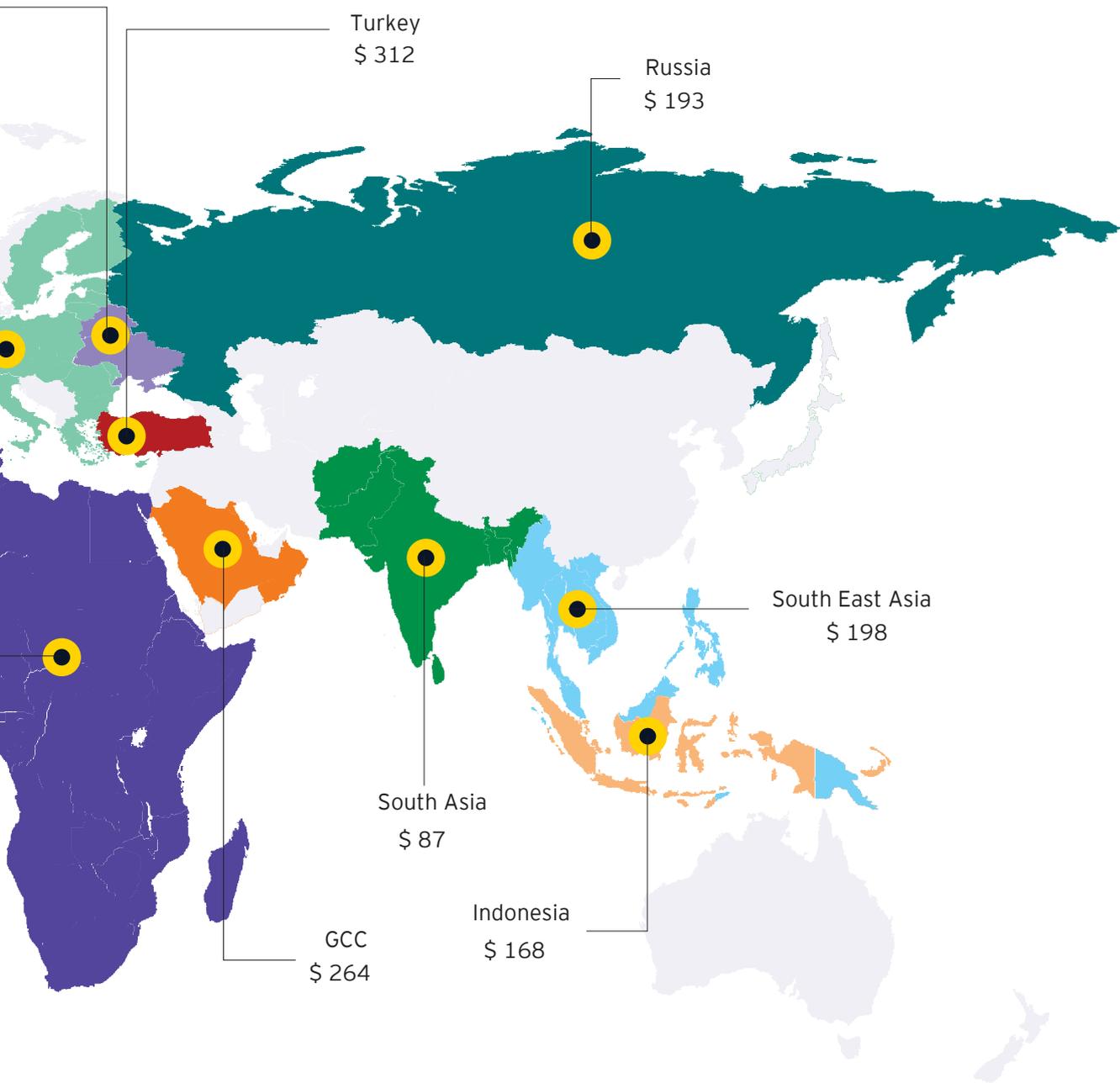
# 06

## Shifting focus to high-end markets

The markets across world may be categorized according to the Average Selling Price ('ASP') of mobile phones in respective countries/country groups.



Exhibit 11: Average Selling Price ('ASP') of mobile phones for various markets/country groups<sup>47</sup>



Basis Exhibit 11, though the country groups provide an average considering high per-capita as well as low-capita income countries within the group, these markets may be classified into following categories:



While US and European Union may be categorized into high-end ASP markets, country groups such as Latin America, Eastern Europe, Middle East, Asia-Pacific and Africa (higher-income countries such as Egypt, South Africa and Nigeria) may be considered Mid-range ASP markets. Low income countries/country groups such as Rest of Africa (i.e. countries other than Egypt, South Africa and Nigeria) may be covered under low-end ASP markets.

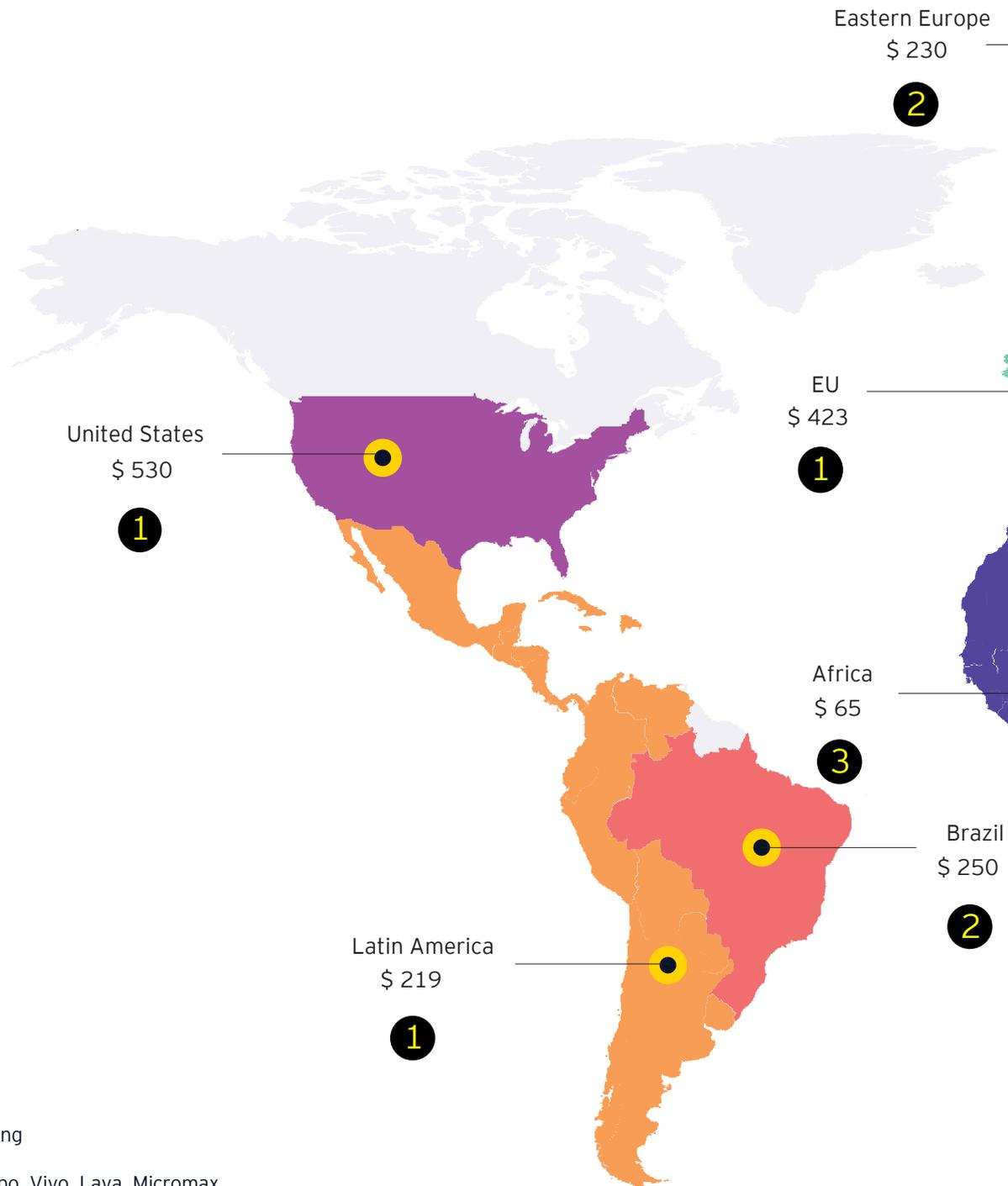
India may target exports to these countries/country groups by nurturing and encouraging domestic manufacturing ecosystem accordingly.

# 07

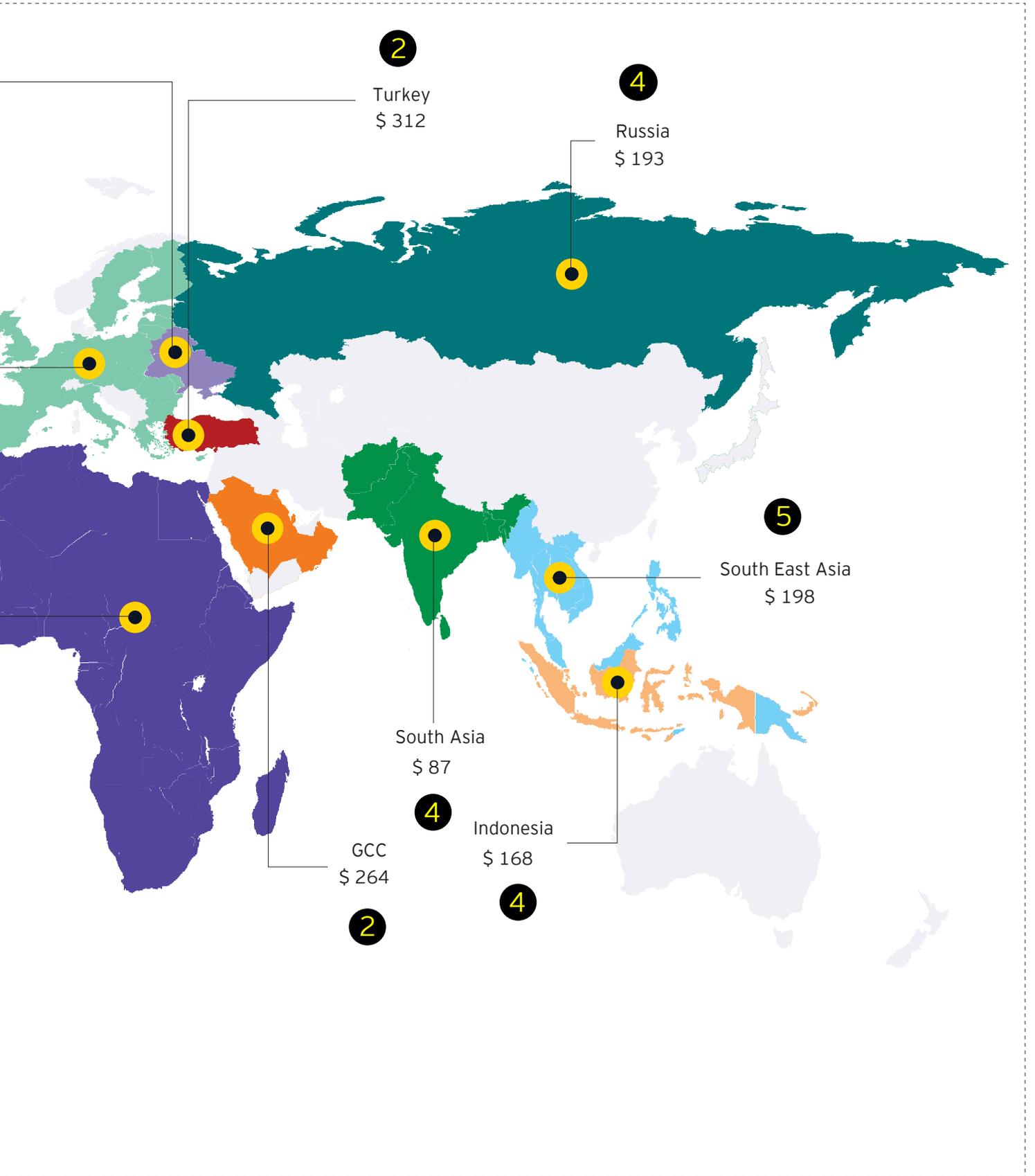
## Who can export from India?

In line with the ASP based market categorization, specific companies may be identified and encouraged to provide for suitable measures to boost exports from India. Global markets are catered to by limited market players and a majority of them specialize in addressing specific ASP-focused phone markets. To illustrate, the demand for ASP-based market categories may be addressed by companies in the following manner:





- 1 Apple, Samsung
- 2 Samsung, Oppo, Vivo, Lava, Micromax
- 3 Lava, Micromax
- 4 Lava, Micromax, Oppo, Vivo
- 5 Oppo, Vivo

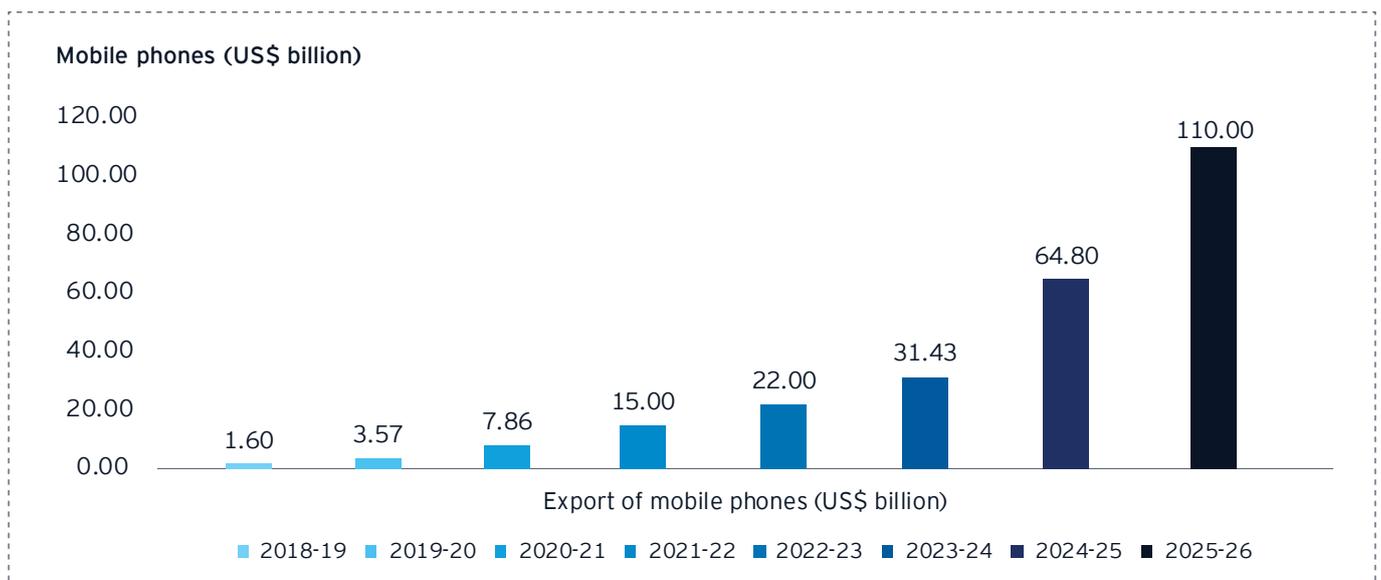


# 08

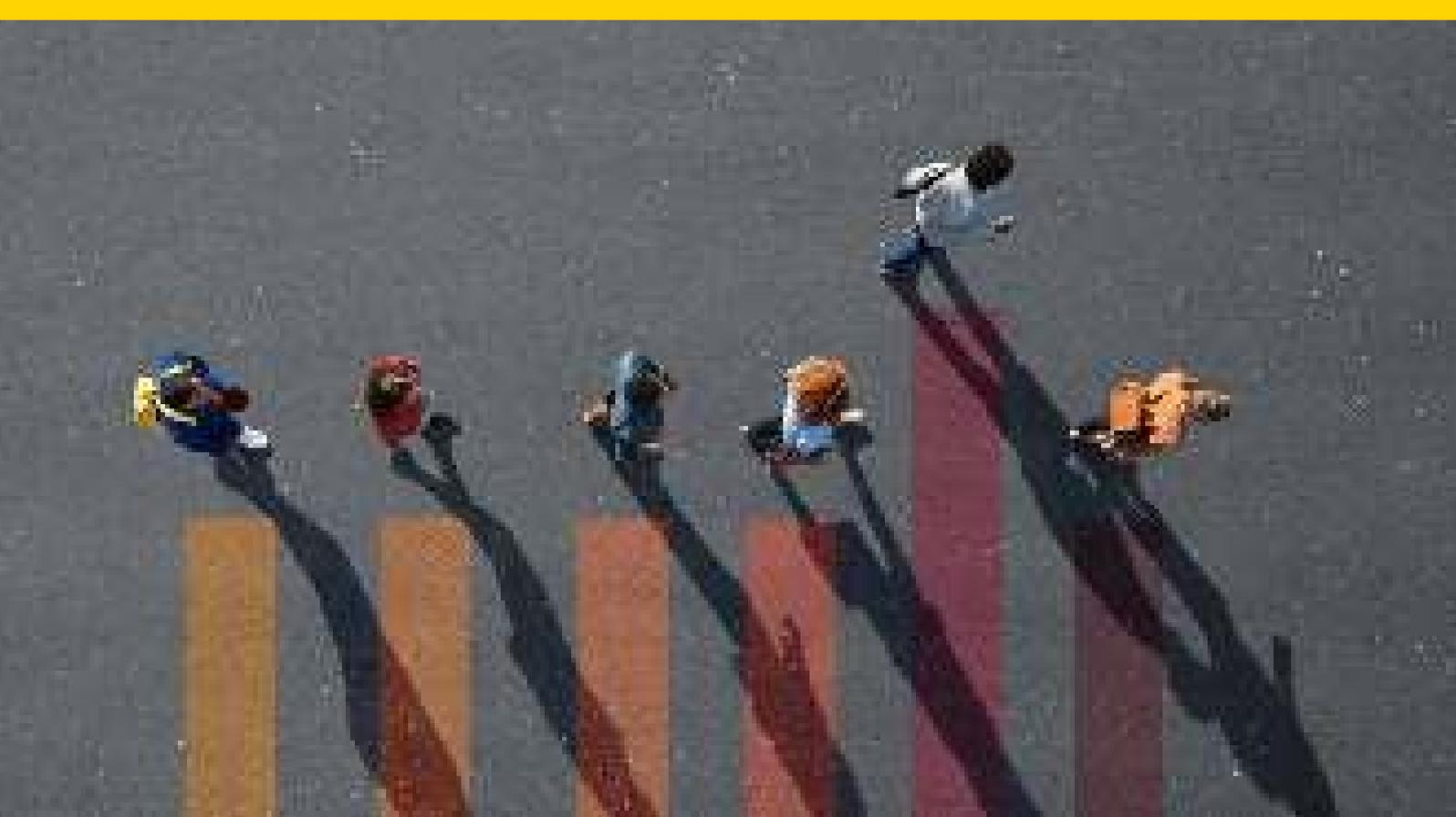
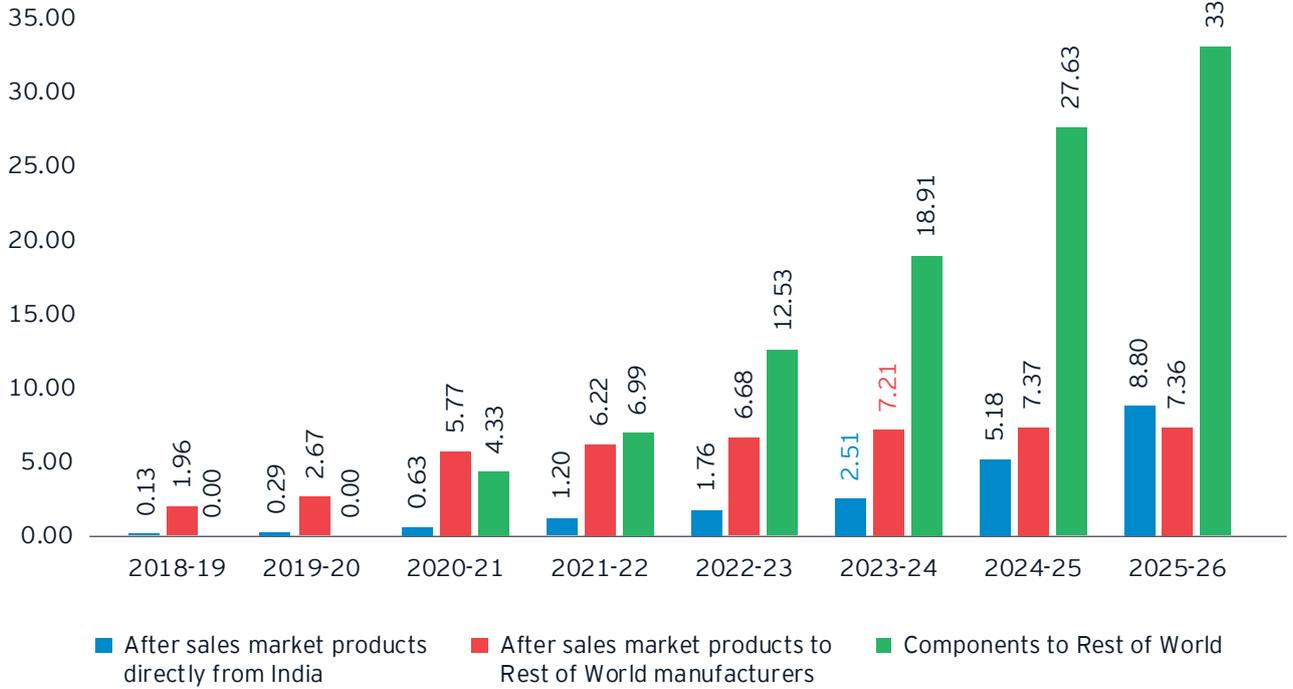
## Growth roadmap

As per the study undertaken by EY in collaboration with FICCI and ICEA titled "Mobile manufacturing industry: A US\$ 245 billion (INR 17 lakh crore) opportunity", the growth roadmap for exports of mobile phone, after sales market products and components is illustrated in Exhibit 12.

Exhibit 12: Estimated trajectory of export of mobile phones, after sales market products and components



Export of components and after sales market products (US\$ billion)



# 09

## Policy imperatives to win

India appears to have all necessary ingredients in place to encourage mobile manufacturing at scale and boost exports from the country. The only piece that appears to be missing so far is the policy support to attract lead firms, incentivize production and unveil measures that provide cost competitiveness to industry or help offset the disabilities suffered by Indian firms vis-à-vis Vietnam and China. Based on the analysis of trade practices of our Asian peers, below is the illustrative list of suggested policy measures that may help catapult India as a mobile phone exports destination:

A. Play on front foot:  
target exports, not import  
substitution

India ran a current account deficit of US\$ 63.38 billion<sup>48</sup> on account of imports of electronics (Chapter 84 and 85 products). So far, India has followed an import substitution policy wherein it has focused on imposing duties on imports of parts and components to dissuade assemblers based in India to procure mobile parts and components from outside of India. The approach has had limited success so far. The only plausible way India can salvage the forex situation is by focusing on exports. India needs to become a substantive player in an exports market that is dominated by just two countries (China and Vietnam).

B. Focus on what India  
does best to attract global  
value chains

The global value chain approach breaks down the entire process of conceiving a mobile phone to its disposal into various stages. These processes are not concentrated in any one country. The comparative advantage of different countries enables for the manufacturing processes to be distributed and fragmented across multiple countries. India, like China, is labor abundant. India's GDP per capita as well as average wage rate is lower as compared to other countries. India may emulate the experience of China and focus on traditional labor-intensive activities like mobile phone assembly. This approach has also been recognized strongly in Chapter 5 of the Economic Survey 2019-20<sup>49</sup>.

C. Integrate into the global value chain by engaging with global lead firms

D. Strengthen Indian companies to serve global markets

E. Target time-bound incentives to address disabilities

The global mobile phone market is served primarily by five companies. 83% of the global mobile phone revenues are split between Samsung, Apple, Huawei, Oppo and Vivo. India has already attracted initial investments from all five companies. India must integrate into the global value chain by providing an assembly platform to these global lead firms. The global lead firms may situate their manufacturing in countries which will allow them to reach out to global markets.

A mobile manufacturing ecosystem depends on the mothership or lead firm. Once the lead firm sets up its manufacturing base in a country, the suppliers of parts, components and sub-components also start shifting to the same location to shorten the supply chains. Currently, Indian companies like Lava and Micromax are producing mobile phones primarily for the domestic market. These companies are yet to plug in to global value chain manufacturing in a significant manner. Domestic companies may begin by turning into white label producers for international companies and in the process refine their own capabilities.

In order to cater to the global markets, India needs to address a plethora of structural and governance issues. It is estimated that India suffers from various disabilities like high cost of power, tax and ease of doing business. This renders India almost 10% to 20% less competitive than Vietnam and China respectively. India must address these disability issues in the long run. Meanwhile, in the short run, the Government shall endeavor to offset these disabilities by providing incentives which are WTO-compliant, easy to implement and help India take off from the export runway.



# 10

## Key recommendations

### Manufacturing needs to hit 100% manufacturing capacity immediately post COVID-19 lockdown

Global supply chains are expected to rush back to work after mid 2020. China is back on track with production levels at nearly 80%<sup>50</sup>. By June 2020, China is expected to reach nearly 100% at this pace. Meanwhile, the extended lockdown in India had led to a complete closure of all manufacturing operations across the country for nearly two months. With businesses and the economy coming to a halt, it was imperative for the Government to allow opening of full manufacturing in a phased manner with safeguards and provision of detailed SOPs for such operations.

Bereft of such a measure, companies preparing for their September and festival season launches of products, may be forced to strengthen their production lines from China by July 2020. Therefore, the ramp up period is between June and September. All suppliers who aim to be a part of global supply chains need to be opened and functioning at nearly 100% by mid-2020, but no later than end-June 2020.

### Successful implementation of Production-Linked Incentive Scheme (PLI)

In view of the disabilities vis-à-vis Vietnam and China and to encourage large scale electronics manufacturing, the government of India recently launched a trilogy of Schemes namely, the PLI scheme, Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors ('SPECS') and Electronics Manufacturing Clusters ('EMC') Scheme, for target segments or products. The PLI Scheme targets large scale investments in India for mobile phone manufacturing, especially those supplying to global supply chains.

It is important that the incentive scheme is easy to implement, easy to measure and linked to minimal criteria. However, the success of the PLI Scheme is entirely premised on the guidelines being practical, competitive and ensuring that the disbursement is efficient and timely. The current process in the form of Direct Bank Transfers in the name of the applicant is not ideal. Inspiration must be taken from an MEIS-type disbursement, to provide much needed liquidity to manufacturers and in the form of cash (as against duty scrips or any other mode). By December-January, the first set of disbursement requests will come in, thereby requiring an efficient mechanism for disbursement of incentive.

It is crucial that the guidelines are framed in a manner that large global supply chains are incentivised to shift plant and machinery to India, rather than merely augment existing capacity. The policy must support effective transfer of plant and machinery to keep costs low and kick start operations by July 2020. Further, in view of the COVID-19 outbreak, consideration might need to be given to relaxing first year investment and production targets might need to be reviewed or combined with second year targets.

## Use the structure of PLI to develop other Schemes

To build a broader ecosystem for electronics in India, the government needs to replicate the PLI scheme with appropriate changes to suit other parts of the global supply chain. Two specific targets would be: areas of core technology and broader component ecosystem. There is a need to follow up the PLI with a deeper engagement with the industry to target a handful of core technologies which can help move the deeper ecosystem to India. Simultaneously, schemes targeting component manufacturing need a more nuanced review to appropriately modify attention on components that will not only strengthen mobile manufacturing but also move greater portions of the global supply chain and the world's overall dependency and strategic parts of the global supply chain to India.

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

Special Economic Zones ('SEZ's) have now gained much importance for electronics including mobile handset manufacturing with Exports being of paramount importance. SEZs allow faster setup of manufacturing plants and ease of doing business with duty free import of capital machinery and components required to manufacture electronic finished goods. However, the sale of finished goods from SEZs into the India is treated at par with imports 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 have to be inefficiently divided into Domestic Tariff Area and SEZs. This leads to inefficient utilization and sub-optimal use of production lines.

Similar to the policy of permitting manufacturing for domestic market through 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 as notified under PMP 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 serving global value chains. Currently, the policy is such that it is beneficial for companies to import from countries with whom India has a Free Trade Agreement, rather than manufacture in the SEZ. It reduces the incentive both for the domestic market and to manufacture for exports markets. This anomaly needs to be corrected.

## Relook at India's taxation policies

One of the disadvantages India suffers vis-à-vis other global economies is the presence of a large domestic market. It also needs to remove any remaining barriers to fast track electronic exports. A comprehensive review of India's taxation policies, both domestic and otherwise, vis-à-vis the policy objectives underlined in making India a global hub for electronic manufacturing, and especially mobile phones and components, needs to be undertaken. This will include a review of GST, duties under PMP and other taxes that impede the pace of exports from India.

## Disabilities beyond PLI need to be addressed by Centre and States

Indian manufacturers suffer a disability vis-à-vis China and Vietnam to the tune of 19.2%-21.7% and 9.4%-12.5% respectively. Thus, Indian manufacturers are at a disadvantage compared to these countries that enjoy cost competitiveness differential of 15% and 5.8% (China and Vietnam, respectively).

This disability is computed on account of numerous contributing factors such as land and labour subsidy, interest subventions on working capital, land rentals, ease of doing business etc. In order to address India's stark disability and help emerge as a competing nation, these factors must be addressed piece by piece. For instance, the PLI Scheme notified by Ministry of Electronics and Information Technology ('MeitY') in March 2020 is one such factor that will aid in substantially improving India's competitiveness by reducing the disability. Similarly, each of the factors must be addressed in a manner to help India create an alluring manufacturing base. These factors need to be addressed jointly and independently by centre and states. For the list of issues that remain unaddressed, beyond the PLI scheme, please refer to Exhibit 8.1

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