

Make in India Strategy for Electronic Products

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Table of contents

| | |
|---|-----------|
| 1. Global Electronic Hardware Industry | 1 |
| 2. A Snapshot of Indian Electronics Industry from 2014-15 | 2 |
| 3. Growth Trend | 4 |
| 4. A Comparison with China | 5 |
| 5. The Existing Policy Initiatives | 10 |
| 5.1 Tax and Tariff Concessions on Inputs and Tariff Protection Against Imports ... | 10 |
| 5.2 Miscellaneous Schemes to Promote Domestic Production | 11 |
| 5.3 Promotion of innovation..... | 13 |
| 5.4 Skill Development | 14 |
| 6. India's Options: Import Substitution or Export Orientation? | 14 |
| 7. An Export-Oriented Strategy..... | 17 |
| 7.1 Ending Tax Uncertainty..... | 19 |
| 7.2 End to Inverted Duty Structure and Related Measures | 20 |
| 7.3 Coastal Economic Zones | 21 |
| 7.4 Investment Incentives | 21 |
| 7.5 Free Trade Agreements..... | 23 |
| 7.6 High Value Added Products | 23 |
| 8. Import Substitution Strategy | 24 |
| 9. Issue of Setting Domestic Standards | 26 |
| 10. Concluding Remarks | 27 |
| 11. Summary Recommendations..... | 30 |

Make in India Strategy for Electronic Products

This paper lays down India's policy options for electronics hardware industry and argues in favor of an export-oriented strategy. The essential argument made is that at less than \$65 billion, the domestic market remains small in relation to the world market, which is in excess of \$2 trillion. Going for the larger market as China has done would permit the exploitation of economies of scale and agglomeration and help the industry become globally competitive. The alternative import –substitution strategy would gain competitiveness principally in the domestic market since it largely relies on securing the domestic market for domestic producers.

The paper is divided into ten sections. Section 1 briefly describes the global industry. Sections 2 and 3 offer a snapshot and evolution of Indian electronics industry, respectively. Section 4 compares the export performance of the highly successful Chinese electronics and electrical goods industries to their Indian counterparts. Section 5 describes the existing policy in the sector. Sections 6-8 compare two possible strategies, one focusing on winning the vast export markets (export-oriented strategy) and the other concentrating on the import markets (import-substitution strategy). Section 9 briefly touches on the question of adopting a domestic standard for certain electronic products and Section 10 concludes.

1. Global Electronic Hardware Industry

Electronics industry is among the largest and fastest growing manufacturing Industry in the world. The total Electronics Equipment Production of the world during the year 2014 was estimated to be around US\$ 2.0 trillion. The maximum

production was that of Computer Systems and Peripherals (26.6 percent) followed by communication equipment (21.7 percent), Consumer Electronics (12.6 percent), Instruments (10.7%), industrial equipment (9.5 percent) and Equipment for Government / Military (8.8 percent). Over the years, production bases have shifted from USA and EU to Asia and the latter's share in global production has increased to over 60%.

2. A Snapshot of Indian Electronics Industry from 2014-15

India's total Electronics Hardware Production in 2014-15 is estimated at US\$ 32.46 billion. This represents a share of about 1.5 percent in world electronic hardware production. The production, export and import figures of Indian Electronics Industry for FY 14-15 are summarized in Table 1.

Table 1: Production, Exports and Imports of Electronics Hardware by India, 2014-15

| S. No. | Parameter | Value (US \$ Billion) |
|--------|-----------------------|-----------------------|
| 1 | Production (Revenues) | 32.7 |
| 2 | Exports | 6.0 |
| 3 | Imports | 36.9 |

Source: CII & ESC

According to Table 1, domestic consumption of Electronic Hardware in 2014-15 was \$63.6 billion. Imports accounted for 58% of this consumption.

Electronics Industry is conventionally divided into six segments. Table 2 provides the production (revenue) share of each of these segments.

Table 2: Indian Electronics Industry Revenues by Segment 2014-15

| Segment | \$Billion | Percent |
|-------------------------------------|-------------|------------|
| Consumer electronics | 9.1 | 28 |
| Electronic components | 5.1 | 16 |
| Industrial Electronics | 5.6 | 17 |
| Computer Hardware | 1.7 | 5 |
| Communication & Broadcast Equipment | 9.5 | 29 |
| Strategic Electronics | 1.7 | 5 |
| Total | 32.7 | 100 |

Table 3 provides data on exports and imports. Three points may be noted. First, India has not had much success in penetrating the export markets so far. At \$6 billion, India has less than 1 percent share in the world markets. Second, electronic components and electronic instruments account for the bulk of India's exports. Finally, imports of electronic goods account for more than half of India's total consumption at home. India is particularly large importer of telecom instruments. As a whole, Indian electronic industry does not present a picture of strength. With the skilled labor force that the country has, the industry should be a significant force in the world markets. But it has not done well in competing with imports even in its own home market. Imports accounted for as much as 58% of the total consumption in 2014-15. Prima facie, it stands to reason that there is something badly amiss in the ecosystem of the country that inhibits the industry from turning into a significant force.

Table 3: Exports and Imports of Indian Electronics Industry (\$Million) by Segment, 2014-15

| Segment | Exports | | Imports | |
|--------------------------------|-------------|------------|-----------------|------------|
| | \$Million | Percent | \$Million | Percent |
| Computer hardware, peripherals | 364 | 6.1 | 7248.12 | 19.6 |
| Consumer electronics | 793 | 13.2 | 4119.89 | 11.2 |
| Electronics components | 1878 | 31.2 | 5409.39 | 14.7 |
| Electronics instruments | 1903 | 31.7 | 5409.72 | 14.7 |
| Telecom instruments | 1073 | 17.9 | 14716.23 | 39.9 |
| Total | 6011 | 100 | 36903.34 | 100 |

Electronics manufacturing industry has received a tiny part of the total foreign direct investment (FDI) into India. From April 1, 2000 to June 30, 2015, it received only \$1.68 billion or 0.66% of the total FDI inflow of \$258 billion FDI inflow. In flow terms, the total FDI in electronics in 2014-15 was \$142.9 million and amounted to just 0.42% of the total FDI inflow. Although telecommunications received 6% of the total FDI inflow during 2014-15 on its own, this was almost entirely in the provision of telecommunications services.

In several countries, the contribution of electronic industry to GDP is significant. For example, it contributes 15.5% to GDP in Taiwan, 15.1% in South Korea and 12.7% in China. But in India, this proportion is only 1.7%. Furthermore, OEM/ODM [Original Equipment Manufacturing / Original Design Manufacturing] and local component suppliers are still in infancy in India. Most of the OEM is confined to last-mile assembly indicating that the industry remains in the early stages of development.

3. Growth Trend

Figure 1 depicts the value of output of electronic industry in current (nominal) lakh crore rupees from 2004-05 to 2013-14. The output has grown from Rs. 1.9 lakh

crore in 2004-05 to Rs. 8.2 crore in 2013-14. The simple average of growth rates during this period works out to 21.5%. But remembering that the production value is nominal and not corrected for inflation and the base is still small, the growth is less impressive than this growth rate may indicate. The point is greatly reinforced when we compare India to China, as discussed below.

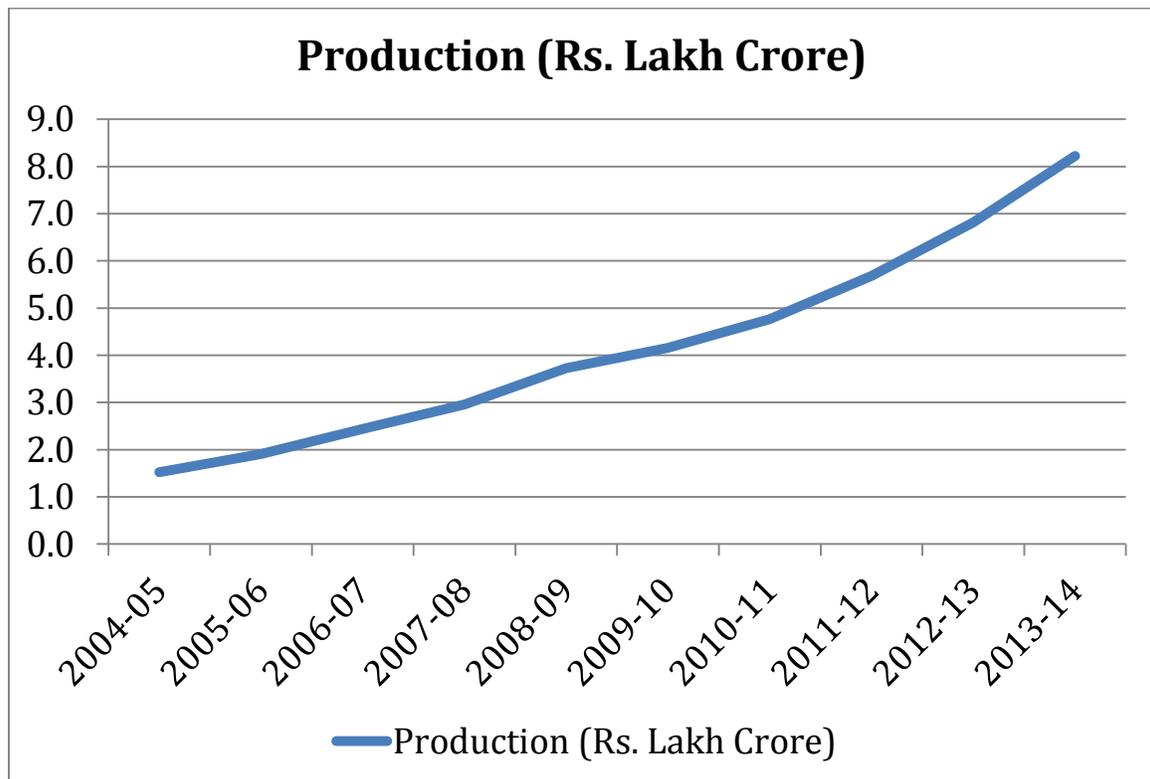


Figure 1: Revenue in electronic industry in current lakh crore rupees

4. A Comparison with China

Two-digit Standard International Trade Classification (SITC) data, available from the United Nations Commodity Trade (UN Comtrade) Statistics, allow us to compare India to China in terms of their export performance. The comparison throws useful

light on how India may want to design its policy if it is to capture a large share in the world exports.

For purposes of this comparison, it is useful to expand the scope of products to include electrical goods. Although technically a distinction can be drawn between electrical and electronic goods, the difference is getting increasingly blurred since the conventional electrical products frequently use electronic parts in them.¹ An additional justification for the inclusion of electrical goods is that from the viewpoint of Make in India and job creation, electrical goods can potentially contribute as much as electronic goods.

There are three 2-digit SITC categories covering electronic and electrical products.

These are:

SITC 75: Office machines and automatic data-processing machines

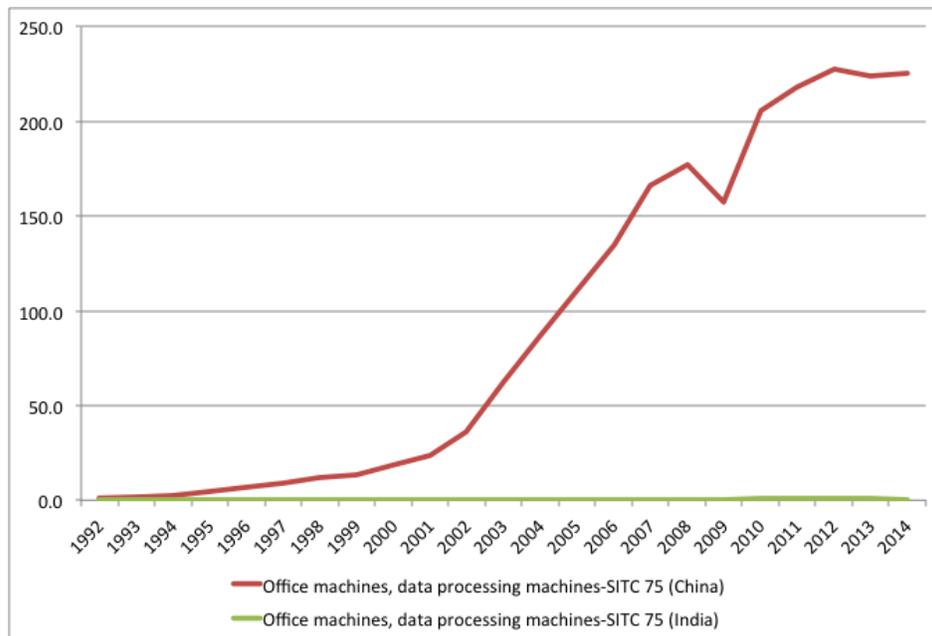
SITC 76: Telecommunications and sound-recording and reproducing apparatus and equipment

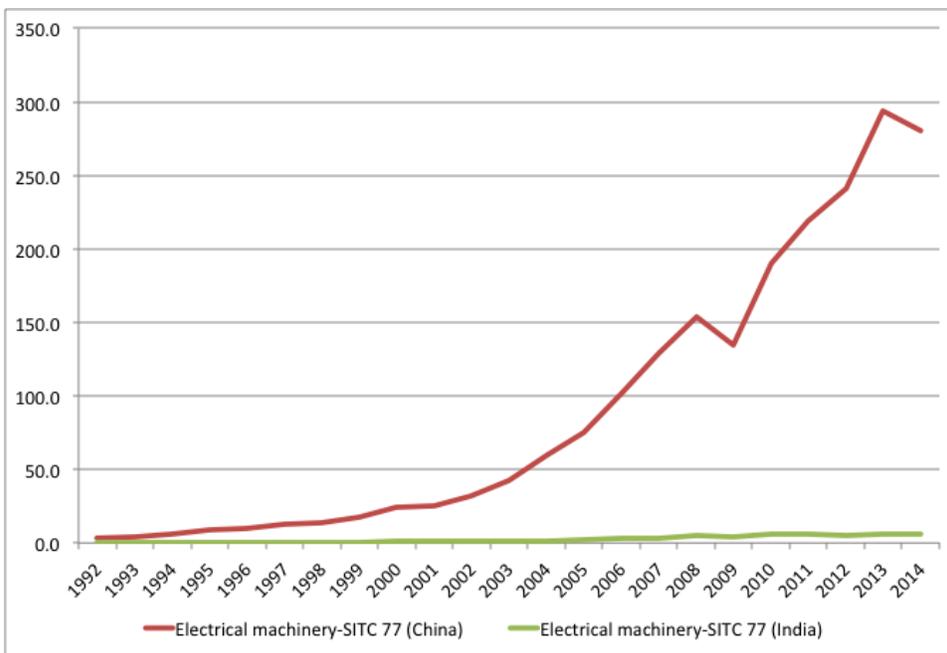
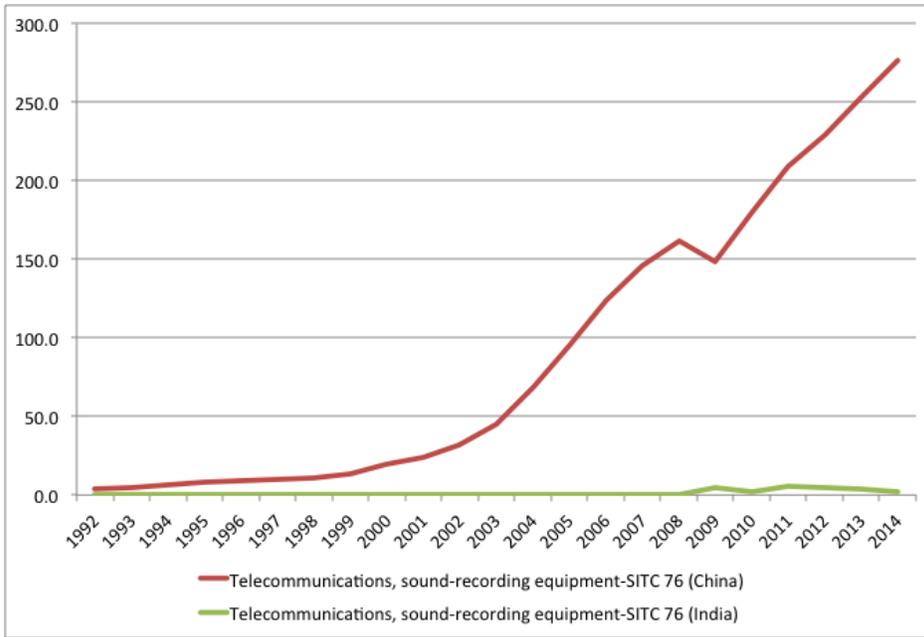
SITC 77: Electrical machinery, apparatus and appliances, not elsewhere specified, and electrical parts thereof

Figures 2-4 successively provide graphical representations of the evolution of exports of these three items by India and China from 1992 to 2014. These three

¹ An electric circuit has no decision-making capability while electronic circuit does. An electric circuit simply powers an instrument, appliance or machine while an electronic circuit can interpret a signal and perform tasks to suit the circumstance. Broadly, appliances that operate by converting electricity directly into heat, light or motion are electrical and those operating by performing more complex tasks are electronic. For example, conventional bulbs and fans are electrical appliances while calculators and telephones are electronic appliances. But the distinction has blurred today because most modern appliances use a combination of electrical and electronic circuits.

figures provide a dramatic contrast between India and China in terms of export performance. Taken together, both countries exported very small amounts in 1992: \$8 billion in the case of China and 0.3 billion in the case of India. Even in electrical goods (SITC 77), which constitute conventional and not new set of products, China's exports amounted to only \$3.3 billion that year. Although the Chinese performance had begun to diverge from that of India even in the early 1990s, as late as 2000, growth in exports was not extraordinary. The total exports of the three products taken together that year at \$62.2 billion were significant and implied a very high rate of growth. But this paled in comparison by a wide margin with what followed in the 2000s. By 2014, exports of the three products together had risen to the gigantic figure of \$782.2 billion. In India, none of the three product categories including even electrical appliances (SITC 77) exhibited anything close to this performance. Their combined exports reached barely \$11 billion in 2013 before dropping to 8.8 billion in 2014.





Figures 2-4: Exports of electronic and electrical goods by India and China, 1992-2014

The Chinese experience has four important implications for the future policy towards electronics industry in India. First, rapid growth in electronic industry will

not be achieved by focusing on the domestic market. Through import substitution, we may be able to raise the output to some degree and generate additional profits for the existing producers but we will not turn the industry into the dynamo it must become. Big success requires operating in the large world market, which amounts to more than two trillion dollars compared with only \$65 billion in the case of the domestic market. Therefore, we must reorient our policy to ensure that the industry becomes competitive in export markets. This feature implies that trade policy and trade infrastructure must not handicap firms from becoming exporters.

Second, the Chinese experience also underlines the importance of large-scale manufacturing. Large firms are better able to exploit both economies of scale and of agglomeration. Since they must compete in the world markets to sell large volumes of output, they also have the incentive to continuously upgrade their processes, management and technology to stay competitive. Small and medium firms must either compete against these firms or become their ancillaries. Either way, they are forced to adopt cost-saving technologies to remain profitable. The implication of this feature is that the ecosystem must be friendly to the operation of large-scale firms.

Third, in today's world, large firms are predominantly multinationals. Such global giants in electronics industry as Hon Hai (Foxconn) of Taiwan, Sony, Fujitsu and Panasonic of Japan, Samsung and LG of South Korea and IBM, Hewlett Packard, Apple and Dell of the United States have driven the rapid growth of electronic industry in China. The implication is that the policy regime should be friendly to

multinationals. This is a more rapid and perhaps the only avenue to bringing large firms to India. Any attempts to grow the large firms at home would take a long time and even then success may be difficult to achieve.

Finally, the success of the Chinese industry also reveals the importance of geographical location of firms. From the beginning, China gave primacy to the creation of the Special Economic Zones (SEZs) and Economic and Technical Development Zones (ETDZs) along the vast coastline on its eastern and southern border. It also paid special attention to port development to remove any bias against exporting due to high costs of shipping. This was in contrast to Indian incentive schemes that predominantly focus on nudging the producers towards the domestic market.

5. The Existing Policy Initiatives

The existing policy initiatives to assist electronics industry in India fall into four two categories: (i) tax and tariff concessions applying to specific products; (ii) Miscellaneous schemes to promote domestic industry; (iii) schemes to promote innovation; and (iv) schemes aimed at skill development. In the following, we describe each of these schemes in greater detail.

5.1 Tax and Tariff Concessions on Inputs and Tariff Protection Against Imports

To encourage assembly activities, basic custom duty and countervailing duty (CVD) are waived on inputs used in the production of all ITA-1 products (ITA-1 products are final products that enter duty free into the country under the WTO Information

Technology Agreement – 1 to which India is a signatory). Similar exemption is also given on inputs used in TVs, mobile handsets, tablet computers, solar PV cells and certain medical equipment.

A special differential excise duty regime has been introduced for mobile handsets and tablet computers to provide protection against imports. Under this regime, an excise duty of 12.5% applies as CVD to imports but domestic producers can choose between the same 12.5% excise with VAT exemption on inputs used and a significantly lower excise duty and no VAT exemption. For a vertically integrated manufacturer, this regime can allow significant protection against imports. Flat panel TVs, which were subject to zero custom duty, have been subject to 36.5% custom duty beginning in August 2014.

Under zero duty Export Promotion Capital Goods (EPCG) scheme, imports of capital goods for pre-production, production and post-production (including CKD/SKD thereof as well as computer software systems) enter at zero custom duty. As per the Foreign Trade Policy 2015-2020, the specific export obligation under EPCG scheme where capital goods are procured from indigenous manufacturers has been reduced to 75% from 90% in order to promote domestic capital goods manufacturing industry.

5.2 Miscellaneous Schemes to Promote Domestic Production

A number of schemes aimed at promoting domestic production exist. These are described below.

Modified Special Incentive Package Scheme (MSIPS): Modified Special Incentive Package Scheme (M-SIPS) provides financial incentives to offset disability and attract

investments in the electronics hardware manufacturing including chip manufacturing. The scheme provides subsidy for investments in capital expenditure - 20% for investments in Special Economic Zones (SEZs) and 25% in non-SEZs. Subsidy rate is lower in the SEZs because several other concessions are available there. Between January 2014 to June 2015, 40 proposals worth Rs. 9538.24 crore in investment have been approved under the scheme (see <http://www.msips.in/MSIPS/>).

Electronic Manufacturing Clusters (EMCs): Electronics Manufacturing Clusters (EMC) Scheme provides financial assistance for creating world-class infrastructure for electronics manufacturing units. The assistance for the projects for setting up of Greenfield Electronics Manufacturing Clusters is 50% of the project cost subject to a ceiling of Rs. 50 Crore for 100 acres of land. For larger areas, pro-rata ceiling applies. For lower extent, the extent of support would be decided by the Steering Committee for Clusters (SCC) subject to the ceiling of Rs. 50 Crore. For setting up of Brownfield Electronics Manufacturing Cluster, 75% of the cost of infrastructure, subject to a ceiling of Rs.50 Crore is provided. About 14 Greenfield EMC proposals have been given in principal approval, while 2 have been given final approval. 2 common facility centers also have been accorded in principle approval.

Investment allowances and deductions: Investment allowance (additional depreciation) at the rate of 15% to electronics manufacturing companies investing more than INR250 million in plants and machinery is provided. This benefit will be available for three years, i.e., for investments made up to 31 March 2017.

Preferential Market Access: Under this 9 generic products and 23 telecommunication products have been identified for preferential market access (PMA) in government

procurement. All ministries have been directed to implement the policy in all Government procurements. A PMA online monitoring system also has been established to track the progress centrally.

Setting up of Semiconductor Wafer Fabrication: Two proposals for setting up of semiconductor wafer manufacturing facilities in India have been approved and implementation is under progress. Semiconductors form about 30% of the cost of electronic product/system.

Mandatory Safety Standards: Mandatory compliance to safety standards has been notified for identified Electronic Products with the objective to curb import of sub-standard and unsafe electronics goods. As of now, 30 electronic products are under the ambit of this Order.

Merchandise Exports from India scheme (MEIS): This scheme has notified certain products (includes AC parts and compressors, refrigerating equipment compressors, fully automatic washing machines, color TV and STB for accessing internet) and markets for exports. These products, when exported to specified markets (Category B countries), are offered 2% export subsidy. There is also provision for higher subsidy under the MEIS scheme for export items with high domestic content and value addition.

5.3 Promotion of innovation

Various initiatives have been taken to promote innovation in India. Electronics Development Fund (EDF) has been created to help generate an ecosystem of R&D in electronics in India to promote IP generation and large-scale manufacturing. Initiatives

have also been taken to promote incubators, centers of excellence and R&D in electronics sector.

5.4 Skill Development

There have been large-scale initiatives to create skilled manpower to achieve targets of 1,500 Ph.D. in Electronics Sector Design and Manufacturing (ESDM) and another 1,500 Ph.D. in Information Technology and Information Technology Enabled Services (IT/ITES) per year by 2020. The scheme for setting up seven new Electronics and IT Academies has been approved and the Special Manpower Development Program for VLSI and Chip Design has also been approved. Financial assistance to the states/UTs for skill development and vocational training has been approved with a target of 400,000 individuals in the ESDM sector.

6. India's Options: Import Substitution or Export Orientation?

In formulating the future policy, there are two options: a primarily import-substitution-centered strategy and an export-oriented approach. Under the former option, we would focus on securing the domestic market for firms located within India. This would require measures that that would make foreign-sourced goods more costly in the domestic market (for example, through a higher tariff) or measures that would cut the costs of domestic producers (for example, through production subsidies).

Under the second option, we would target the global market including domestic one. Domestically-sourced goods would have to become competitive in not just our home market but in the markets of other countries as well where they will have to

compete against similar products sourced from anywhere in the world. This is a far more ambitious goal but also one with enormous potential. It would require creating an ecosystem in which Indian electronic industry becomes globally competitive.

The upside of the first approach is that it is easier to implement. As long as the World Trade Organization (WTO) rules or rules agreed under Free Trade Agreements (FTAs) that India has signed do not come in the way, discrimination in favor of domestically located producers and against suppliers abroad can increase the share of the former in the domestic market. There is also some certainty of success in the approach since domestic market is well identified. With interventions placing them at an advantage relative to foreign sourced supplies, domestic suppliers can expand their share.

But this route also comes with some downsides. It is important to recall that India had pursued this route with ultra-high protection provided across the board during the first four decades of development. Imports as a proportion of the GDP rarely crossed the 10% mark throughout this long period (today, they are near 30%). But the strategy was a failure with per-capita income just doubling over the long forty-year period. Due to slow growth, domestic market remained small. Even a 90% share in a small market translated into a small volume of output.

Growth since India began opening up to the world economy in 1991 has enlarged the domestic market but relative to the world market still remains small. Domestic demand for electronic goods was approximately \$64 billion in 2014-15. In

comparison, the world market in 2014 was \$2 trillion. The scope for expansion of the industry is many times more if we aim at the world markets.

A second downside of import substitution strategy is that in so far as it relies on protection instead of output subsidy, it increases the cost of the product to its buyers. If protection is set at a high level to achieve significant expansion of the domestic industry, it can have very detrimental effect on consumers. As a dramatic example, one important reason why telecommunications revolution spread so rapidly in India was that imports of mobile handsets were freely allowed. Had we pursued import substitution in this sector and relied on the domestic industry to supply the bulk of the handsets, the telecommunication revolution would have almost surely failed to materialize on the scale it did.

The alternative approach of export orientation is not subject to these shortcomings. Far more importantly, it has the advantage that it does not limit the industry size to the small domestic market. The world demand being many times larger than the domestic market in any specific product, it allows firms to exploit the economies of large-scale production. It also allows the industry to grow large allowing it to exploit agglomeration economies.

Whether we adopt an export-oriented strategy that treats foreign and domestic sales with equal favor or go for an import substitution strategy that actively favors sales in the domestic market has profound implications for policy choices. Under the former approach, we seek to remove barriers that impede the ability of the

domestic industry to become globally competitive while under the latter approach we try to give it additional advantage over foreign suppliers in the domestic market.

7. An Export-Oriented Strategy

Several factors have impeded the ability of the Indian electronic industry to become globally competitive. First and foremost, uncertainty of tax regime and onerous labor laws discourage global players from locating in India despite the availability of workers at all skill levels at wages lower than in most other parts of the world. This fact is reflected in minuscule foreign direct investment in electronic industry in India. At the same time, domestic firms, which are better able to work around tax uncertainties and labor-market rigidities, lack access to technologies and links to global markets. The result is the preponderance of domestic firms that are largely focused on the relatively small domestic market. This places the large global firms located in other countries at an advantage as suppliers even in the Indian market. They have the benefit of scale as well as access to cost-saving technologies in outside locations.

This situation is exacerbated by two additional sets of factors: inverted duty structure and high barriers to the movement of goods into and out of the country. Under the WTO Informational Technology Agreement of 1995 (commonly referred to as ITA-1) that India signed in 1997, tariffs on 217 IT products came to be set at zero. Continuing positive custom duties on many inputs used in these products places their producers at a disadvantage vis-à-vis their foreign counterparts able to access the same inputs at lower, often zero, tariffs. A similar situation arises from

FTA agreements that have lowered tariffs on products below those applicable to inputs used in them.

The second set of factors working against competitiveness of domestic firms globally includes onerous regulations, poor connectivity of production locations to ports and delays at ports—factors that impede the movement of goods into and out of the country. It is not unusual for a firm to have to fill more than a dozen forms to import its inputs. Inspection requirements and other formalities associated with custom clearing add further to the cost and time delays. Turnaround time of ships at ports averages two to three days compared with 8 to 12 hours at Hong Kong and Singapore. Transporting internally from production location to destination port can take a long time—14 days from Delhi to Mumbai, according to one estimate. These factors limit the access of domestic firms to foreign markets and encourage them to remain focused on the domestic market. The same factors also shut out these firms from global value chains and inhibit them from forming production networks at home. The end result is a fragmented industry with relative shortage of large-scale firms.

At the present juncture, India has an unusual opportunity. Real wages in manufacturing in China have been rising at 10% per year since 2007. In 2014, they stood at more than Rs. 5 lakh per year. These increased wages are rendering China uncompetitive in employment-intensive activities. In surveys, Chinese firms point to labor costs as the number one barrier to their development. Just as the Hong Kong and Taiwanese investors moved to China in the early 1980s in response to

high wages in their respective locations, firms currently located in China are looking for locations with less expensive labor. India can be that location. But this requires a number of steps.

7.1 Ending Tax Uncertainty

Because multinationals, currently predominantly invested in China, have the latest technologies as well as links to global markets, any strategy aimed at connecting Indian electronics industry to global markets must recognize the importance of bringing them to India. Although retrospective taxation is now behind us, frequent transgressions by tax officials involving issuance of tax notices without reasonable basis continue to shape the perceptions of foreign investors. The notices also carry a real cost in that a proportion of the assessed tax revenue must be immediately deposited.

To take the fear of being hit by unjust and unjustified tax demands, it is important to clearly establish in writing the tax liabilities under different circumstances in full detail. Most investors do not mind paying taxes that are due but do fear and resent being surprised. The process can be greatly aided by eliminating the exemptions as far as possible and simplifying the tax system. The proposed Goods and Services Tax (GST) will accomplish this to a large degree in the case of indirect taxes. The same may also be done with respect to corporate profit taxes.

7.2 End to Inverted Duty Structure and Related Measures

The only clean solution to the problem of inverted duty structure is to bring the custom duty down to the level of the final product. In cases that the duty on the final product is zero, duties on inputs used should also be brought down to zero. While in principle a system of duty drawback on inputs used in exports can substitute for this measure, in practice this does not work well due to too many bureaucratic steps and cumbersome procedures involved.

It is often pointed out that many of the inputs have multiple uses so that cutting or eliminating duty would lead to duty reduction even for uses for which it is not called for. While this is correct, given that the associated revenue loss in almost all cases would be small and bureaucratic cost of maintaining the custom duty for some uses while eliminating it for others would be high, it is best to apply the duty cut to the inputs regardless of their use.

The general principle we must follow with respect to exports and imports is that no indirect taxes should be exported while full burden of within-border indirect taxes must fall on imports. The former implies that all tariffs and domestic taxes paid on inputs whether sourced domestically or from abroad must be rebated back at the exit point. Likewise, countervailing duty equivalent to all domestic indirect taxes must be applied to all imports.

7.3 Coastal Economic Zones

Although India has numerous Special Economic Zones (SEZs), they have not taken off in the way they did in China beginning in 1980. There are issues of both size and location that have held back the SEZs in India. Following China, what is required is setting aside a large area near the coast, which may be called Coastal Economic Zone (CEZ) to distinguish it from SEZs, in which a sound ecosystem for healthy growth of export-oriented firms is fostered.

A CEZ may be up to 200 to 250 kilometers wide from the coastline, approximately equal distance in length and encompassing a modern deep dredge port. It would have minimal red tape and relatively flexible labor and land-acquisition laws. It will also allow easy entry and exit of firms. It will be authorized to take swift decisions on applications for environmental clearances. Goods moving into and out of the zone through the port will face minimum barriers. The turnaround time of ships would meet the best practice standards of 7 to 10 hours. The zone would have liberal laws for the development of urban spaces since a resident labor force is critical to the development of manufacturing and services. It would also have good internal infrastructure, especially as it relates to the availability of water and electricity but also extending to good internal transportation. The links to hinterland will gradually develop.

7.4 Investment Incentives

The concept of CEZ is wider and it will contain clusters of a variety of industries. Therefore, within the CEZ, electronic-industry specific zones and clusters will need

to be formed. Currently, numerous incentives and exemptions applicable to electronic goods in and outside SEZs exist. It is not known how much impact these incentives have had on investment and output. It is difficult to separate investors who decide in favor of investment as a result of the incentives from those who would have invested anyway even in the absence of the latter. Many of the incentives also find their way into the system in response to representations by existing producers who complain about this or that handicap (often called “disabilities”) imposed by the domestic ecosystem vis-à-vis the ecosystem facing foreign suppliers. These representations must be viewed with a critical eye since they rarely mention the advantages (for example lower wages) they enjoy over their foreign counterparts.

Against this background, if incentives are to be given, they should be such that their impact on the key objective of bringing large firms with substantial employment effect can be reasonably ensured. With this in mind, it would be worth considering a ten-year tax holiday for a firm that invests a substantial pre-specified sum and generates a large pre-specified volume of direct employment. For example, the investment threshold may be set at \$1 billion and employment at 20,000. These thresholds will ensure that only firms that promise to create substantial number of good jobs and help build up the industry use the benefits. These firms also promise to support small and medium firms as ancillaries.

7.5 Free Trade Agreements

We need to forge free trade agreements (FTAs) to forge duty free market for our electronic goods. At present, our approach with respect to FTAs is defensive because we are a much larger importer of electronic products than exporter. But a switch to export oriented strategy would convert FTAs into an opportunity. What we need to ensure is that we can quickly develop electronics industry on a large scale so that we are globally competitive and can capture the markets of our FTA partners. Export orientation should allow us to eventually sign the Information Technology Agreement 2 (ITA-2).

7.6 High Value Added Products

A common belief among policy makers is that the higher the domestic value added in a product the better. This belief often leads countries to curb the exports of primary inputs (for example cotton and iron ore in the case of India) and protect the final good (for example, cotton clothes and steel). This is an erroneous approach. High value added is not virtue in itself if the product is not competitive in the world markets. It will simply not get produced on a large enough scale to make a dent in employment. On the other hand, a product may have only a small value added but if it is globally competitive, it can be produced on a mass scale with large number of jobs created. China is sometimes derided for adding just \$7 to the iPhone, which then sells for several hundred dollars. But it is forgotten that China produces hundreds of millions of these phones, which add up to a significant number of good

jobs for its workers. It is not important how much value *per unit* of a product a country adds. What matters is how much *total* value it adds.

8. Import Substitution Strategy

The alternative, import substitution strategy would build on the current approach. It will principally focus on the domestic market and try to enlarge the share of the firms located within India in the domestic market. Under this strategy, we would still want to eliminate tariffs on inputs used in the 217 ITA-1 products to improve the profitability of the latter. We would also want to provide for the ten-year tax holiday on investments of \$1 billion or more that also create 20,000 jobs. This would help bring some large foreign firms into India.

Under an import substitution strategy, we would additionally seek to improve the profitability of local suppliers over foreign ones in the domestic market through a variety of fiscal incentives. The Department of Electronics and Information Technology suggests several ways in which this can be accomplished:

- (i) Review FTAs with ASEAN, Korea, Japan to limit extensive access given to electronics sectors
- (ii) Reduce excise duty on all inputs for electronic goods to 6% while excise duty on finished products be pegged at 6% without CENVAT credit and 12.5% with CENVAT credit
- (iii) Extension of 200% tax deduction for R&D u/s 35(2AB) to Chip Design Industry

(iv) Removal of inverted duty structure:

(a) All capital goods for electronics industry be exempted from basic custom duty (BCD) and countervailing duty (CVD)

(b) Abolish Central Sales Tax (CST) on Electronics/ IT Goods and their inputs

(c) Abolish SAD of 4% on inputs (except populated PCBs) of all Electronic goods

(v) Extension of differential excise duty dispensation for mobile handsets/ tablets to identified items such as Customer Premise Equipment (CPE)

(vi) Phased Manufacturing Roadmap for Mobile Handsets and Tablets (Charger / Adapter, Battery, Mechanics, Wired Headsets/Speakers, Printed Circuit Board Assembly (PCBA), Camera Assembly, Display to be progressively indigenized and removed from duty benefit)

(vii) Extend benefit of investment linked deduction u/s 35AD of Income Tax Act to all electronic equipment manufacturers

(viii) Allow deferred payment of excise duty for 7 years

We would also use the instrumentality of government procurement to favor domestic over foreign suppliers. Under import substitution approach, foreign investors will also be attracted by the profitability of local over foreign production, especially for sales in the domestic market.

With the ecosystem remaining unreformed, local firms will still remain largely handicapped in foreign markets relative to their foreign counterparts. As such they would fail to become internationally competitive. This would mean that they would primarily serve the domestic market. Over time, as the domestic market grows, both domestic and foreign invested firms will grow but absent the necessary changes to the ecosystem they are unlikely to become large exporters. Experiences of Indian auto and apparel industries to-date, which have largely grown in a protected domestic market, testify to the likelihood of this scenario. After 25 years of end to investment licensing and opening to foreign investment, exports of passenger vehicles remain below 7 lakh and of commercial vehicles well below 1 lakh. At the same time, auto prices in the domestic market exceed those in the world markets by 20 to 50%. Indian apparel industry has also remained largely inward oriented with exports being one-tenth those of China and smaller than those of Bangladesh and Vietnam in absolute terms.

The upshot of this analysis is that import substitution is unlikely to lead to rapid enough expansion of our electronic industry. If we want rapid transformation, we must adopt an export-oriented strategy and work towards creating an ecosystem in which the industry can be globally competitive without import protection.

9. Issue of Setting Domestic Standards

An argument is sometimes made that following China we too must adopt domestic standards for certain electronic products. This is a seductive idea but requires a careful study before acting on it. Setting an Indian standard can yield monopoly

profits for Indian owners of intellectual property rights. But if other countries do not adopt our standard, production will remain constrained by the size of the domestic market. In addition, with scale economies failing to materialize and monopoly profits charged on intellectual property, growth of industry would be hampered. Unless our ecosystem allows us to be among the lowest-cost producers of the same product using our standards and this persuades other countries to accept our standards, we would not be able to penetrate the world markets. Before we rush to forcing our standards in the domestic market, we need to create a business-friendly ecosystem and grow larger. Premature adoption of standards can scuttle the growth of the industry prematurely. One way to see this is to ask whether the adoption and enforcement of a local standard in mobile telephony in the early 2000s would have permitted the phenomenal expansion of mobile phones that we saw in the last decade. The plausible answer to this question is in the negative. We would have simply not been able to produce handsets at sufficiently low costs at sufficiently rapid pace to allow the rapid expansion in this sector that took place.

10. Concluding Remarks

While the Annexure summarizes the recommendations, it is useful to consider some summary remarks here.

If we wish our electronic industry to grow rapidly and help transform India, choosing a strategy that allows us to capture a large share of the world market is our only hope. With wages already high and the threat of shrinking labor force due to

one-child policy looming, China is poised to relinquish some of the space in the global markets, especially in the low-skill employment-intensive manufacturing. India has the unusual opportunity to fill this space provided it takes measures to improve its production ecosystem and removes the barriers that currently discourage exports.

Falling short of this, import substitution is the remaining alternative to expand the production of electronic goods industry. Here three measures are clearly promising. First, ending inverted duty structure would enhance production while also improving overall efficiency of the system. Second, introducing ten-year tax holiday to anyone investing \$1 billion and creating 15,000 jobs (or some other figure) in electronics industry may bring much-needed large-scale manufacturing in electronics industry to India. Finally, preference in government procurement, especially in the area of defense, can further aid the Make in India campaign in electronics industry.

Beyond these measures, the path to import substitution is more complicated. The option to renegotiate FTAs to place electronics goods on the negative list has its costs. Such renegotiation will likely require us to give concessions in other products. Therefore, what is gained in electronics in terms of Make in India would be lost in other sectors. Moreover, renegotiation will undermine our credibility and therefore future ability to negotiate FTAs. Some of the fiscal measures suggested by DEITY would be welcome by the industry but going by the experience to-date would yield limited results. Measures that introduce excise duty on

domestic production and countervailing duty on imports at rates that are effectively different from each other risk being challenged in the WTO. If these measures are considered, the Commerce Ministry must be consulted to ensure their WTO consistency.

Finally, if the measures promoting import substitution are seen as necessary to boost the production of electronics goods immediately, it is important to simultaneously announce our intention to move ahead with the measures aimed at reorientation towards exports in the medium to long run. It will be imprudent to wait on this since the longer we wait the more the import-substitution interests will become entrenched and more difficult it would become to introduced export oriented measures. Indian auto industry best illustrates this point. With all major auto manufacturers invested in India, there now exists a very strong lobby against tariff liberalization in this sector. The industry claims it is competitive and yet offers intense opposition to any liberalization of the domestic market. The consumer in the domestic market continues to pay 50% or higher premium on auto prices prevailing in the world markets.

The present opportunity to capture the large world markets is perhaps India's last such opportunity. China is vacating some space in the world markets while disruptive technological revolution through robotics and 3D technologies is fifteen to twenty years away. We can ill afford to miss this opportunity.

Make in India Strategy for Electronic Products

Summary Recommendations

Recommendation 1: Export Oriented Strategy

The objective behind this strategy is to create an ecosystem in which Indian electronics industry becomes globally competitive.

| Area | S.No. | Recommendation | Responsibility |
|-------------------------------|------------|--|---|
| Tax | 7.1 | <p>End Tax Uncertainty and Simplify Tax Regime</p> <ul style="list-style-type: none"> • Clearly establish in writing the tax liabilities applicable to producers of electronic products under different circumstances in full detail. • Eliminate tax exemptions and simplify tax system • Rollout GST | Department of Revenue/ DeitY |
| Tariff | 7.2 | <p>End Inverted Duty Structure</p> <ul style="list-style-type: none"> • Bring all input tariffs down to the tariff applicable to the final product • Exports to be subjected to zero taxes: all tariffs and domestic taxes paid to be rebated back at the exit point • Impose Countervailing duty (CVD) equivalent to all domestic indirect taxes on imports | |
| Coastal Economic Zones | 7.3 | <p>Coastal Economic Zones (CEZ)</p> <ul style="list-style-type: none"> • Identify CEZ ranging from 2 to 3 thousand square kilometers under Sagarmala Project for establishment of Electronics Export Clusters • Create Electronic-Industry Specific Zones and Clusters Within the CEZ • Provide each Zone to be provided with State of the art Infrastructure • Provide Ease of Doing Business for Trading across Borders as per International Standards along with relatively flexible labor and land-acquisition laws • Provide Liberal Laws for Development of Urban Spaces | Ministry of Shipping/ Department of Commerce |

| | | | |
|-------------------|------------|--|---|
| Investment | 7.4 | Investment Incentives <ul style="list-style-type: none"> • A Ten-year Tax Holiday for a firm that invests a Substantial Sum and generates a large Employment within CEZ. For this purpose an investment threshold of US\$ 1 billion with the employment of 20,000 may be considered | Department of Revenue/ DeitY/ Ministry of Shipping |
| FTA | 7.5 | Free Trade Agreements (FTAs) <ul style="list-style-type: none"> • Convert FTAs into Opportunities • Forge Free Trade Agreements to capture/ access Duty Free Market for Electronic Goods • Export orientation to eventually enable signing of the Information Technology Agreement 2 (ITA-2) | Department of Commerce |
| Products | 7.6 | Low Value Added but High Volume Products <ul style="list-style-type: none"> • Do not shun low Value addition per unit. If produced on a large scale, low value addition per unit still translates in a large total value addition and large number of jobs (for example, i-Phones in China) | DeitY |

Recommendation 2: Import Substitution Strategy

The objective of Import substitution strategy is to expand the production of Electronic Goods in the short run. It is however imperative to move ahead with the measures aimed at reorientation towards export simultaneously. This will ensure that the present opportunity to capture the large world market in Electronics arising out of China's rising real wages is not missed. This is also required to ensure that a future entrenched domestic industry does not rule out a switch to export oriented strategy.

| Area | S.No. | Recommendation | Responsibility |
|---------------|--------------|---|-------------------------------|
| Tariff | 10 | End Inverted Duty Structure <ul style="list-style-type: none"> • Ending Inverted Duty Structure to Enhance Production and to Improve Overall Efficiency | Department of Revenue/ |

| | | | |
|------------------------|--|--|------------------------------|
| | | <p>of the System</p> <ul style="list-style-type: none"> • All tariffs and domestic taxes levied on inputs whether sourced domestically or from abroad to be rebated back at the exit point • Impose Countervailing duty equivalent (CVD) to all domestic indirect taxes on imports | DeitY |
| Incentives | | <p>Investment Incentives</p> <ul style="list-style-type: none"> • Introducing Ten-Year Tax Holiday to anyone investing about \$US 1 billion and creating around 15,000 jobs in Electronics Industry | |
| PMA | | <p>Preferential Market Access (PMA)</p> <ul style="list-style-type: none"> • Modify Preferential Market Access policy of DeitY to allow preference in Government Procurement, especially in the Area of Defense | |
| Fiscal Measures | | <p>Differential Taxation of Imports versus Domestic Production</p> <ul style="list-style-type: none"> • Described in the text, these measures can attract challenges in the WTO | Department of Revenue |

S.No: This refers to Serial Number in the text of the policy paper
