A Study to Analyze the Health of Export of Electronic Hardware & Software from India

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Abstract

India has immense potential for growth of exports in various sectors. Electronic Hardware & Software sector is one of them. The Electronics Industry in India came into existence sometime in the mid 60’s with an orientation towards space and defence technologies. This initiative was driven and controlled by the government and the public sector enterprises. It was soon followed by developments in Consumer Electronics mainly with transistor radio, black & white television, calculators and miscellaneous audio products. Colour televisions followed thereafter. The year 1982 came as a crucial year; the Government allowed thousands of colour televisions sets to be imported into the country to broadcast the Asian Games held in New Delhi. Subsequently, the electronics sector has highly advanced in the present era. The purpose of this research is to determine the export potential of various electronic hardware from India on the basis of their past export performance of various electronic items from. The present study is based on the available statistical data so acquired, to derive export potential from the country. This study will help stakeholders in encouraging and initiating the exports of concerning sectors along with the sustainable growth and that will definitely lead to promotion of exports of India.

INTRODUCTION

Electronics and information technology is proving to be the growth engine of the current day economies of the world. The liberalized policy initiative of the Government of India in the last decade has asked the Indian IT industry on to a path of development and prosperity. Over the years, the Electronics Hardware Industry has evolved to offer several innovative products for the convenience of the mankind. Electronic devices have become integral part of human life and are playing major role in their everyday routine activities. The electronics hardware industry is identified as one of the fastest growing segment in terms of international trade.

The Electronics Hardware and Computer Software/Services industry, a comparatively new entrant in India’s export horizon, has emerged as a fore-runner among all industries and has been consistently striding on a high growth path in recent years. India has embarked on a policy agenda, which aims to restructure its economy for enhanced global participation. Foreign Direct Investment (FDI) to supplement domestic investment for achieving a quantum jump in the growth rate is now an integral part of government of India policy initiative. Imparting greater transparency in global market places are seen as the hallmark of the new industrial, trade and fiscal policies. Salient features of the industrial policy for the Electronics and IT sectors are:

- Licensing virtually abolished except for manufacturing aerospace and defence manufacturing is permitted.
- There is no reservation to public sector enterprises in the electronics industry and private sector investment is welcome in the every area except aerospace and a few strategic defence industries.
- Electronics and it units can be set up anywhere in the Country subject to clearance from the authorities responsible for control of environmental pollution and local zoning and land use regulations.
- Industries exempted from licensing are only required to file information in the prescribed Industrial Entrepreneurs Memorandum (IEM) with the Secretariat for Industrial Assistance (SIA), Ministry of industry, Government of India.

The Information Technology (IT) industry has shaped up as a major success story in India’s economy. Export of computer software and IT enabled services has become a large component of the export of the country. This is also an area where the Government’s role has been very different form that in some other industries. The important contribution of the Government in the Growth of this industry consist of telecom policies, which enabled low cost computer networking in the country and investments in human capital such as through the IITs.

India’s overall export during the year 2010-11 was estimated to be Rs. 1779443 crore (US$390 billion) registering a growth of 26-72 percent (31.76 percent in US$ terms) over the year 2009-10 when India’s over all export was estimated to be Rs.1404224 crore. (US$296.23 billion). The share of Services in India’s overall export is estimated to be Rs.660620 crore (US$145 billion). There has been a growth of 18 percent (22.88 percent in US$ terms) in export of services over the preceding year when the export of services was estimated to be Rs.559792 crore (US$ 118 billion). The Country’s Merchandise Export registered a growth of 32 percent (37.78 percent in US$ terms) during the year 2010-11 over the year 2009-10.

In value terms, India’s merchandise export increased from Rs.845534 crore (US$ 178.23 billion) estimated in 2009-10 to Rs. 1118823 crores (US$245.57 billion) during the year 2010-11.
India’s Electronics and Computer Software / Services industry is estimated to be Rs. 466990 crores (US$ 102.5 billion) during the year 1010-11. The share of Electronics Hardware Industry is estimated to be Rs. 125790 crores (US$ 27.61 billion) and that of computer / services sector is Rs. 341200 crores (US$ 74.89 billion). Production of Electronics and Computer Software /services sector during the year 2010-11 registered a growth of 12 percent (16percent in US$ terms ) over the year 2009-10 when the total production of Electronics, Computer Software/ Services was estimated to be Rs. 418090 crores (US$ 88.13 billion).

LITERATURE REVIEW

The Indian Electronics Hardware Export Study was commissioned in 2003 by Electronics and Computer Software Export Promotion Council (ESC) under the aegis of the Department of Commerce, to find what has gone wrong in India’s electronics and IT hardware industry, why India’s electronics exports are not picking up the desired level of momentum, and what holds it up in making India to emerge at the electronics and IT hardware outsourcing hub in the world.

The report on this Study conducted by a US Consulting firm was released by the Department of Commerce in November 2004. According to the report global electronics industry is the fastest growing area in international trade.

However, the Indian electronics hardware industry is still in the development phase, and the India has so far been able to capture a minuscule share of the global electronics hardware as compared to her neighbouring Asian countries like the People’s Republic of China, Taiwan, South Korea etc.

MAJOR FINDINGS OF THE STUDY OF ESC (2003):

- India’s lack of success in exporting electronics hardware to the global market is deeply rooted to a variety of reasons which range from market dynamics to inadequacy of support policy initiative;
- Low level of technology, poor business infrastructure, long business cycles, inadequacy of domestic investment, inability to attract foreign investment, mega investment from multinational companies, Lack of large scale manufacturing and competitive product pricing.
- Further they found that lack of strong domestic market growth trends, Inadequate promotional activities, Lack of decent profit margins, absence of strategic market plan, lack of initiative for new product development inadequate investment in research and development, lack of global strategic partnerships, lack of international branding, lack of Indian grey market, lack of Indian brand recognition.

OBJECTIVES OF THE STUDY

1. To analyze the trend of export of various electronic hardware and software from India.
2. To suggest some measures for improvement of export of electronics from India in the present scenario.

RESEARCH METHODOLOGY

The Study:

The present study was taken to comprehend the export of various electronic hardware & software from India.

The Sample:

Electronic hardware (consumer electronics, telecom equipments and cables, Instruments / OE / ME, Electronics components, computer hardware), Computer software and services and ITES, have been selected to study upon. The data required for present study was secondary in nature. The yearly report statistics of electronic hardware of the nation were been used. The main statistical data was gathered from the official websites and for the analysis trend-analysis method was applied.

Tools for Data Collection:

Statistical Tool: Trend Analysis method was applied to predict the trend of the export of spices from India.

Table 1.1: Showing Export Values of Electronic Hardware and Software from India.

<table>
<thead>
<tr>
<th>Category</th>
<th>2006-07</th>
<th>2007-08</th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Electronic Hardware</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer Electronics</td>
<td>1500</td>
<td>1600</td>
<td>2600</td>
<td>3000</td>
<td>1400</td>
</tr>
<tr>
<td>Telecom Equipments &amp; Cables</td>
<td>650</td>
<td>625</td>
<td>12276</td>
<td>7800</td>
<td>14800</td>
</tr>
<tr>
<td>Instruments/Office Equipments, Medical Equipments</td>
<td>3000</td>
<td>3885</td>
<td>4200</td>
<td>3500</td>
<td>4500</td>
</tr>
<tr>
<td>Electronic Components</td>
<td>5850</td>
<td>6100</td>
<td>10500</td>
<td>9700</td>
<td>18400</td>
</tr>
<tr>
<td>Computer Hardware</td>
<td>1500</td>
<td>990</td>
<td>1650</td>
<td>1900</td>
<td>1300</td>
</tr>
<tr>
<td>B. Computer Software &amp; Services (Including ITES)</td>
<td>146000</td>
<td>175000</td>
<td>227834</td>
<td>241950</td>
<td>262500</td>
</tr>
<tr>
<td>Total (A+B)</td>
<td>158500</td>
<td>188200</td>
<td>259060</td>
<td>267850</td>
<td>302900</td>
</tr>
</tbody>
</table>
Table 1.2: Showing 5 Years (2012-2016) Predicted value of export of Hardware and Software from India.

<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>A. Electronic Hardware</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer Electronics</td>
<td>2380</td>
<td>2500</td>
<td>2620</td>
<td>2740</td>
<td>2860</td>
</tr>
<tr>
<td>Telecom Equipments &amp; Cables</td>
<td>17872.7</td>
<td>21420.2</td>
<td>24967.7</td>
<td>28515.2</td>
<td>32062.7</td>
</tr>
<tr>
<td>Instruments/Office Equipments, Medical Equipments</td>
<td>4601.5</td>
<td>4863</td>
<td>5124.5</td>
<td>5386</td>
<td>5647.5</td>
</tr>
<tr>
<td>Electronic Components</td>
<td>18720</td>
<td>21590</td>
<td>24460</td>
<td>27330</td>
<td>30200</td>
</tr>
<tr>
<td>Computer Hardware</td>
<td>1621</td>
<td>1672</td>
<td>1723</td>
<td>1774</td>
<td>1825</td>
</tr>
<tr>
<td>B. Computer Software &amp; Services (Including ITES)</td>
<td>300641.8</td>
<td>330636.8</td>
<td>360631.8</td>
<td>390626.8</td>
<td>420621.8</td>
</tr>
<tr>
<td><strong>Total (A+B)</strong></td>
<td>345837</td>
<td>382682</td>
<td>419527</td>
<td>456372</td>
<td>493217</td>
</tr>
</tbody>
</table>

**CONSUMER ELECTRONICS** = It is one of the largest segments in the electronics hardware sector in India. In this segment, Colour Television is the largest contributor. India’s production of consumer electronics goods during the year 2009-10 registered a growth of 11 percent over the year 2008-09. Production of consumer electronics items has been growing at an annual average growth rate of 13.16 percent during the last five years. Export of consumer electronic goods registered a steep decline of 53.33 percent during the year 2010-11 over the year 2009-10, the reason being the slowdown in the world economy. The DVD player market too declined, summing up to the before-said sentence. Export of consumer electronics goods fell from Rs.3000 crore estimated in the year 2009-10 to Rs. 1400 during the year 2010-11. Top items of consumer electronics export during 2010-11 are video players, colour TV, watches and clocks, video cassettes, video CD, Loud speaker, digital camera, radio receivers and video cameras. Strong demand for consumer durables in the recent times is expected to help reverse the decelerating trend. Major destinations for consumer electronics export during 2010-11 are Europe, Singapore, Hong Kong and other South Asian Countries, North America, Middle East Countries, Japan Korea & other Far East countries, African countries.

**TELECOM EQUIPMENTS AND CABLES** = Export of Telecom Equipment has been constantly growing annually during the past 5 years. Exports massively increased by approximately 1864% on the year 2008-09 over its previous year as India had become a manufacturing hub involving setting of domestic manufacturing facilities by Multinational Companies like ZTE, HUAWEI, ALCA-TEL etc. Export of Telecom Equipments also registered a high growth of 89.74 percent during the year 2010-11 over the year 2009-10. Export of Telecom Equipments has increased from Rs. 7800 crore in 2009-10 to Rs. 14800 crore estimated in the year 2010-11. Middle East Countries are the top destinations for telecom equipments and cables. African Countries come second and followed by Singapore, Hong Kong & Other South Asian Countries. Major items of telecommunication export are mobile phones, television reception apparatus, telephone sets, jamming equipments, set top box, telephone attachments, radio/TV transmission apparatus, radar apparatus, etc. China is the largest exporter of electronic wires & cables followed by Mexico, which highly affect the Indian exports of the same.
INSTRUMENTS/OFFICE EQUIPMENTS & MEDICAL EQUIPMENTS = This sector of the Indian industry continues to play a very important role towards the economic growth. Production of electronics instruments registered a growth of 26 percent during the year 2010-11 over the year 2009-10. Export of electronics registered a growth of 28.57 percent during the year 2010-11 over the year 2009-10. Export of electronic equipments during the year 2010-11 is estimated to be Rs.4500 crore up from Rs.3500 crore estimated in the year 2009-10. Major countries to export are Singapore, Hong Kong & other South Asian Countries, North America, Europe, Japan, Korea & other Far East Countries. Major items of instrumentation export are X-Ray Equipments, Rectifiers, Inverter, Medical Equipments, Automatic Electricity Regulators or Controllers, Surveying Instruments, Meters, etc.

ELECTRONIC COMPONENTS = The developments in the components sector are leaded by consumer electronics sector. Market for components such as connectors, antenna semiconductor devices, etc. is likely to go up due to indigenous manufacture of mobiles phones, set top boxes, DVD players, etc. Production for electronics components registered a growth of 42% during the year 2010-11 over the year 2009-10, whereas exports of the same showed a growth of 89%. EU countries are the top destinations for the components from India. With the EU eliminating tariffs on several high-tech goods, the Indians exports of electronic components to the same had seen a high boost. North America is the second top destination for export of components from India during 2010-11. Major export items are printed circuits, distribution panels, solar cells, parts of PC, transformers, parts of printing/copying machine, capacitors, parts of transformers, other media for recording.
COMPUTER HARDWARE = India is one of the fastest-growing IT systems and hardware market in the Asia-Pacific region. Most of the prominent global vendors and some locals have strong presence in the Indian market. Most of the MNCs have their assembly units in India. Production of computer hardware increased from Rs. 14430 crore estimated in the year 2009-10 to Rs. 14970 crore in the year 2010-11. Exports for this sector registered steep decline of 31.58 percent during the year 2010-11 over the year 2009-10 due to global recession, particularly the US economic breakdown. The domestic firms have been lowering the dependence on the US market, while strengthening emphasis on the emerging markets, which may help India to surge its exports in the future. Also, Establishments which had been postponing their major IT purchases in last few quarters are now ready to invest in IT, which could be the major reason for the growth in the server sales. Singapore, Hong Kong and other South Asian countries remain the top destination for export of computer hardware from India. Export to all regions except Latin America registered a declined in export during the year 2010-11. Mainly exported items are PC cards, DVD drives, Personal Computers, hard disc, monitors, main frame computers, printers, projectors, scanners and others drives.

COMPUTER SOFTWARE AND SERVICES = Software developments and information technology enabled services including business process outsourcing (BPO)/ knowledge process outsourcing services (KPO) industry in India has emerged as one of the most dynamic and vibrant sectors in India’s economy. Government has announced promotion of IT as one of the top priorities of the country. Production of Computer Software and Services during the year 2010-11 is estimated to be Rs. 341200 registering a growth of 11 percent over the year 2009-10 when the total production of
Computer software/services was estimated to be Rs. 308150 crore. Export of IT Software/Services estimated at Rs. 187000 crore during 2010-11 registered a growth of 7.75 percent over the year 2009-10 when the export of IT software and services was estimated at Rs. 173550 crore. The stability of strong demand for outsourcing from western clients has helped to maintain an increasing trend in its exports. USA remains the top destination for India’s export of Computer software/ services during the year 2010-11 as well. UK is the second top destination and Canada has emerged as third destination followed by Germany and Netherlands.

CONCLUSION AND DISCUSSION

India’s share in world market for software and services was 7.8 percent during the year 2010-11, over the year 2009-10. This was 6.83 percent. During the year 2010-11, India exported its commodities to over 256 countries of the world. India’s export of electronics and computer software/services during the year 2010-11 was destined to 217 countries. North America remains top destination for India’s export of Electronics and Computer Software during 2010-11 as well with 56 percent of the share of total exports in the sector. Strengths of Indian IT Industry like technically qualified high class IT manpower, enormous skilled human resources compared to developed countries leading to lower manpower cost nearly one tenth of those in developed nations, rich experience of working with large global companies and wide workforce, and professional institutions provide India large base for regular growth over next years and become a leader in the sector leaving all the competitors behind.

The result of the study shows that there is high potential for growth for all the Electronics Hardware and Software in the coming years, the growth will definitely continue. Computer hardware must be given special attention as there was a steep decline in the sector from the estimated growth. Consumer products in the telecommunication, audio & video and data processing industries will suffer during the forecasted period due to more and more intense competition between major players leading to further price cuts and consolidation among the supply chain. To achieve major growth in the electronics hardware and software innovation must be supported by the Indian government. Incentives must be provided to companies for carrying out R&D. Telecom as a service industry alone cannot continue to contribute to the country’s GDP at the current level and therefore it is important to set up telecom equipment manufacturing in the country, as it is well said that ‘the economy grows, only when the manufacturing industry grows’. India is far behind the countries like Europe, North America, Japan and China. There is need to bring more specialization in professional and application sector to come into competition with the world market leaders in electronics.

MAJOR RECOMMENDATIONS

Government of India and the Indian Electronics Hardware manufacturers have to work in tandem and take some initiative. The initiative to be taken by the Government of India should include:-

- Identification of a vision and strategic growth plan.
- Promoting R&D activities and human resource development.
- Reducing operational costs of manufacturing and improving business attractiveness.
- Promoting single manufacturing clusters. (for example Motor Port Valley, Southern England)
- Promoting anchor investment in Indian Electronics Hardware industry.
- Identification of thrust areas and development of incubators.
- Relaxation of labour laws.
- Rationalization of tariffs.
- Promoting India as an ideal destination for Electronics Hardware manufacturing.
• Skills development.
• Pro-active policies for development of entrepreneurship in hardware sector like software.

IMPLICATIONS

The study would have implication for the following groups:

For Exporters from India: The study will help them find out export potential from India. It will also help them to know the current situation of export of electronic hardware and software and the export potential lies in the sectors of various electronic in India.

For Researchers: The researchers can further carry out studies to understand export industry.

For Government: This research is helpful to government bodies as it would help them to identify the sector in which exporters should be given some incentives so that the export can be increased and in which sector FDI should be invited flexibly.

For Students: The study is also useful for the students who want to explore the Indian Market. This report would provide a good stepping stone carry out their study.

LIMITATION OF THE STUDY

The statistical data were taken for last five years i.e. from 2006-07 to 2010-11, which may not generalize the conclusion.

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