Indian ESDM Industry Update
An IESA - EY Report

EXECUTIVE SUMMARY

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GLOBAL ESDM AND ECONOMIC OUTLOOK

In last 20 years, locus of global electronics market has experienced massive migration. Sized at $1.7 -2 trillion USD in 2015, the global electronics market has shifted its production focus from high cost destinations to low cost geographies, contributing heavily to economic development of nations such as China, Korea and Taiwan. In 2015, China is estimated to account for 38% of electronics equipment production up from mere 2.6% in 1995 while low-cost geographies overall accounted for 69% of global share.

Post global slowdown in 2009, global electronics sector took some time to stabilize and has shown stable growth (~4%) since 2012. US has shown signs of recovery and has registered a GDP growth of more than 2% in recent past leading to a growth of ~3% in American electronics market. Emerging economies, backed by strengthening fundamentals around demographic dividend, disposable income and growing enterprises, have been a major impetus to this growth as well.

INDIAN ESDM SECTOR AND ECONOMIC OUTLOOK

Amongst all emerging economies, India has been one of the frontrunners from growth and economic development perspective. Post downward trend of GDP growth in 2010 – 2012 period, Indian economy has spurred back to growth and is forecasted to grow at 7+% YoY till 2020. The robust growth of India’s electronics industry is primarily driven by huge domestic demand for products that can be attributed to a multitude of factors, including growing middle class, rising disposable incomes, favourable duty structures and large scale public procurement needs driven by Govt. projects such as broadband connectivity to villages, rural electrification and e-governance programs. Inflation is forecasted to stabilize beyond 2015 (by OECD, IMF) and will increase confidence in Indian economy. Investor confidence in Indian economy was evident in 2015 when India emerged as most favoured destination for FDI leaving behind China and US and ensuring over $19 billion of cumulative FDI inflows till June 2015.

Favourable ESDM policy and initiatives such as M-SIPS, PMA, EDF, duty arrangements, along with rising interest of MNCs and Indian enterprises in the sector have created immense positive impact on Indian ESDM value chain. As multiple foreign manufacturers such as Foxconn setting shops in India and local players (especially mobile phone brands) are shifting from trading-only entities to manufacturing setups in India, demand for electronics component are also poised to see an upward trend.

INDIAN ESDM SECTOR – THE $100+ BILLION OPPORTUNITY

In 2015, India’s ESDM industry is sized at US$82 billion growing at a CAGR of 8% from 2013. By 2016-17 the sector will become a $100+ billion opportunity and is forecasted to grow further at a CAGR of 16- 23% to reach US$171-228 billion by 2020.

Apart from sector specific drivers, the forecasts are based upon several parameters such as overall GDP growth of India, currency movement, inflation, existing trade agreements (and changes expected, if any), consumer sentiments, potential government consumption, existing government policies (and changes expected, if any), investments (foreign and domestic), manufacturing
entities (existing Indian players, foreign players, Indian conglomerates, start-ups) and type of value addition in India. In the base case, the drivers are assumed to stay at existing levels or move as per foreseeable forecasts. However, in optimistic case all drivers are expected to stay positive leading to a significant growth (resembling a hockey stick growth chart) over the forecast period.

The sector size is projected to reach US$400 billion by 2023 - 2026. According to the report of the Task Force report, then demand for electronics in India stood at USD US$45 billion and was projected to grow to USD US$400 billion by 2020. These US$400 billion forecasts made in 2009, when adjusted for changes in INR:USD exchange rate and impact of GDP slowdown, match with our 2015 base case forecast for the demand (TM).

The ESDM sector size is defined as Electronics products TM + Electronics products TE + Electronic component market revenues from local manufacturing + Design services market revenues + EMS services revenues.

**Electronic Products**

In 2015, the electronic products market is sized at $61.8 bn. growing at a CAGR of 10% over past 2 years. The sector is expected to grow at a CAGR of 15-19% to reach $123-150 bn. by 2020. Domestic manufacturing has been growing at a CAGR of 17% in recent past which is expected to increase further over next 5 years. Electronics products TM and TE is considered in the Total ESDM Market Size.

Mobile devices segment remains the largest segment in electronics products. Indian mobile devices market has been driven by rising demand for mobile handsets, reducing prices and tariffs. Tablets market had seen a surge in consumer demand in 2013 and then stabilized by 2014-2015. In value terms, the market was valued at US$16.9 billion in FY15 with CAGR of 16% over 2013. TDM was valued at US$6.5 billion in 2015, growing from US$3.5 billion in 2013 at a CAGR of 36%. TE was valued at US$0.05 billion in 2015, reducing from US$2.5 billion in 2013. This market is expected to grow at a CAGR of 17% over the next five years to reach US$36.9 billion by 2020. The growth will be primarily driven by smartphone penetration increase (Estimated to grow to ~66% in 2020 from current penetration of 36%) and tablets seeing increasing use in Government and education sector. The overall tablet market in India is estimated to be US$0.7 billion, with domestic manufacturing of US$0.5 billion in 2015.
ELECTRONIC MANUFACTURING SERVICES

Electronic Manufacturing Services segment has been one of the major beneficiaries of Government’s focused effort towards developing ESDM sector. The segment has seen a huge growth over the past 2 years and has grown from $0.5bn. in 2013 to $1.0 bn. in 2015. Indian EMS market is estimated to witness exponential growth of 42-68% over the next five years to reach US$6-13.2 billion by 2020, driven majorly by mobile manufacturing in India and further supported by steady growth in other sectors such as strategic electronics (due to offset policy). EMS services revenues is considered in the Total ESDM Market Size.

ELECTRONIC COMPONENTS

Electronic components market has seen a steady growth in past growing at a CAGR of 12% over past 2 years to reach $13.6 bn. In 2015. The market is estimated to grow at a CAGR of 22-33% to reach US$ 36.6-56.5 bn. Electronic component market revenues from local manufacturing is considered in the Total ESDM Market Size.

TDM grew at 2% CAGR over last two years to reach US$3.3 billion by 2015. Overall, a majority of demand (~60%) for electronic components in the country is met through imports. Domestic component manufacturing is dominated by electromechanical and passive categories.

Electromechanical components form largest segment of total domestic supply with a share of about 70%, while active components hold the smallest piece of the pie. Although India has significant presence of R&D captive units, there exists very limited/no capabilities in manufacturing active components. There are signs of positive sentiments (with players such as HSMC, STMicroelectronics showing interest), the prospects of establishing fab setup in India is yet to be realized.

DESIGN SERVICES

Contribution of design services to ESDM sector has grown steadily over 2013-15 at a CAGR of 12% to reach $12.9 billion in 2015. Design services revenue is forecasted to reach $23.5- 29.2 billion by 2020 at a CAGR of 13-18%. The segment has shown a strong growth in the last ten years, witnessing entry of a number of domestic and global companies in Indian design services landscape. Leveraging abundance of local talent and presence of mature ITeS firms that have achieved significant scale; India has already emerged as an attractive destination for offshored
ER&D services. Design services market revenues is considered in the Total ESDM Market Size. As a segment, design services revenue is heavily reliant on export demand. Though the domestic market has grown in last few years, it is at a nascent stage given limited cases of indigenous product companies generating domestic demand for offshored R&D services (except for verticals such as aerospace and defence).

Sized at US$10.9 billion in 2015, embedded systems is the largest segment (85% revenue share) within design services market. Connectivity, portability and IoT are the key themes that are driving demand for embedded systems services across verticals such as automotive, consumer electronics, mobile handsets, healthcare and industrial.

A way forward to $400 billion opportunity

With various government initiatives aiming to boost domestic manufacturing, India has already started witnessing initial movement with increased assembly activities across products such as mobile phones and other consumer electronics. To realize this opportunity India needs to take several steps along incentivizing demand, export and manufacturing among others.

PROMOTING DOMESTIC MANUFACTURING

M-SIPS

• As components manufacturing (includes active, passive and semiconductors) entails high capital investment and a longer gestation period, the extent of capital subsidy on component manufacturing available under M-SIPS should be increased from the present level of 20% (in SEZ) -25% (in non-SEZ) to 30% (in SEZ)- 35%.(in non-SEZ).

• Income tax holiday of 10 years should be provided for the component manufacturers.

• The production subsidy, in its present form, under the M-SIPS is computed @ 10% of the turnover less all the inputs. It is recommended that only the imported inputs be reduced from the turnover, which would promote increased domestic l value addition.

• Local value addition through indigenous R&D should also continue get benefits under the MSIPS.

• Extend M-SIPS capital subsidy to investors /companies relocating their manufacturing facilities from abroad to India. In such cases, the residual value of the capital equipment (which should be certified by the Chartered Engineer or any accredited agency) be considered for capital subsidy. Such proposals should also provide for technology transfer, wherever possible. This measure would enable faster setting up of manufacturing facilities, employment creation and provide readily available market for exports.

• Viability Gap Funding (VGF) should be provided for investments in select high-tech /priority sectors or areas of weak supply chain (with large manufacturing demand for manufacturing e.g. fabs, ATMP, Polysilicon manufacturing.

Duty Structure

• Non ITA-1 Products; Where domestic manufacturing is already happening or there is significant visibility for the same, the BCD on inputs for such products should be reduced to zero, till the time domestic manufacturing of the inputs starts happening. At the same time, the BCD on the finished product should be suitably increased by utilising the gap between applied rate and bound rate, thereby, giving an impetus to domestically manufactured electronic products.
• For ITA-1 Products; Differential excise duty structure for domestic manufacturers should be continued post implementation of GST. Additionally, for priority products, a Phased Manufacturing Program (PMP), akin to the PMP for mobile handset manufacturing, should be evolved. Examples are PCs, Energy Meters, etc.

• Revisit the ITA-1 list to identify electronic goods on which BCD can be increased, as many goods have undergone technological advancements and are covered under ITA-2 to which India is not a signatory.

• Review the FTAs under which non-ITA-1 goods are being imported at concessional rate of duty so as to explore the possibility of levying higher rate of BCD.

**Impetus to Exports**

• Setting up of Re-export Processing Zones with the facility of duty free import of capital equipment and goods (including products, subassemblies, devices, components, raw materials), which will undergo domestic value addition including repair in these zones. Thereafter, it would be exported from the re-export zone with a duty free dispensation.

• It should be a bonded customs warehouse with the dispensation identical to the one in SEZ. Re-export zones will have a huge potential of creating jobs, rapid prototyping facilities, testing, tooling, etc.

• The Re-export processing zones should be subject to 100% exports with no access to domestic market.

**Business and Project Implementation**

• Implement Preferential Market Access (PMA) in Defence, PSUs, State Government procurement, especially, in projects / programmes implemented with the funding support of the Government of India. These include programmes such as Digital India, Smart Cities, LED Lighting, Roof top Solar power systems etc.

• To facilitate faster execution of large projects, (entailing large land and infrastructure requirement), create a SPV, which would be initially managed by the Govt/PSU and would obtain Govt. clearances of the required infrastructure as per the investor's requirements.

• The expenses incurred on obtaining these clearances can be capitalized as part of the project cost to be paid by the investor to the Govt. The benefit of this arrangement would be that the SPV, being Govt. owned, it would enable faster clearances, thereby, facilitating faster project implementation by the investor.

**PROMOTING INDIGENOUS R&D AND INNOVATION**

**Incubation Centres and Chip Design Centre**

• Govt. should fund setting up of Chip Design Centres to promote the start-ups in chip design.

• Govt. should facilitate (by providing Cap Ex and limited period Op Ex funding support) for setting up of ESDM Incubation Centres in multiple locations to support the start-ups and entrepreneurs.

• Govt. should fund setting up CoEs for IoT, which offers a large market potential and India can emerge as a global leader in this segment.

**ESDM Focused Talent Pool**

• Facilitate setting up of talent development centres through integration of industry with academia and regular upgradation of curricula leading to students learning industry relevant programmes and working on industry projects.

• Build Entrepreneurial Ecosystem in engineering campuses through Industry driven training, R&D Partnership and expert mentoring.