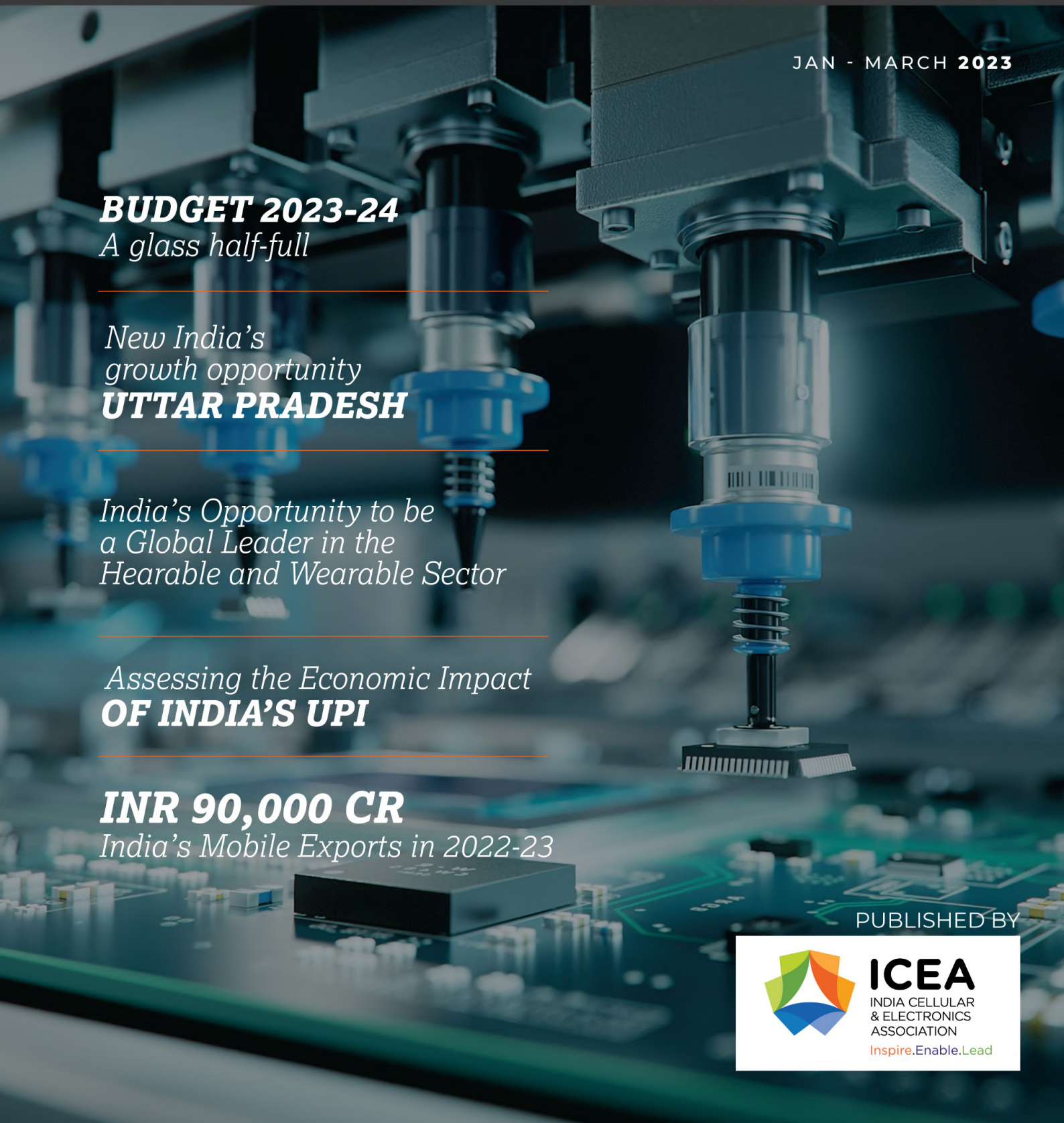
IGNITO

INDIA'S ESDM QUARTERLY DIGEST



JAN - MARCH **2023**

BUDGET 2023-24
A glass half-full

New India's growth opportunity
UTTAR PRADESH

India's Opportunity to be a Global Leader in the Hearable and Wearable Sector

Assessing the Economic Impact
OF INDIA'S UPI

INR 90,000 CR
India's Mobile Exports in 2022-23

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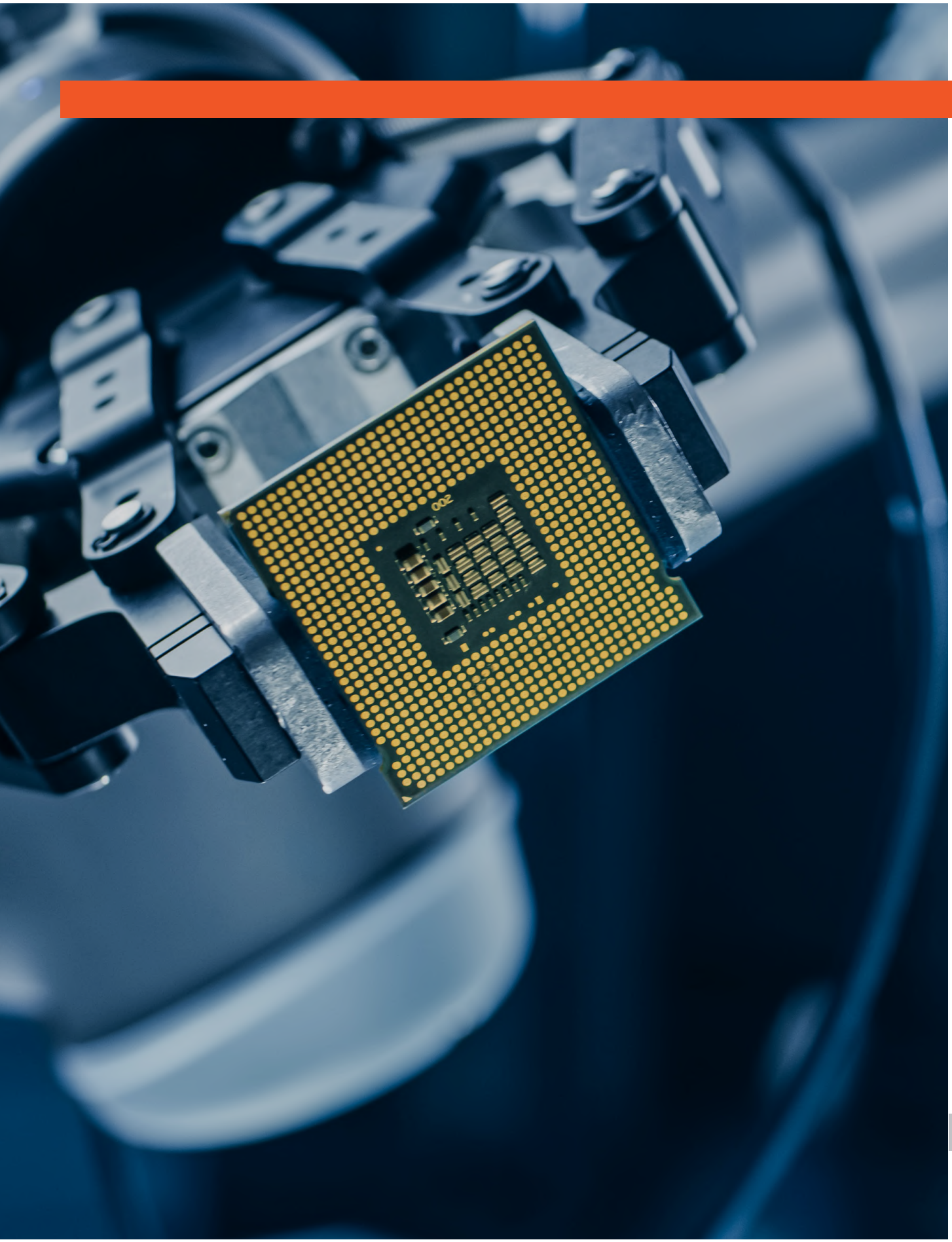


Note from Editor-in-Chief

Dear Readers,

It gives me great pleasure to introduce the inaugural edition of our electronics policy magazine. As the Editor-in-Chief, I am excited to present to you some of the latest developments in the mobile and electronics industry in India.

The magazine is a quarterly publication designed to serve as a repository of ideas, aiming to build broader awareness of policies that can bring about positive changes in India's electronics landscape.

As Ralph Waldo Emerson once said, "The voyage of the best ship is a zigzag line of a hundred tacks" the Indian economy, and particularly the electronics sector, has had its share of wins and losses.

In the 2000s, India was home to the world's largest mobile phone manufacturing plant. The Nokia factory in Tamil Nadu peaked at producing more than 15 million phones a month and exported them to around 80 countries. India on average produced about 125 million handsets per annum between 2011-2014. However, these numbers plummeted as the Nokia plant shut down in 2014.

But now, India's mobile and electronics industry has turned over a new page and witnessed a meteoric rise over the past few years. From just 2 mobile phone factories operating in 2014, India currently has more than 250 manufacturing units in the mobile phone ecosystem itself spread across the nation that have made it the second-largest mobile phone manufacturing country in the world, producing more than 310 million units and exporting mobiles worth INR 90,000 Crore in 2022-23. In this revival, the government's policies of the Phased Manufacturing Plan (PMP) and the Production Linked Incentives (PLI) have tremendously supported the industry to expand its footprint in the country.

The mobile and electronics industry is one of India's most dynamic and rapidly growing sectors, with incredible potential for innovation and advancement. The Government of India envisions further scaling up this industry and establishing a domestic manufacturing ecosystem of USD 300 billion by 2025-26.

Our magazine aims to provide valuable insights and analysis on the industry trends, emerging technologies, and policy developments shaping the future of electronics in India.

In this first edition, we cover a wide range of topics, including the government's policy initiatives to promote electronics manufacturing in India, the latest announcements in Budget 2023-24, India's design capabilities, and the impact of government policies on electronics manufacturing in 2022-23.

We have also included the opinions of both the government and the private sector leaders who share their insights and perspectives on the future of electronics in India. Our aim is to create an environment of mutual understanding, collaboration, and cooperation, amongst all relevant stakeholders which will ultimately lead to the development and implementation of policies that can accelerate the growth of India's mobile and electronics industry.

Our writers and editors have worked diligently to bring you the most comprehensive and up-to-date information on the industry and government policies.

Through this magazine, we aim to provide our readers with insights into the latest trends and innovations in this industry and to facilitate the sharing of best practices and success stories. We hope that the magazine will serve as a catalyst for change, inspiring readers to take action and contribute to the growth of the sector.

We sincerely hope you find this first edition of our magazine informative and insightful. We welcome your feedback and suggestions and look forward to your continued support in our efforts to promote the mobile and electronics industry in India.

Thank you for your readership.

Sincerely,
Pankaj Mohindroo
Editor-in-Chief

INDUSTRY OVERVIEW

Citius, Altius, Fortius: Electronics Manufacturing in India in 2022-23

India's current economy stands at USD 3.1 trillion.

While it took 60 years to reach the first trillion-dollar benchmark since independence, India has accomplished the feat of adding the second trillion dollars in just seven years, followed by the third trillion dollars in only five years, as of 2019.

India's economy has been on a remarkable growth trajectory in recent years, with its GDP surging from USD 1 trillion to 3.1 trillion in just over a decade. To put this into perspective, it took India 60 years to reach the first trillion-dollar milestone since its independence, but the country managed to add the second trillion dollars in just seven years and the third trillion dollars in only five years. This impressive feat highlights India's potential as a major player in the global economy, and underscores the significant progress the country has made in terms of economic development.

The world is witnessing a seismic shift in the international geopolitical order, with India emerging as a prominent player on the global stage. With the opportune timing of the G20 Presidency in 2023, India is set to take centre stage, shaping the course of international politics and economics. But that's not all – the electronics industry in India is also undergoing a ground-breaking era of growth, and is expected to contribute a whopping 15% of global electronics production by 2025-26.

The driving force behind this growth is none other than India's mobile phone exports, which have been nothing short of exceptional.

The history-making performance of mobile phone exports saw them dramatically increase from INR 45,000 Crore to an estimated INR 90,000 Crore in FY22-23, surpassing the previous estimate of INR 75,000 Crore.

The total exports of electronic goods in FY22-23 soared to INR 1,90,098

Crore, marking a staggering 63% increase from the previous year. This is largely due to the large mobile phone exports.

> The impact of mobile phone exports on India's electronics industry cannot be overstated, as they account for a whopping 46% of the overall electronic goods exports.
>
> In fact, mobile phone exports have crossed the USD 10 billion threshold for the first time in any fiscal year, reaching an estimated USD 11.12 billion in FY22-23. It's clear that this sector is playing a vital role in India's electronics export market.

But India isn't just excelling in exports – it's also making great strides in domestic electronics manufacturing. In FY21-22, India manufactured USD 87.35 billion worth of electronic goods and is on track to create a USD 300 billion domestic electronics manufacturing ecosystem by FY25-26. With such impressive growth in both exports and domestic manufacturing, India's electronics industry is poised for a bright future.

The magnitude and pace of this development can be gauged from the fact that less than 10 years ago only 2 mobile phone manufacturing factories were operating in India. Now, we have more than 250 units operating in the mobile and component manufacturing ecosystem. India has also now transitioned from importing 78% of mobile phones in 2014 to less than 4.1% in 2022-23. India has now become the second-largest mobile phone manufacturing country in the world.

> This expansion has been the result of Samaaj, Sarkaar, and Bazaar working together to move the policy needle and the perception of the global industry community that India can manufacture good quality products at scale and at a globally competitive cost.

The Government of India, on its part, has been very receptive to the industry's needs and has strategically set a vision to achieve a USD 300 billion electronics ecosystem by 2025-26 with domestic manufacturing being boosted through policy initiatives like the PMP, SPECS, EMC and then the PLI. At the same time,

the global industry has recognised the massive opportunity in a low-cost, English-speaking country with a substantial domestic market. Indeed, India has become one of the preferred destinations for businesses to invest in order to make their supply chains more resilient and diversified with the "China +1" formula.

Public policy, by its very nature, can become a reactive process if it is only focused on fixing things - addressing the market failures as they come - rather than building new and sustainable ecosystems. The growth of the electronics industry, in recent years, has been a result of proactively building new and sustainable policy structures, however many disabilities still remain to be addressed.

The Phased Manufacturing Programme (PMP) instituted in 2017, was the first step in this new approach. A novel policy prescription that had not been tried in India before, the PMP encouraged creating an ecosystem of mobile phone manufacturing by levying duties on the finished mobile phones imported and levying duties on its components in a phased manner. This meant manufacturing in India resulted in cheaper products than importing them. The objective of the PMP was to initiate a duty-based approach towards import substitution, which would involve gradually imposing tariffs. The main goal was to encourage the development of domestic manufacturing that would cater primarily to the local market, with little emphasis on exports. This led global brands to, manufacture locally. The result was that the production increased from INR 18,900 Crore in 2014-15 to INR 3,50,000 Crore (est.) in 2022-23.

The PMP laid the foundations for the country's large-scale electronics manufacturing ecosystem. Because of this programme, India was now able to cater to its domestic market. And after this, to initiate a meteoric rise in this sector and to capture the global market with increased exports, the Production Linked Incentive (PLI) Scheme was introduced in 2020. By giving an incentive of 4-6% on manufactured products, PLI aimed to invite foreign investors to set up their manufacturing units in India and promote local manufacturers to expand their units and generate employment.

The central problem that PLI aimed to address was the lack of competitiveness in the Indian economy and to make manufacturing in India export-oriented. Compared to countries like Vietnam and China, India's economy experiences considerable disabilities in the form of high logistics costs, lofty tariff rates, inferior quality of public infrastructure, excessive regulatory compliances, and an uncertain policy landscape. Consequently, products manufactured in India are estimated to be 8% more expensive than those manufactured in Vietnam. The 4-6% incentive is meant to subdue this cost disability and make 'Made-in-India' products globally competitive and affordable to export to the international market.

This policy has been extremely successful. From negligible exports in 2015-16, India has now exported INR 90,000 Crore of mobile phones in 2022-23, creating more than 1,00,000 jobs in the process. This extraordinary growth has been primarily driven by the establishment and expansion of Apple's manufacturing ecosystem in India.

The year 2022 was especially significant for the PLI program. The Empowered Committee, helmed by the CEO of NITI Aayog, sanctioned the initial disbursement under the scheme, signifying a momentous milestone in the scheme's journey. Foxconn India received INR 357.17 Crore and Padget Electronics, a 100% subsidiary of Dixon Technologies, received two tranches of incentives totalling INR 111.57 Crore.

On the lines of PLI for Mobile Phones, the Government of India has rolled out similar policies of production linked incentives for IT Hardware

and White Goods, along with 10 other sectors. And, in February 2022, the Union Budget instituted a Phase Manufacturing Programme (PMP) for Wearable and Hearable devices. With no production in FY 2020-21, the production of wearables and hearables in India has increased from USD 250 million in 2021-22 to USD 1 billion in 2022-23.

India also embarked on moving up the value chain by promoting the establishment of domestic semiconductor and display fabs. In September 2022, the Union Cabinet approved modifications in the "Programme for Development of Semiconductors and Display Manufacturing Ecosystem in India" by now offering 50% incentives, on a pari passu basis, for semiconductor fabs across all the technology nodes as well as for compound semiconductors, packaging and other semiconductor facilities.

Additionally, the Government of Gujarat signed an MoU of INR 1.54 Lakh Crore with Vedanta-Foxconn Group for the manufacture of semiconductor and display fab in Dholera. The establishment of this fab will mean that India will become the 5th country in the world to manufacture semiconductors.

However, with all these positive developments, there were a few 'ease of doing business' problems that persists and affects the business sentiments.

The clearance of goods is a crucial part of any production process, but it can often be delayed due to the verification process of Certificates of Origin (COO). Any Customs Officer has the authority to request verification of a COO that contains product details, destination, and country of export. These procedural delays can be a hindrance to the timely delivery of goods, potentially impacting production processes.

Then there are also inordinate delays in visas for foreign nationals coming to India. Encouraged by the PLI incentives, members of the global value chains for electronics products are shifting their base to India. However, the shift is faced with some fundamental challenges arising from the gap in the technical know-how and expertise presently available. Thus, the foreign nationals intending to visit India are senior management personnel and technical experts of global companies that need to visit multiple places for quality checks, discussions, and training exercises. Therefore, if India does want to localise global value chains fast, it needs to facilitate easy immigration services for such individuals.

Further, compared to competing economies like China, Thailand, Mexico, and Vietnam, India has substantially higher tariff rates, particularly in the electronics industry that merely increase the cost of production in the country without decreasing imports. This damages India's global competitiveness.

There are also various complex compliances in the regulatory architecture of the country that are hampering the ease of doing business in India. Particularly stubborn are the new Battery and Plastics Waste Management Rules. The failure to comply with either results in international shipments of the company being halted by Customs - impacting the whole supply chain and production cycle.

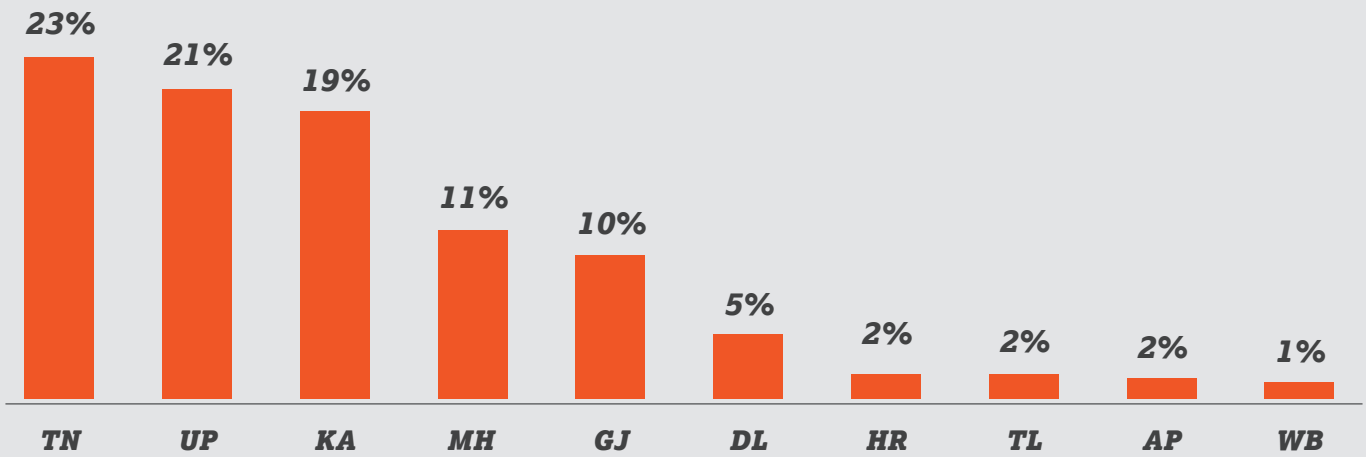
This decade has been touted as the "techade" for India. The Digital Economy is expected to be contributing almost USD 1 trillion to India's goal of becoming a USD 5 trillion economy. And, for this digital economy, electronic goods act as critical building blocks. For example, the JAM trinity - Jan Dhan, Aadhaar, Mobile - would have been incomplete and less consequential if mobiles were not a part of it.

Therefore, governments in the Union and States need to recognise the importance of this sector in the economy and initiate policies to promote higher domestic value addition, and integration with the global value chains to make India a global manufacturing powerhouse for electronic products.

INDUSTRY STATISTICS

TOP 10 ELECTRONIC GOODS EXPORTING **STATES** FY 22-23

The top 5 states- Tamil Nadu, Uttar Pradesh, Karnataka, Maharashtra, and Gujarat, constitute 85% of overall electronic goods exported from India. The data showcases the regional distribution of exports in India, with the southern states of Tamil Nadu and Karnataka, as well as the northern state of Uttar Pradesh, playing dominant roles in the country's export market.

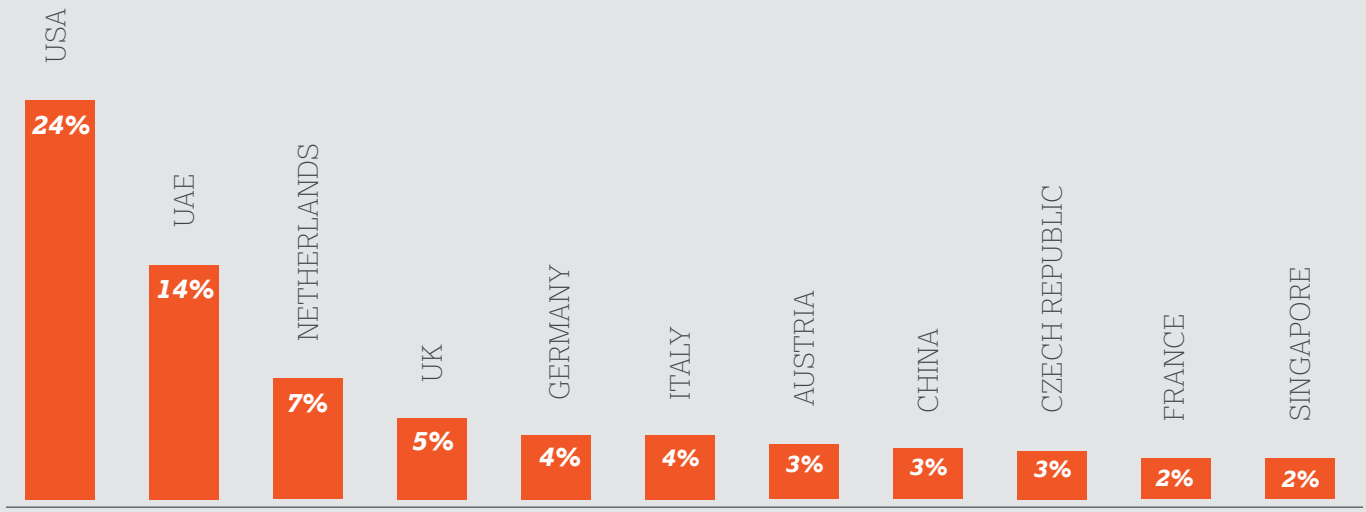


INDIA'S TOP 10 EXPORTING COUNTRIES
ELECTRONIC GOODS (FY 22-23)

The data provided above represents the percentage share of the total exports for 10 countries from India. The United States holds the largest share at 24%, highlighting its significant role as a key trading partner for the exporting country followed by UAE with a 14% share, demonstrating its strategic importance as a regional trading hub.

European countries also have a notable presence with Netherlands, UK, Germany, Italy, Austria, Czech Republic, and France collectively contributing a total share of 28.7%. This indicates the importance of European markets for India's trade.

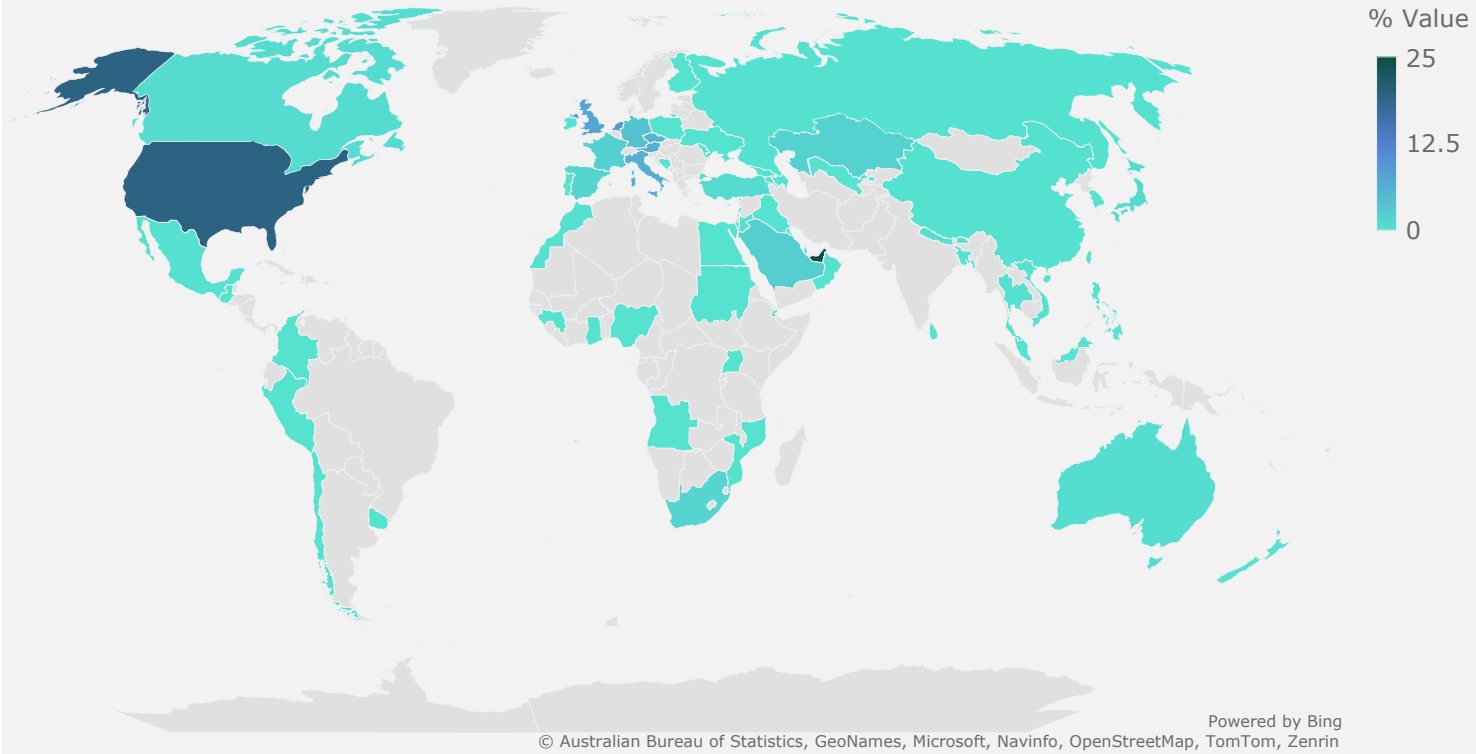
In summary, the data showcases the diverse range of countries and territories involved in the exporting nation's trade, with a mix of economic powerhouses and regional hubs playing key roles in its export landscape. Strengthening and expanding trade relations with these countries can be instrumental in driving economic growth and broadening the export base.



INDIA'S MOBILE PHONE EXPORTS GLOBALLY

The data provided lists the percentage value of exports from India to various destinations around the world. The United Arab Emirates (25%) and the United States (19.54%) are the top export markets, followed by several European countries.

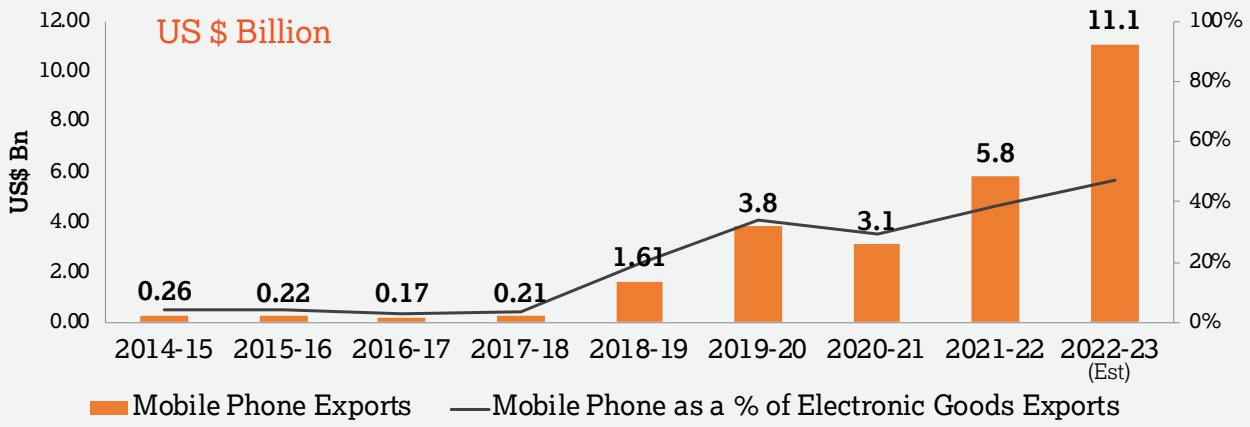
The analysis of this data suggests diverse export partners, with a strong focus on the Middle East, North America, and Europe as key trading partners. Expanding and maintaining trade relations with these regions, as well as exploring the untapped potential in other markets, can help promote export-driven economic growth in India.



MOBILE PHONE EXPORTS FROM INDIA

The data shows a significant increase in both total electronics exports and mobile phone exports over the years, with mobile phone exports occupying an increasingly larger share of the total electronics exports. This trend highlights the growing importance of mobile phones in India's electronics export market, and can be attributed to factors such as expanding domestic production capabilities, government incentives like the PLI scheme and PMP, and a favorable market environment for manufacturers.

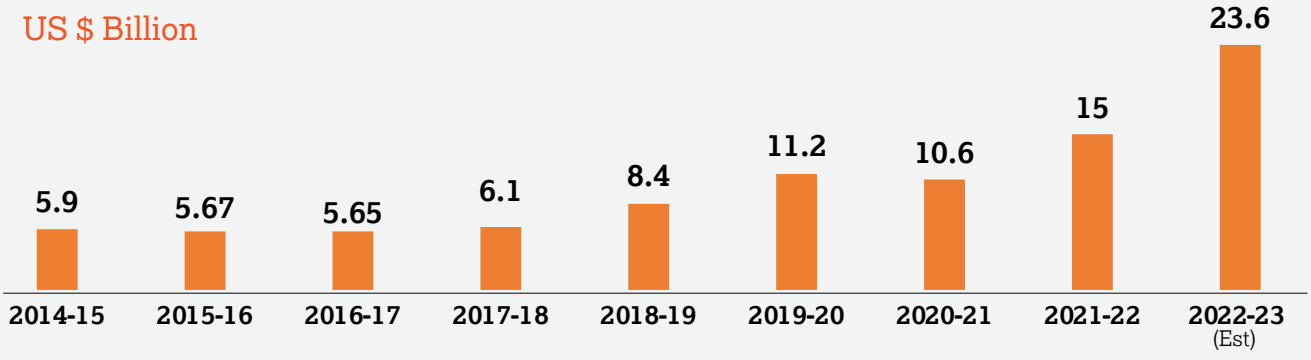
In conclusion, the data indicates a strong growth trajectory for electronics exports, particularly in the mobile phone segment, reflecting India's success in building a competitive electronics manufacturing sector and its potential to capture a larger share of the global market.



ELECTRONICS GOODS EXPORT FROM INDIA

The data demonstrates a general upward trend in the exports of electronics goods from India, with a significant increase starting from 2016-17 onwards. This growth can be attributed to various factors such as government initiatives, investment in local manufacturing, a favorable market environment, and the expanding capacity of India's electronics industry.

In summary, the data reveals India's progress in building a robust and competitive electronics export market, which has experienced significant growth in recent years. This success points to the potential for India to become a leading player in the global electronics market and further expand its export capabilities in the coming years.



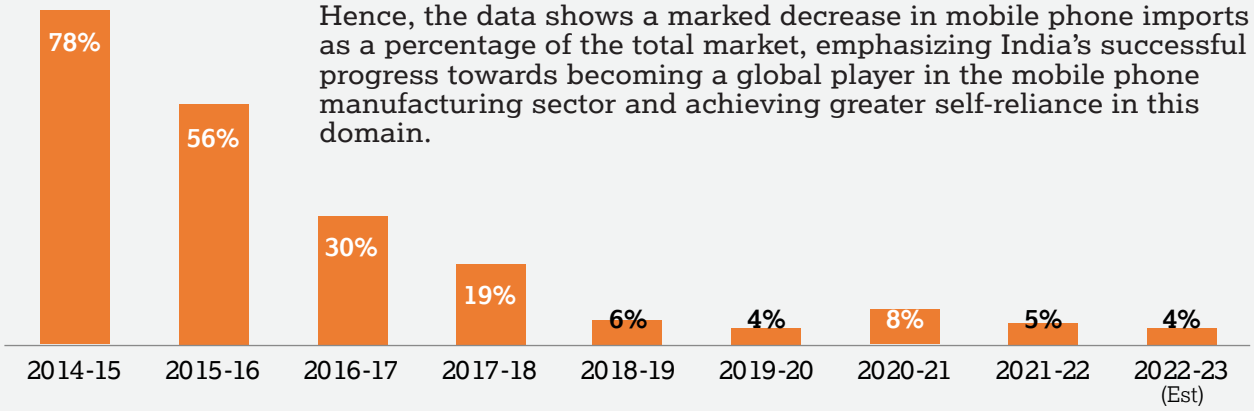
IMPORT OF MOBILE PHONES AS A % OF TOTAL MARKET SHARE

Import %

The provided data represents the percentage of imported mobile phones as a part of the total market in India from 2014-15 to 2022-23. A significant downward trend can be observed, suggesting a substantial decrease in the import of mobile phones over this period.

The decline in import reliance can be attributed to the growth of India's domestic mobile phone production, which has been supported by government incentives and policies like the PLI scheme and the PMP, as mentioned previously. The rapid expansion of the local manufacturing ecosystem has played a crucial role in reducing dependency on imports, promoting self-sufficiency, and contributing to the "Make in India" initiative.

Hence, the data shows a marked decrease in mobile phone imports as a percentage of the total market, emphasizing India's successful progress towards becoming a global player in the mobile phone manufacturing sector and achieving greater self-reliance in this domain.

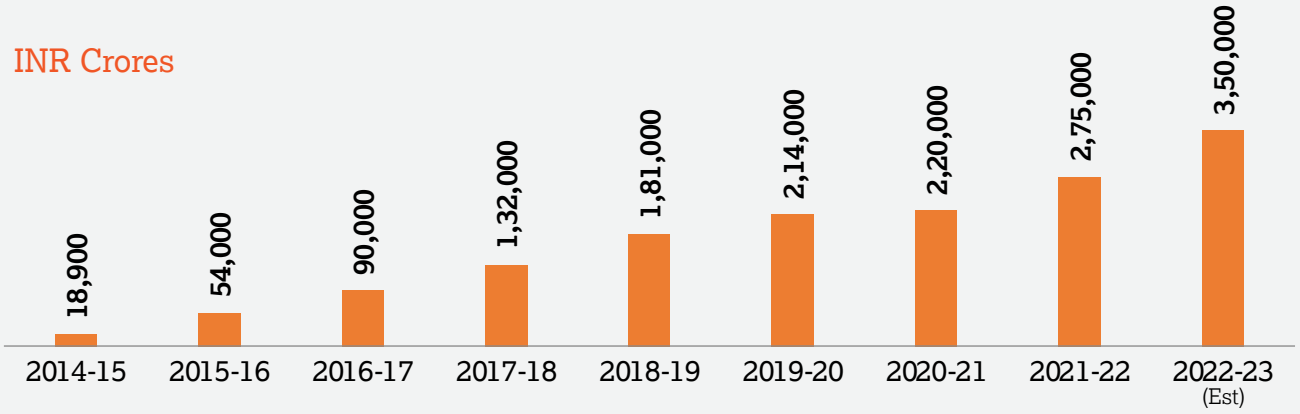


MOBILE PHONE PRODUCTION IN INDIA

The data shows tremendous growth in mobile phone production can be attributed to various factors, including government incentives and policies like the Production Linked Incentive (PLI) scheme and the Phased Manufacturing Programme (PMP). These initiatives have encouraged domestic and foreign manufacturers to invest in India, bolstering local production and fostering the growth of the electronics manufacturing ecosystem.

The data demonstrates India's increasing capability as a mobile phone manufacturing hub, driven by supportive government policies and a conducive environment for both domestic and international players. The sustained growth in mobile phone production not only showcases India's progress in electronics manufacturing but also highlights its potential to become a global leader in this sector.

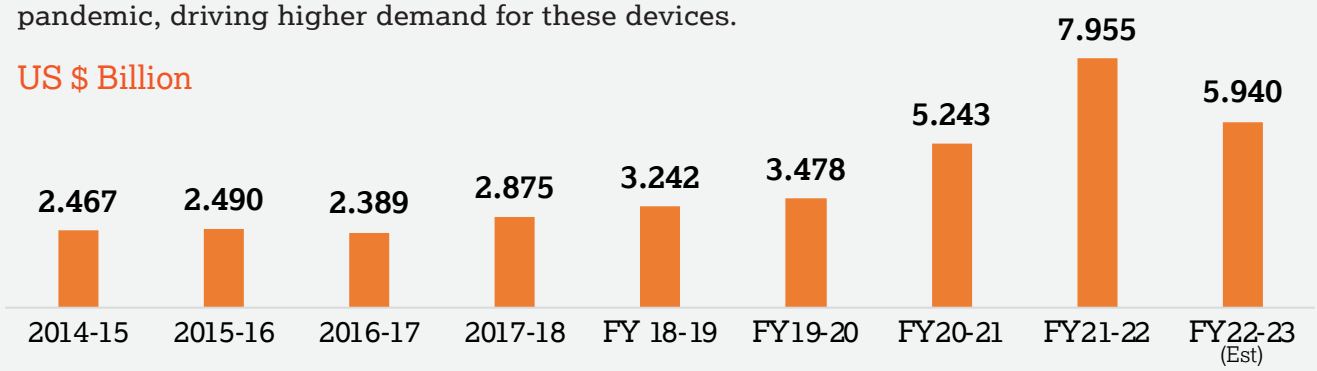
INR Crores



IMPORT OF IT HARDWARE IN INDIA

IT/Hardware imports grew from 2.467 billion USD in FY 14-15 to 5.94 billion USD in FY 22-23. The sudden surge in imports from FY 20-21 to FY 21-22 for the IT/Hardware is attributed because of factors such as increased remote work and online learning due to the pandemic, driving higher demand for these devices.

US $ Billion

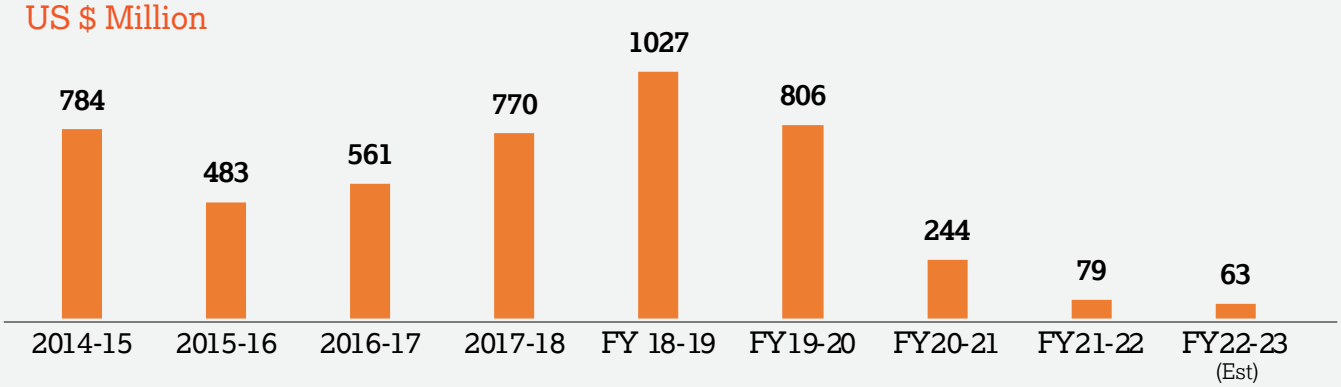


IMPORT OF TV IN INDIA

Since 2014-15 the imports of TV has been increasing till FY 18-9. The imports of TVs have decreased significantly from 1.03 billion USD in FY 18-19 to 0.06 billion USD in FY 22-23. This is attributed to various factors such as the growth of the domestic manufacturing industry, and changes in import policies or tariffs.

The data hence suggest that the decreasing trend in TV imports indicates a need to focus on strengthening domestic production.

US $ Million



GOVERNMENT ANNOUNCEMENTS

Union & State

UNION GOVERNMENTS ANNOUNCEMENTS

SPECS SCHEME EXTENDED FOR ONE YEAR UP TO MARCH 2024

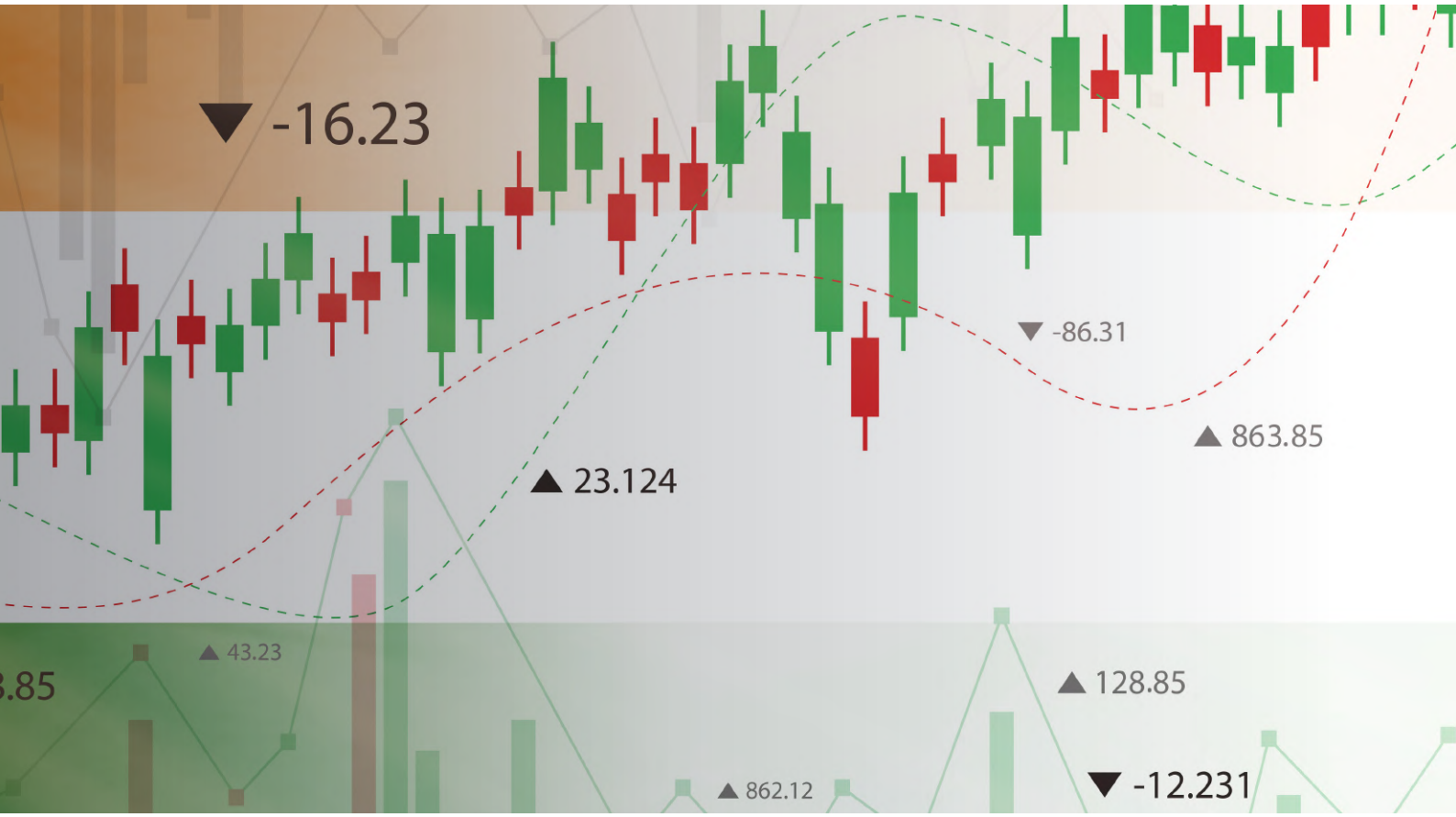
The Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS) was announced in April 2020 for a period of three years (upto March 2023), with a budget allocation of Rs. 3,285 crores. This scheme has provided much-needed support to the Indian electronics industry, adversely impacted by the high disability costs.

The Ministry of Electronics & Information Technology has extended the scheme for the promotion of electronics components and semiconductor (SPECS) by a year. Industry associations said the extension will boost local electronics manufacturing and is aimed at allowing filing of new applications that was discontinued at the end of the fiscal year on March 31, 2023. The scheme was extended via a notification on 5th April 2023.

Source: https://economictimesindiatimes.com/news/economypolicy/govt-extends-sopsfor-chip-electronicsgear-by-a-year/articleshow/99325872.cms?from=mdr

GOVT GIVES APPROVAL FOR 34 ELECTRONIC COMPONENTS MANUFACTURING PROPOSALS WORTH RS 11,187 CR TILL MARCH

The government has approved 34 electronic components manufacturing proposals worth Rs 11,187 crore till March 30 this year. In a written reply to Lok Sabha, Minister of State for Electronics and IT Rajeev Chandrasekhar said the government had notified a Scheme for Promotion of Manufacturing of



Electronic Components (SPECS) on April 1, 2020, and applications were received till till March 30, 2023. "As on March 30, 2023, 120 applications have been received under SPECS. The applications received under the scheme are from domestic companies. As on March 30, 2023, thirty four (34) applications with total project cost of Rs 11,187 crore have been approved under the scheme," he said.

FTP 2023 ANNOUNCED AND SEEKS TO TAKE INDIA'S EXPORTS TO 2 TRILLION DOLLARS BY 2030

Union Minister of Commerce and Industry, Consumer Affairs, Food and Public Distribution and Textiles, Shri Piyush Goyal launched the Foreign Trade Policy 202 mentioning that it is dynamic and has been kept open ended to accommodate the emerging needs of the time. He stated that the policy had been under discussion for a long time and has been formulated after multiple stakeholder consultations. India's overall exports, including services and merchandise exports, has already crossed US$ 750 Billion and is expected to cross US$ 760 Billion this year.

SALIENT FEATURES OF FTP-2023

1. The 2023 FTP policy is designed to be responsive to emerging situations and will be revised as needed, without being linked to specific dates.

2. Various e-initiatives will be implemented to reduce transaction costs for MSMEs and facilitate e-commerce exports, including online approvals, reduced user charges, e-certificates of origin, and paperless filing of export obligation discharge applications.

3. To achieve the goal of one trillion dollars in merchandise exports by 2030, sector-specific targets will be established, and rupee payments will be accepted under FTP schemes.

4. The policy emphasizes capacity building at the district level to promote grassroots export promotion.

5. The SCOMET licensing procedure will be streamlined to make it more efficient.

IT MINISTRY NOTIFIES ONLINE GAMING RULES: WHAT'S CHANGED?

India's IT Ministry on April 6 notified new rules to regulate the online gaming industry, including online real money gaming. These rules, which come as an amendment to the IT Rules, 2021, largely leave the industry to self-regulate through self-regulatory bodies that the IT Ministry will approve. Online gaming platforms can also only host real money games verified by a self-regulatory body and cannot host any game (real money or not) that causes "harm." Online gaming platforms are also subject to many of the same requirements applicable to social media platforms under the IT Rules, 2021, such as setting up grievance redressal, following due diligence requirements etc.

Source:https://www.medianama.com/2023/04/223-itministry-online-gaming-rules/

INDIA IMPLEMENTS NEW E-WASTE (MANAGEMENT) RULES EFFECTIVE FROM 1ST APRIL, 2023

Ministry of Environment, Forest and Climate Change has issued the E-Waste (Management) Rules, 2022 which shall be in effect from the 1stApril, 2023. The official notification contains chapter-wise rules and regulations, responsibilities, procedures, modes and ways to tackle e-waste management. Specifically, the rules shall adhere to every manufacturer, producer rebuilder, dismantler and recycler indulged in the manufacture, sale, transfer, purchase, refurbishing, dismantling, recycling and processing of e-waste or electrical and electronic equipment including their components, consumables, parts and spares which make the product operational. The executing committee shall be liable for all-inclusive implementation, monitoring and supervision of these rules so that decisions are based upon the disputes caused from time to time and shall refer to the Ministry of Environment, Forest and Climate Change. The e-waste shall also takea permit for refurbishing and the refurbisher have to get registered on the portal based on the data available and a refurbishing certificate shall be produced in favour of a registered refurbisher in the format.

Source:https://www.energetica-india.net/news/india-implements-new-e-waste-management-rules-effective-from- 1st-april-2023

INDIA SUCCESSFULLY ORGANISES THE FIRST MEETING OF G20 DIGITAL ECONOMY WORKING GROUP

The First G20 Digital Economy Working Group meeting was held in Lucknow, India, from 13th to 15th February 2023. The meeting saw participation from G20 member nations and eight guest countries along with international organisations such as ITU, UNDP, OECD, UNESCO, and the World Bank. The discussions centred around three priority areas, Digital Public Infrastructure (DPI), Cyber Security in Digital Economy, and Digital Skilling. The need to address the digital skills gap was highlighted, with NASSCOM and UNESCO sharing tha the global economy could lose up to $11.5 trillion by 2028 due to this gap. The meeting included five workshops covering topics such as cybersecurity solutions for MSMEs and the use of geospatial technologies.

Source:https://www.pib.gov.in/PressReleasePage.aspx-?PRID=1899538

MOU ON SEMICONDUCTOR SUPPLY CHAIN AND INNOVATION PARTNERSHIP SIGNED BETWEEN INDIA AND US

India and the US have signed an MoU under the framework of the India-US Commercial Dialogue to establish a collaborative mechanism for semiconductor supply chain resiliency and diversification. The MoU aims to leverage the complementary strengths of both countries and facilitate commercial opportunities and the development of semiconductor innovation ecosystems.

It also seeks to promote mutually beneficial research and development (R&D) and talent and skill development. This MoU follows the Commercial Dialogue 2023 held in New Delhi between the two countries.

Source:https://www.pib.gov.in/PressReleasePage.aspx?PRID=1905522

MEITY FORMS TASK FORCE TO MAKE INDIA 'PRODUCT DEVELOPER AND MANUFACTURING NATION'

The Ministry of Electronics and Information Technology (MeitY) has established a nine person task force to make India a "product developer and manufacturing nation". Bhuvnesh Kumar, additional secretary (MeitY), will serve as the task force's chair, and Amitesh Kumar Sinha, joint secretary (electronics), will serve as the member convenor. Veterans of the Indian electronics sector, including Ajai Chowdhry, founder of HCL, Sunil Vachani, chairman of Dixon Technologies, Hari Om Rai, chairman of Lava International, Vivek Bansal, president engineering of VVDN, Aman Gupta, co-founder of Boat Lifestyle, Sanjay Nayak, managing director of Tejas Networks, and Vivek Tyagi, chairperson, are part of the task force.

Source:https://economictimes.indiatimes.com/

SECRETARY, MEITY REVIEWS MODERNIZATION PLAN FOR SCL MOHALI TO ADVANCE INDIA'S SEMICONDUCTOR ASPIRATIONS

Shri Alkesh Kumar Sharma, the Secretary of MeitY, has visited the Semi-Conductor Labs in Mohali and reviewed the progress of the modernization plan. He stated that the modernization of SCL Mohali will play a crucial role in advancing India's semiconductor aspirations.

The government is actively pursuing the modernization of the existing Semi-Conductor Laboratory (SCL) in Mohali as part of broader efforts to grow semiconductor manufacturing in India. SCL is the only IDM semiconductor facility in India that has served the lowscale indigenous semiconductor needs of the country. SCL has launched an RfP for capacity augmentation of the existing CMOS wafer fab, and it will add NVM technology and GaN on Silicon technology to its suite of technological capabilities. MeitY has engaged a leading management consulting firm, Boston Consulting Group, to develop a longer-term vision and execution roadmap for SCL 2.0 to play a key role in India's semiconductor mission.

Source:https://www.pib.gov.in/PressReleasePage.aspx-?PRID=1898080

VLSI: AICTE LAUNCHES B. TECH ELECTRONICS VLSI DESIGN & TECHNOLOGY AND DIPLOMA IN IC MANUFACTURING

The All India Council for Technical Education (AICTE) has launched a curriculum for B. Tech Electronics VLSI Design & Technology and Diploma in IC Manufacturing. The courses aim to provide a variety of employment roles with outstanding salary incentives for Indian students in global and Indian companies. The courses will create an environment for the semiconductor ecosystem for setting and scaling up. The Chips to Startup (C2S) programme is also aimed at training 85,000 engineers in ESDM disciplines over a period of 5 years. The semiconductor and display manufacturing ecosystem in India is being developed through the Semicon India program, which provides financial support to companies investing in semiconductors, display manufacturing, and design ecosystem.

Sources: https://www.pib.gov.in/PressReleasePage.aspx-?PRID=1900384

GOVT. APPROVES ELECTRONICS MANUFACTURING CLUSTER IN MAHARASHTRA WITH RS 493 CR OUTLAY

MeitY approved setting up of an electronics manufacturing cluster (EMC) in Ranjangaon Phase III in Maharashtra with a cost of Rs 492.85 crore. The project is aimed at boosting the electronics manufacturing hub in Maharashtra and aims to attract Rs 2,000 crore investment and generate 5,000 job opportunities. The Centre will work jointly with the Maharashtra government towards the development of the electronics manufacturing cluster and will spend about Rs 208 crore as its share in the project.

Source:https://www.financialexpress.com/industry/govt-approves-electronics-manufacturing-cluster-in-maharashtra-with-rs-493-cr-outlay/2762220/

MINISTRY OF POWER RELEASES DRAFT CARBON CREDIT TRADING SCHEME (CCTS)

The power ministry on Monday issued a draft carbon credits trading scheme as part of its process to establish a carbon credit market in India and sought views from stakeholders on

the proposals by April 14. The Energy Conservation Amendment Bill, passed by Parliament in December, included provisions for a market for carbon credit. The proposed Energy Conservation (Amendment) Bill, 2022, which was passed by the Indian Parliament, empowers the Central Government to specify a Carbon Trading Scheme in consultation with the Bureau of Energy Efficiency (BEE). The ministry in currently finalizing the Carbon Credit Trading Scheme (CCTS). The scheme outlines that an 'Accredited Carbon Verifier' is an agency accredited by the BEE to carry out validation or verification activities in relation to the CCTS. Carbon credit trading aims to reduce carbon emissions and address climate change.

Source: https://www.rear.org.in/post/ministry-of-power-releases-draft-carbon-credit-trading-scheme-ccts

CCI ARMED WITH POWER TO PENALISE TECH MNCS FOR VIOLATIONS BASED ON GLOBAL REVENUE

The Competition Commission of India (CCI) will now have the power to impose penalties on multinational companies (MNCs) for violations based on their international revenue, reports say. The lower house of the parliament cleared some amendments to the Competition Act that will allow global deals by digital MNCs to come under local laws. Presently, penalties are based on relevant market revenues, but under the new rules, they can also be based on their global revenues. According to the Competition Bill 2022, tech companies that have a strong presence in India will come under the CCI ambit for deals valued over Rs 2,000 crore. The amendments were passed without any debate and will arm the government to regulate digital companies to create a level-playing field.

Source: https://www.exchange4media.com/digital-news/cci-armed-with-powers-to-penalise-tech-mncs-for-violations-based-on-global-revenue-126335.html

DPIIT TO SET UP TASK FORCE FOR FORMULATING LOGISTICS COST FRAMEWORK

A task force will be set up for formulating a framework to determine logistics costs in the country, the commerce and industry ministry has said. It was decided in a workshop organised by Department for Promotion of Industry and Internal Trade (DPIIT) on the subject. The task force members would include representatives from NITI Aayog, Ministry of Statistics and Programme Implementation (MOSPI), National Council of Applied Economic Research (NCAER), academic experts and other stakeholders. The workshop on logistics cost framework was organised in partnership with Asian Development Bank (ADB). Speaking at the workshop, Commerce and Industry Minister Piyush Goyal suggested taking note of India's geography, terrain, size and complexities, trade volume and value etc while calculating the logistics cost.

Source:https://www.business-standard.com/article/economy-policy/dpiit-to-set-up-task-force-for-formulating-logistics-cost-framework-123032100351_1.

ELECTRONICS MANUFACTURING GETS A FRESH INCENTIVE DISBURSAL OF INR 765 CRORE UNDER THE PLI SCHEME

The Government of India has approved a tranche of production-linked incentives (PLI) worth INR 765 crore for electronics manufacturing. Out of the total Rs 765 crore worth of production-linked incentives (PLI) approved by the government for electronics manufacturing, the majority share of Rs 601.93 crore will be given to Wistron, the contract manufacturer for Apple in India. Meanwhile, Dixon Technologies' Padget unit will receive Rs 149.63 crore, and AT&S, Shogini, and Alcon Electronics will get incentives of Rs 7.58 crore, Rs 3 crore, and Rs 2.40 crore, respectively.

Source: https://www.moneycontrol.com/news/business/markets/electronics-manufacturing-gets-a-fresh-rs-765-crore-pli-scheme-report-10251571.html

EXPANSION OF DIGITAL OPPORTUNITIES IN INDIA THROUGH SOFTWARE TECHNOLOGY PARKS (STPI) AND ELECTRONICS MANUFACTURING CLUSTERS (EMC)

Announced by the Government of India, the Software Technology Parks of India (STPI), an autonomous society under the Ministry of Electronics and Information Technology (MeitY), has been instrumental in expanding digital opportunities in smaller and newer towns across the country. Currently, there are 63 STPI centres in the country, and an additional 22

have been approved. MeitY has also introduced the Modified Electronics Manufacturing Clusters (EMC 2.0) Scheme to create a robust electronics manufacturing ecosystem in the country. Under the EMC 2.0 scheme, three applications for setting up EMC projects have been approved in Andhra Pradesh, Haryana, and Maharashtra.

Additionally, STPI has established an Electropreneur Park (EP) 1.0 at Delhi University to cater to the needs of start-ups in the field of ESDM (Electronic System Design and Manufacturing) domain.

Source:https://www.pib.gov.in/PressReleasePage.aspx-?PRID=1897277

SEVERAL STATES ARE KEEN TO SET UP ELECTRONICS MANUFACTURING CLUSTERS UNDER CENTRE'S EMC 2.0 SCHEME: MOS

"Under the EMC 2.0 scheme, eight applications for establishment of Electronics Manufacturing Cluster and two applications for setting up of Common Facility Centres (CFCs) have been received from seven states across the country," Union Minister of State for Electronics and IT Rajeev Chandrasekhar said in a written reply to a question in the Rajya Sabha.
Eight applications for setting up of Electronics Manufacturing Cluster (EMC) have been received from seven states, including Haryana, Uttarakhand, Karnataka, Andhra Pradesh and Telangana, under the EMC 2.0 scheme. The Ministry of Electronics and Information Technology (MeitY) had notified the modified Electronics Manufacturing Clusters (EMC 2.0) scheme on 1 April 2020 to provide financial support for creation of world class infrastructure along with common facilities and amenities, including ready built factory (RBF) sheds and plug and play facilities for attracting major global electronics manufacturers along with their supply chains, to set up their manufacturing operations in such clusters. The scheme is open for receipt of application upto March 2023 with disbursement of funds upto March 2028 to the approved projects.

Source:https://swarajyamag.com/infrastructure/sevenstates-keen-to-set-up-electronics-manufacturing-clustersunder-centres-emc-20-scheme

DGFT FURTHER SIMPLIFIES THE PROCESS OF LEVYING COMPOSITION FEE FOR EXPORT OBLIGATION EXTENSION TO INCLUDE MORE CASES UNDER ADVANCE AUTHORIZATION SCHEME

The Directorate General of Foreign Trade (DGFT) has amended rules regarding the levying of Composition Fee to simplify the process and extend benefits to cases where an extension in the Export Obligation Period (EOP) and/or regularisation of exports have been allowed. The revised Composition Fee model is based on a specific rate for different levels of the 'CIF value of Authorisation,' which is simpler to calculate and aids in automation. This initiative aims to make doing business easier and reduce transaction costs by streamlining compliance processes and reducing the need for manual calculations and paperwork. The DGFT is working towards the goal of stronger trade facilitation and ease of doing business by simplifying the Composition Fee calculation procedure for exporters.

Source:https://www.pib.gov.in/PressReleasePage.aspx-?PRID=1903374

UPDATES ON STATES POLICIES, INVESTMENTS & ANNOUNCEMENTS

Tamil Nadu passes Bill banning online gambling despite new IT rules, wants to prohibit online gaming too Hours after the Tamil Nadu state assembly, led by the DMK government moved a fresh resolution against Governor RN Ravi for allegedly not clearing Bills passed by the State Assembly and unanimously passed the same, the latter has accorded his assent to the Bill banning online gambling in Tamil Nadu. The state government now stands firm and says it will not revoke the ban on online gaming despite the new amendments to the IT rules notified by the Centre last week. The Centre had notified the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Amendment Rules, 2023, on Thursday, which is an amendment to the existing IT Rules of 2021. The notification amends the existing rules and adds provisions. The additional portions provide the regulatory framework for online gaming and misinformation.
Source:https://www.cnbctv18.com/india/tamil-naduonline-gaming-new-it-rules-not-to-lift-ban-16368301.htm

RAJASTHAN GOVT OKAYS CUSTOMISED PACKAGES FOR FIVE PROJECTS TO ENCOURAGE RS 6,994-CR INVESTMENT

The State Empowered Committee (SEC) discussed a project for providing customised package of benefits under the Rajasthan Investment Promotion Scheme (RIPS) to pave way to attract investments up to Rs 11,993.48 crore in the state. The projects come from a variety of industries including manufacturing, cement, chemicals, textile, automobiles and hospitality sectors.

It is expected that these projects will create 8,815 new jobs in the state. The cases recommended by the State Empowered Committee will now be placed before the Board of Investment headed by Chief Minister Ashok Gehlot for final approval, the statement said. In accordance with the requirements of the Rajasthan Enterprises Single Window Enabling and Clearance (Amendment) Act, 2020, a board of investment chaired by the chief minister has been formed. Veenu Gupta, Additional Chief Secretary (Industries), said, "Investors have expressed trust in the state government's plans.

The goal is to make investing in the state simple. The recommendations put up at the 40th SEC meeting also offer prospects for the creation of new opportunities and more sustainable development in the state.

Source: https://theprint.in/economy/state-govt-panelmulls-providing-customise-benefits-to-attract-rs-1200-crore-investment-in-rajasthan/1416376/

UP GLOBAL INVESTOR'S SUMMIT 2023

The Uttar Pradesh (UP) government recently hosted its state-level Global Investor's Summit between February 10-12. The summit concluded with several deals signed between UP authorities, domestic conglomerates like Reliance and Godrej, and multinational firms (MNCs) like IKEA and Lulu Group. UP sought to prime itself for a successful summit by holding investor meetings across 20 countries, including Thailand, Japan, Australia, and the Netherlands, besides organizing roadshows in several Indian cities.

Ahead of the summit, around 1333 memoranda of understanding (MoUs) were reportedly signed between various domestic and international firms for investments worth INR 7.85 trillion. Overall, the summit received investment proposals worth INR 32.92 trillion and potential to create 9.2 million jobs. Investor MoUs were signed with agriculture, basic education, additional sources of energy, excise, food safety and drug administration, and transport departments besides industrial authorities. Investments were announced for the IT/ITeS, electronics, commercial development, infrastructure, group housing, dairy, energy, agriculture, education, medical education, civil aviation, and forestry sectors.

Source: https://www.india-briefing.com/news/uttar-pradesh-builds-up-its-foreign-investment-appeal-successfully-concludes-2023-global-investors-summit-27225.html/

AP GLOBAL INVESTOR'S SUMMIT 2023 SUCCESSFULLY ORGANISED AT VIZAG

Andhra Pradesh government has received investment proposals worth 13 lakh crore in the Advantage Andhra Pradesh Global Investment Summit 2023. "We have executed 352 MoUs with an investment commitment of 13,05,663 crore providing employment potential of over 6,03,223 jobs," the Chief Minister YS Jagan Mohan Reddy said in the summit's valedictory session. The state government will be setting up a monetary committee with Chief Secretary and CMO officials to ensure translation of MoUs into actual investments, Reddy said. "I sincerely request all of you to move from the MoU stage to the grounding of your investments in Andhra Pradesh at the earliest. Assuring you all that our government will demonstrate "speed of facilitating businesses" taking matters forward," the Chief Minister said while thanking the delegates.

Source: https://www.thehindubusinessline.com/news/national/ap-gis-closes-with-352-mous-worth-13-lakh-cr-investments/article66580028.ece

HARYANA TO PROMOTE ELECTRONICS MANUFACTURING CLUSTER: CM KHATTAR

Presiding over the meeting of group of ministers, Haryana Chief Minister Manohar Lal Khattar said, "Electronics manufacturing cluster will be promoted in the state and a plan should be prepared to develop textile parks and increase

infrastructure in them." He said that the auto appeal system and grievance redressal system of the state government has been considered better by the central government. He directed all the departments to work on a comprehensive level by making progressive plans in various developmental areas."So that by the year 2047, effective steps can be taken towards making the state a leading, modern and self-reliant," added the CM presiding the meeting regarding learnings from the second national conference of chief secretaries. During the meeting, presentation was given by senior officers on various topics including emphasis on efficient, small and medium scale industries, infrastructure and investment, reducing regulatory compliance, GST etc.

Source: https://knnindia.co.in/news/newsdetails/state/haryana/haryana-to-promote-electronics-manufacturing-cluster-cm-khattar

NEW ELECTRONICS MANUFACTURING CLUSTER AT DHARWAD, KARNATAKA

The central government sanctioned a new greenfield project for Electronics Manufacturing Cluster (EMC) at Dharwad in Karnataka as an attempt to make India an electronics manufacturing hub. It is expected to create over 18,000 jobs and the cluster is worth Rs 180 crore.

This new EMC has a strategic locational advantage and well connected with NH-48 (1 Km), Hubli Domestic Airport (33 Km), which will reduce the logistics/ transportation cost of the industry in the EMC. It is likely to attract investments to the tune of over Rs 1,500 crore soon. "Karnataka is emerging as a global electronics manufacturing hub for the world, just as it is already a telecom hub with Apple plants in Kolar (Wistron) and Devanahalli (Foxconn). These new investments are creating jobs and development. The Narendra Modi government is committed to build India as a manufacturing hub as part of its 'Atmanirbhar Bharat' policies," said Union Minister of State for Skill Development & Entrepreneurship and Electronics & IT, Rajeev Chandrasekhar while announcing the approval of cluster in Bengaluru.

Source: https://www.businesstoday.in/latest/economy/story/rs-180-crore-electronics-manufacturing-cluster-approved-at-dharwad-in-karnataka-374765-2023-03-24

MAHARASHTRA GOVERNMENT TO SET UP DRONE HUB & MANUFACTURING CLUSTER IN AURANGABAD

The Maharashtra government is planning to set up a drone hub and manufacturing cluster at Aurangabad Industrial City (AURIC) in Aurangabad district. As per reports, the state government has set up a committee under the chairmanship of Development Commissioner (Industries), Directorate of Industries to oversee the project. According to officials, the government received a proposal from strategic think-tank Bramha Research Foundation, Mumbai, to set up a drone hub and manufacturing cluster at AURIC in Aurangabad. In November 2022, deputy CM Devendra Fadnavis held a meeting to discuss the matter, and thereupon to set up a committee, the official said.

Source: https://knnindia.co.in/news/newsdetails/state/maharashtra/maharashtra-government-to-set-up-drone-hub-manufacturing-cluster-in-aurangabad

KARNATAKA PASSES BILL ALLOWING 12-HOUR WORK DAYS IN INDUSTRIES

The Karnataka legislature has passed an amendment to the Factories Act of 1948 in its application in the state to allow industries to extend working hours for labour up to 12 hours a day while keeping the maximum weekly work hours at 48. The Factories (Karnataka Amendment) Bill, 2023 was passed without a debate in the Legislative Assembly but was opposed by the Congress, JDS, and even a member of the BJP, in the Legislative Council when the law was passed on February 24.

IT and BT Minister Dr C N Ashwathnarayan told the Legislative Council that the extension of working hours was being done to provide a boost for the manufacturing sector where India is lagging behind China. The amended law allows overtime to extend from 75 hours in three months to 145 hours and also allows women to work night shifts with adequate security. "Now, the rule is that workers should work for 48 hours and the aim is to reduce work from six days a week to four or five and in a total week, the work still remains at 48 hours.

Source: https://indianexpress.com/article/cities/bangalore/karnataka-passes-bill-work-days-weekly-workhours-8470470/

UNION BUDGET 2023-24

A Glass Half Full

- Bipin Sapra

An in-depth analysis of the recent Union Budget 2023-24 announcement for the mobile and electronics industry and the way forward.

Bird's eye view of the industry

India and its governing spirit have changed for the better during the last few years with policy and procedural amendments becoming a continuous process. Equipped with a series of stimulants announced by the Government of India, the electronics industry is on a high growth trajectory to achieve the manufacturing target of USD 300 billion by 2025-26, as envisioned in the Vision Document prepared by the Ministry of Electronics and IT (MeitY) and the India Cellular & Electronics Association (ICEA).[1]

Some of the key policy measures for the electronics industry announced by the Government include the Production Linked Incentive (PLI) schemes that were launched in 2020-2022 for 13 sectors with a budgetary outlay of approx. **INR 1.97 lakh crore** (US$ 26 billion) have greatly benefitted and incentivised the manufacturing of electronics products including Mobile Phones and specific components, Telecom Equipment, IT Hardware, White Goods, and LEDs. The Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS), and the Electronics Manufacturing Clusters (EMC) 2.0 have also been instrumental in encouraging investments in the Electronics System Design and Manufacturing (ESDM) sector and as outcomes of these schemes, the domestic manufacturing of such incentivised electronics have increased manifold and many of the scheme applicants have already benefitted.

It is commendable that the government is responsive to industry

concerns and is actively working towards addressing the needs of the industry. The policies formulated in recent years show that several major schemes for the electronics sector, such as SPECS, PLIs, EMC, and SemiCon India Programme, have been announced by the government without waiting for the Budget Day. Additionally, India has witnessed need-based policy announcements, procedural amendments, and tweaks in direct and indirect taxes to encourage manufacturing as a continuous process performed round the year.

Nonetheless, the industry and people at large always have some positive expectations from the Union Budget in which Government announces several schemes and does budgetary allocations for various sectors such as agriculture, MSMEs, education, defence, railways, and social welfare among others.

Key proposals in Union Budget 2023-24

India's budget announced for the next fiscal aims to build on the foundation laid in the last one to propel the country into Amrit Kaal. Adding to the policy impetus for the electronics industry are the Union Budget announcements for this year. The industry saw a 40% increase in the budgetary allocation this year, compared to last year, with a jump from INR 11,719.95 crores to INR 16,549.04 crores in the overall outlay for the MeitY.[2] The big winners in the budget proposals include:

MOBILE PHONE

The mobile phone production in the country has increased from 6 crore units in 2014-15 (valued at ~ INR 18,900 crore) to 31 crore units in 2021-22 (valued at ~ INR 2,75,000 crore)[3]. This has been further strengthened by the customs duty relief on the camera lens and its inputs/ parts for use in the manufacture of the camera module of cellular mobile phones. The duty on these products had been reduced in the last year's budget from 10-15% to 2.5%. This year the duty of 2.5% has been removed in totality. The continuance of concessional import duty of 5% (from 20%) on lithium-ion cells used for mobile phone batteries until 31 March 2024 is another key takeaway for mobile phone manufacturers.

[2] Confederation of Indian Industry (CII), Union Budget 2023-24: An Analysis, 3 February 2023. Available at: CII.

[3] Union Budget Speech 2023-24.

TELEVISION

Televisions are an integral part of households and thus a very important item in the list of consumer electronics and are heralded as a product for which the country can establish itself as a global hub for manufacturing. The budget has reduced the Basic Customs Duty on imports of specific parts for the manufacture of open cells of TV panels from 5% to 2.5%. Considering that open cells are a major high-cost component in the process of manufacturing TVs, this duty reduction will boost the production of televisions in the country. As published in MeitY's Annual Report 2021-22, the TV production in the country in 2020-21 accounted for USD 4.24 billion, this figure is expected to rise to USD 10.22 billion by 2025-26 growing at a CAGR of 20%.

OTHER ANNOUNCEMENTS IN THE SECTOR

1. Customs duties on specific chemical items used in the manufacture of specified chemicals/items for the manufacture of pre-calcined FerritePowder(whichiseventually used in the manufacture of cores in transformers for electronic devices[4]) have been reduced from 7.5% to 0% till March 2024.[5]

2. Customs duties for Palladium Tetra Amine Sulphate that are used for the manufacture of parts of connectors have been reduced from 5% to 2.5%.[6] This will act as a tailwind for companies to "Make in India" since the duty on procuring the said raw material has been reduced. These connectors are versatile items and are used in the manufacture of consumer electronics, automobiles and also the aerospace industry.

WITH THE AIM TO ENHANCE EASE OF DOING BUSINESS, THE BUDGET ANNOUNCED THE FOLLOWING

- *More than 39,000 compliances have been reduced.*
- *Over 3,400 legal provisions have been decriminalised.*
- *The Jan Vishwas Bill 2022 introduced in the Parliament seeks to amend 42 Central acts in order to further trust-based governance in India by reducing the compliance burden on individuals and businesses.*
- *Permanent Account Number (PAN) to be the common identifier for businesses for all digital systems of specified government agencies.*
- *A system of "Unified Filing Process" is to be set up to obviate the need for separate submissions of the same information.*
- *Execution of contracts during COVID was a challenge for all. MSMEs that were not able to execute contracts in that period will receive back 95% of the forfeited amount of bid/performance security.*
- *Entity DigiLocker to be set up for use by MSMEs, large businesses and charitable trusts for storing and sharing documents with various authorities/regulators/ banks/other business entities, in a secure digital manner whenever needed.*

[4] Material Processing Technology for Soft Ferrites Manufacturing (sapub.org).

[5] Budget speech 2023

[5] Budget Speech 2023

Impact of PLI on the industry

India's share in global electronics manufacturing has grown from 1.3% in 2012 to 3.6% in 2020.[7] Growing at a Compound Annual Growth Rate (CAGR) of 17.9%, the domestic production of electronic items has seen a sharp rise from USD 37 billion in 2015-16 to USD 74.7 billion in 2020-21.[8] The Economic Survey of India for 2022-23 highlighted that the country's electronics industry had reached a valuation of USD 118 billion as of FY 20. The sector has been spruced up primarily due to growth in the production of mobile phones, consumer electronics as well as industrial electronics.

PLI Scheme for Large-Scale Electronics Manufacturing attracted an investment of INR 4,784 crore in the industry leading to a total production of INR 2.04 lakh crore as of September 2022 out of which the exports alone accounted for INR 80,769 crore.[9]

Adding to the above, in the last couple of years, about 250 manufacturing units have been established in the country catering to the mobile phone manufacturing ecosystem.[10] This development has generated employment for about 7 lakh persons (both direct and indirect).[11] Both foreign and Indian brands have shown a tendency towards setting up manufacturing plants or have entered into sub-contracts for the manufacture of mobile handsets with Electronic Manufacturing Services (EMS) companies in India.[12] The PLI scheme for LSEM (Large Scale Electronics Manufacturing) generated about 40,916 jobs as of September 2022. In fact, global mobile phone giants have created about 100,000 jobs in a span of 19 months up till 2023. [13]

Owing to the schemes/incentives announced by the Government, the growth of the electronics sector – specifically the mobile production followed by the manufacturing of televisions and the setting up of semiconductor foundries – will prove to be a big source of employment, both direct and indirect, for the youth of the nation in the near future.

[7] Annual Report 2021-22, Ministry of Electronics and Information Technology. Available at: MeitY_AR_English_2021-22.pdf.

[8] Annual Report 2021-22, Ministry of Electronics and Information Technology. Available at: MeitY_AR_English_2021-22.pdf.

[9] Economic Survey 2022-23.

[10] Annual Report 2021-22, Ministry of Electronics and Information Technology, MeitY_AR_English_2021-22.pdf.

[11] Annual Report 2021-22, Ministry of Electronics and Information Technology, MeitY_AR_English_2021-22.pdf.

[12] Annual Report 2021-22, Ministry of Electronics and Information Technology, MeitY_AR_English_2021-22.pdf.

[13] PLI scheme boost: Apple creates 100,000 new direct jobs in 19 months | Business Standard News (business-standard.com).

Semiconductors: the flag bearers of the industry

There has been a major thrust on the sub-industry of semiconductors in the budget which will provide a fillip to the domestic manufacturing activities for semiconductors and create roots for a strong ecosystem in this sector. Outlay on the "Modified Programme for Development of Semiconductors and Display Manufacturing Ecosystem" in India has increased massively from an outlay of INR 200 crore in the previous budget to INR 3000 crore in this year's announcements.[14] This amount has been further proposed to be prioritised amongst – silicon-based semiconductor fabs (INR 1,000 crore); semiconductor fabs and chip packaging (INR 1,800 crore) and design-linked incentives (INR 200 crore).[15]

The government's vision of Atmanirbhar Bharat in the electronics and semiconductors market gained momentum when the Semicon India programme was approved with a total outlay of INR 76,000 crore for the development of the semiconductor and display manufacturing ecosystem in India.

Tax announcements – a move in the right policy direction

The government's move towards the reduction of customs duty, specifically the cut in the import duty on TV panels by 2.5%, will greatly benefit Indian consumers considering that televisions are one of the most purchased consumer durables in the country – across urban and rural areas. Per data available on IBEF, shipments of smart TVs from India rose by 65% YoY in the second quarter of 2021 on account of rapid expansion endeavours being pursued by original equipment manufacturers (OEMs).[16] It is forecasted that by 2025, smart televisions in India will reach a figure of approximately 40-50 million. [17]

The said duty reduction coupled with the changes proposed in the new income tax regime providing an exemption from income tax till INR 7 lakh will hugely aid the mid-level income sections of the country – who comprise the largest consumer market in the nation – by increasing their purchasing power and creating a larger pool of disposable income. The said boost in the purchasing power of the country will not only create more demand for electronic consumer durables but will also significantly enhance demand for entry-level products i.e., first-time purchasers of electronic consumer durables items such as semi-automatic washing machines and smaller LED TVs. Thus, there will be an uptick in the consumer demand for such items caused by an increase in disposable income due to the lowering of tax slabs.

[14] Confederation of Indian Industry (CII), Union Budget 2023-24: An Analysis, 3 February 2023. Available at: CII.

[15] Rs 3,000 crore allocated for semiconductors in Budget 2023: Let's break it down | Deccan Herald

[16] Media and Entertainment Industry in India, Indian Media Industry (ibef.org)

[17] Media and Entertainment Industry in India, Indian Media Industry (ibef.org)

Competitiveness of the domestic industry – still a roadblock

Manufacturers, suppliers, and distributors too have a lot to gain from the government announcements in the electronics sector. By moving towards rationalising the country's tariff structure, simplifying trade and business-related procedures, advancing infrastructure, and providing incentives the Government is targeting to give a substantial boost to the domestic industry for manufacturing of electronics products.

The slew of incentives and measures announced by the government over the recent years seek to achieve a level-playing field for the country's manufacturers and to enable them to compete with global markets and curb imports of electronics products into the country. There has been a decrease in the rate of imports for finished goods and an increase in the import of electronic components. This is an indicator of the growth of manufacturing facilities of electronic products in the country.[18] Supporting this growth is the fact that India is now the second-largest mobile handset manufacturing country in the world.

However, there is tough competition for India on the global platform.

The Vietnamese electronics industry has emerged as the most intense hub due to the "China plus 1" strategy being adopted by leading manufacturing firms globally. This in turn has primed Vietnam for its participation in global value chains (GVCs) in the electronics sector.

While there are many factors responsible for a country's participation in GVCs, the national policy landscape plays a crucial factor. It is necessary for a nation like India to adopt GVC-conducive measures such as low trade barriers and a reduction in costs arising out of international trade. Other important aspects where there is scope in the national policy space include advanced infrastructure and a well-organized logistics ecosystem.

In the case of India, several stages of production of the electronics industry can shift base to the country with the right set of trajectories set by the policymakers to ensure ease of doing business for the companies.

There exists a cost disability for electronics manufacturers seeking to set up their plants in India vis-a-vis in Vietnam and China. The latter countries have implemented a host of business-friendly regulations in the form of tax breaks, provision of supportive infrastructure, better ease of ease doing business and advancement of the manufacturing ecosystem. The collective impact of such policy support in China and Vietnam suggests that when compared to India the competitiveness gains for investors are approximately between 19 to 21% in China and 9 to 12% in Vietnam.[19]

[18] Annual Report 2021-22, Ministry of Electronics and Information Technology, MeitY_AR_English_2021-22.pdf.

[19] ICEA Vision Document, Volume 2, "$300 bn Sustainable Electronics Manufacturing & Exports by 2026". FinalReport_VisionDocument_24012022.pdf (icea.org.in)

Scope for policy change

The country has transitioned from almost absolute imports of mobile phones during 2013-2015 to a stage of import substitution during 2016-2020 and now is an exporter of mobile phones. India crossed INR 90,000 crores of mobile exports by the end of FY 2022-23 - eclipsing the entire FY 2021-22's mobile exports of INR 45,000 crores.

This development is the result of a clear intention on the part of government and industry however the domestic mobile and electronics industry needs more support, especially in the form of duty concessions on inputs/components.

The high import duties on inputs/components used for the manufacture of electronic items increases the cost of manufactured product and makes them uncompetitive in the international markets. Basis the high-level analysis of the reasons for lower exports from India in comparison to the competing nations such as China, Vietnam, Malaysia, Thailand, etc., it is a fact that India has the highest import tariff rates than the competing nations, i.e., 9.7% as against 3.2% in China, 3.5% in Mexico, 5% in Thailand, and 5.6% in Vietnam.[20] For instance, some inputs used for the manufacture of mobile phones still attract import duty ranging from 2.75% to 16.5% and this makes the Made-in-India mobile phones costlier in the international market. [21]

The Indian ESDM manufacturing industry is facing the heat of this cost disparity and encountering difficulties in competing in the international markets vis-à-vis the electronics manufacturers from the above-mentioned countries. The sector has appealing business opportunities on the horizon that are yet to be leveraged. Two such potential areas are: the role of MSMEs and emerging technologies. MSMEs, also known as India's Champions, can play a pivotal role in sustaining the local manufacturing ecosystem for the electronics industry. Global lead firms are certainly crucial in bringing investment, innovation and establishing a manufacturing vein, however, it is the MSMEs that will be instrumental in continuing domestic manufacturing for the country while also augmenting GDP, creating more jobs and reducing reliance on imports.

Similarly, emerging technology can greatly aid electronics manufacturing in India through integration with smart software such as Artificial Intelligence, and 5G services. Internet 4.0 brings with it an amplified demand for data networks that will further enhance the demand for 5G-compatible devices such as 5G modems, 5G routers, MIMO antenna, 5G new radio and countless other electronic items. These opportunities, however, can be fully relished only with the right policy support for the electronics sector, as has often been the demand of the industry.

Key Recommendations

Over the past 4-5 years, the domestic production of electronic items has markedly increased at a CAGR of 17%.[22] However, the domestic industry continues to face certain challenges.

India has stressed on the policy of 'Make in India' and 'Aatmanirbhar Bharat' and accordingly, all policies have been aligned to remove disabilities vis-à-vis competing countries. The vision of the government is that manufacturing in India should be adding substantially to the GVCs of the electronic sector. While the policies have borne substantial fruit in mobile phone manufacturing, the other electronic

[20] ICEA comment.

[21] Report-by-ICEA-on-Detailed_Tariffs-Drive-Competitiveness-and-Scale_06022022.pdf.

[22] Annual Report 2021-22, Ministry of Electronics and Information Technology, MeitY_AR_English_2021-22.pdf

goods are now being given suitable focus too.

The PLI and other schemes which have been introduced to remove disability vis-à-vis other countries are bringing in much-needed investment in all sectors. Some of the schemes need to be tweaked for the industry to derive the desired benefit. Similarly, critical components and goods need to be identified for which government should create the necessary ecosystem.

Some of these electronic goods like laptops and computers are part of the ITA – 1 of which India is the signatory and accordingly it is not possible to increase customs duty on the same. Hence PLI and other related incentives are the only mechanisms to promote Make-in-India for these goods.

Further, in addition to budget announcements, there are other equally pressing issues that the government must address. Plug-and-play infrastructure can be a game changer for the domestic industry. By providing infrastructure support, in the form of buildings and concerned permits, the government authorities can significantly assist the manufacturers by themselves undertaking regulatory compliances and handing over readymade facilities to the private sector. This will go a long way in boosting India's attractiveness for the electronics sector which tends to be rather labour-intensive.

Another area for consideration is better to market access through Free Trade Agreements (FTAs). India is active in bilateral agreements which can be critical for establishing global supply chains. Ongoing negotiations with trading partners such as US and EU should be conducted with electronics manufacturing in mind so as to enable exports from India.

India's techade – the way forward

Electronics hardware manufacturing has come to be one of the chief pillars for the government of India, especially in its initiatives such as Digital India and Make in India. As an outcome of these measures, India aims to become a global hub for design and manufacturing while reducing its dependence on imports.

Drawing on the experiences of South Korea and Taiwan – two of the most significant illustrations of 'catch-up industrialisation' – that crafted industrial policies in the period between 1960 and 1990 focused on setting up global value chains, it would be prudent for India also to continue supporting its domestic industries to ensure high growth.

While India is adopting astute policies and topping the same with a supportive budgetary envelope, there is still scope for a lot more that can be done for the electronics sector to reach its high target of becoming a USD 300 billion market by 2025-26.

The next step for the Government would be to continue creating an amicable environment, supplement the existing schemes with further schemes focussed on incentivizing value addition, and R&D to send the right signals to foreign investors who have started placing their bets on India as a preferred destination. The policy moves by the government should be announced with the vision of strengthening the country's domestic manufacturing capabilities in the electronics sector as well as sharply increasing exports to other markets. This will usher India to a new dawn of being self-reliant and find its rightful place in the global supply chains looking at diversification.

Author

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ELECTRONICS MANTRA:

FIRST GLOBALISE, THEN SEQUENTIALLY LOCALISE

- Dr. Neha Gupta

With the domestic market of mobile phones now being catered to by local production, the Government of India's outlook changed from import substitution to export orientation to capture the global markets with the introduction of the PLI.

Production Linked Incentive (PLI) scheme is now professed as the new industrial policy of India. The electronics sector became the first recipient of PLI, which started in April 2020 with a focus on mobile phones and specified electronic components. Fortunately, India has emerged as the second largest manufacturer of mobile phones, whose production increased from USD 3.1 billion in 2014-15 to USD 38 billion in 2021-22. During the same period, smartphones' exports have risen sharply from just USD 0.23 billion to USD 5.8 billion.

The revival of the electronics sector in 2017-18 was initiated by the Phased Manufacturing Programme (PMP) which was introduced as an import substitution strategy and became one of the biggest contributors to the growth of the sector.

With the domestic market of mobile phones now being catered to by local production, the Government of India's outlook changed from import substitution to export orientation to capture the global markets with the introduction of the PLI.

The government in fact has been adopting a number of trade and industrial policy initiatives starting from the National Policy on Electronics (NPE) of 2012 (revised in 2019) and the Vision Document prepared by the Ministry of Electronics and IT (MeitY) and India Cellular & Electronics Association (ICEA) released in 2022. Their core motivation has been to enhance India's economic development, create more output and jobs, and increase competitiveness. Accordingly, the focus has been on achieving maximum success in the case of the ultimate indicator, i.e., the domestic value addition (DVA). This indicator

is estimated as the sum total of the value of all domestic inputs (labour, capital, management, etc.) used in the production process.

Although, increasing DVA is a common practice, Indian policymakers have gone further to simultaneously influence the two components that make up the DVA, namely the quantum or scale of exports (SCALE) and the domestic contents per unit of production (DVAratio: equivalent to value addition in aggregate). That is, the government has been encouraging policies like PMP to substitute the use of imported inputs with domestic production.

While not a requirement, the PLI scheme for the sector is expected to increase DVAratio, say for mobile phones from 15-20% to 35-40%. Concurrently, along with the target of having more local content and domestic electronics production of USD 300 billion by 2025-26, the Indian government also aims to achieve exports of USD 120 billion to transform India into an electronics hub.

In a nutshell, the government hopes that both objectives can be simultaneously pursued, such that the rise in DVAratio should not adversely affect the goal of achieving exports SCALE and vice-versa. Does this assumption hold true for successful exporting nations and for India? As policy measures swing heavily between raising DVA content and exports, policymakers in India face a situation similar to which came first, or rather should, the hen or the egg. Our recent report 'Globalise to Localise' , prepared by Indian Council for Research on International Economic Relations (ICRIER) in collaboration with ICEA, provides a more plausible explanation for the same using the case of the Indian electronics sector.

Although India's DVAratio economy-wise, for all the sectors, is 80% , which is near to 87% of China, its local content ratio is lower for its electronics sector at just 18%, i.e., only 18% of the value added in the electronics sector was generated within India as compared to 38% in the case of China and 24% in the

[23] Launched in August 2022, Authored by Deepak Mishra, Neha Gupta, Sanya Dua and Sanjna Agarwal

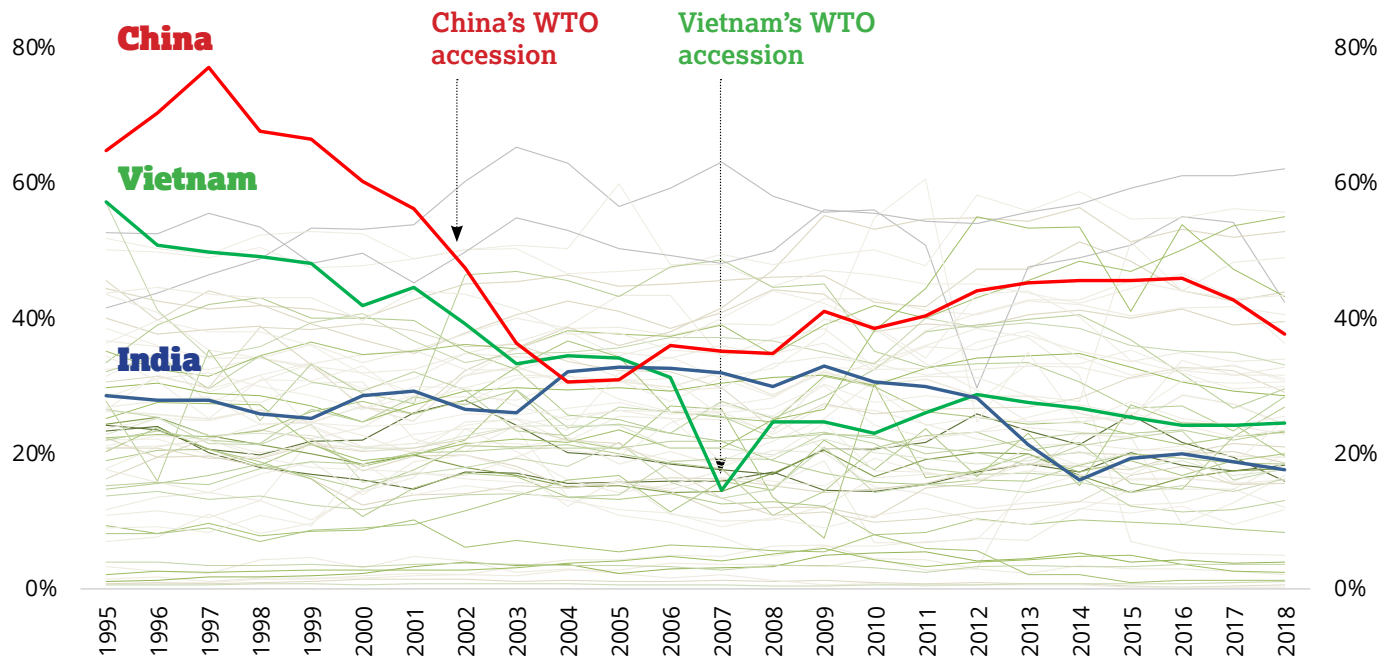
[24] Using the latest available data of 2018 obtained from the recent 2021 version of the OCED-WTO Trade in Value Added (TiVA) database, as calculated for the above-stated ICRIER-ICEA report

case of Vietnam (Figure 1). This, however, also supports the nature of the electronics trade, which is more global value chains (GVCs)-dominated. Greater participation in GVCs means smaller DVAratio and higher scale and vice-versa. Experiences of Japan, South Korea, Taiwan, etc. have clearly shown that trade policies should not focus on exporting products with more value addition .

The impressive results of policy measures are more visible in the case of India's electronics exports, which have almost tripled between 2015 and 2022 from USD 5.8 billion to USD 16 billion. But, as India plans to achieve the size and pace of exports attained by successful exporting nations such as China and Vietnam, who respectively exported USD 902 billion and USD 131 billion worth of electronic products in 2021, there is an ongoing urge among Indian policymakers to substantially increase exports and capture global markets.

Policymakers are not only concerned about India's lower exports languishing in the range of USD 10-16 billion annually but also about its continuously lower DVAratio, i.e., 18%. This placates India's back-to-back policy initiatives to simultaneously boost both to manifest desired realities on both fronts.

Figure 1: India's DVAratio for the electronics sector has been relatively low and stagnant as compared to China and Vietnam



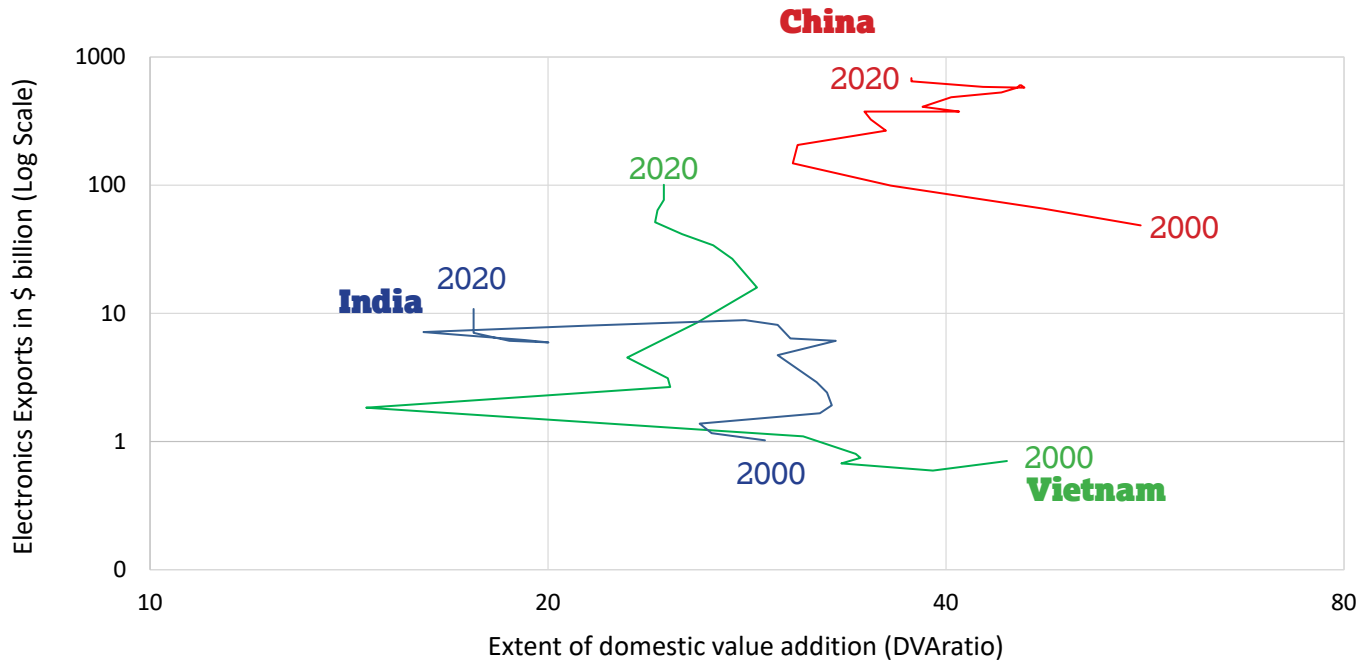
Source: CEIC Database, OECD-WTO Trade in Value Added Database (2021 Version)

[25] Dollar, D., Khan, B., and Pei, J. (2019). "Should high domestic value added in exports be an objective of policy?". World Trade Organization.

That said, the ICRIER-ICEA report particularly conducted a cross-country regression analysis to examine the empirical relationship between exports and the share of domestic value addition in successful exporting nations. The results show a strong perverse correlation between SCALE (exporting to the global market at scale) and DVAratio, even after accounting for open trade policies and domestic reforms. The two variables are found to be negatively correlated in the short term (Appendix 1), while they reveal a positive correlation in the medium term (Figure 2). The reason being, it is not a laid-back task to increase DVA.

Notably, India and China are operating at a contrary spectrum when it comes to electronics trade and GVCs, as the latter corresponds to high SCALE and high DVAratio, while India still exhibits a less dynamic relationship between these two variables.

Figure 2: China, India and Vietnam have pursued different approaches for local content and exports of electronic products, 2000-20



Source: CEIC Database, OECD-WTO Trade in Value Added (TiVA) Database

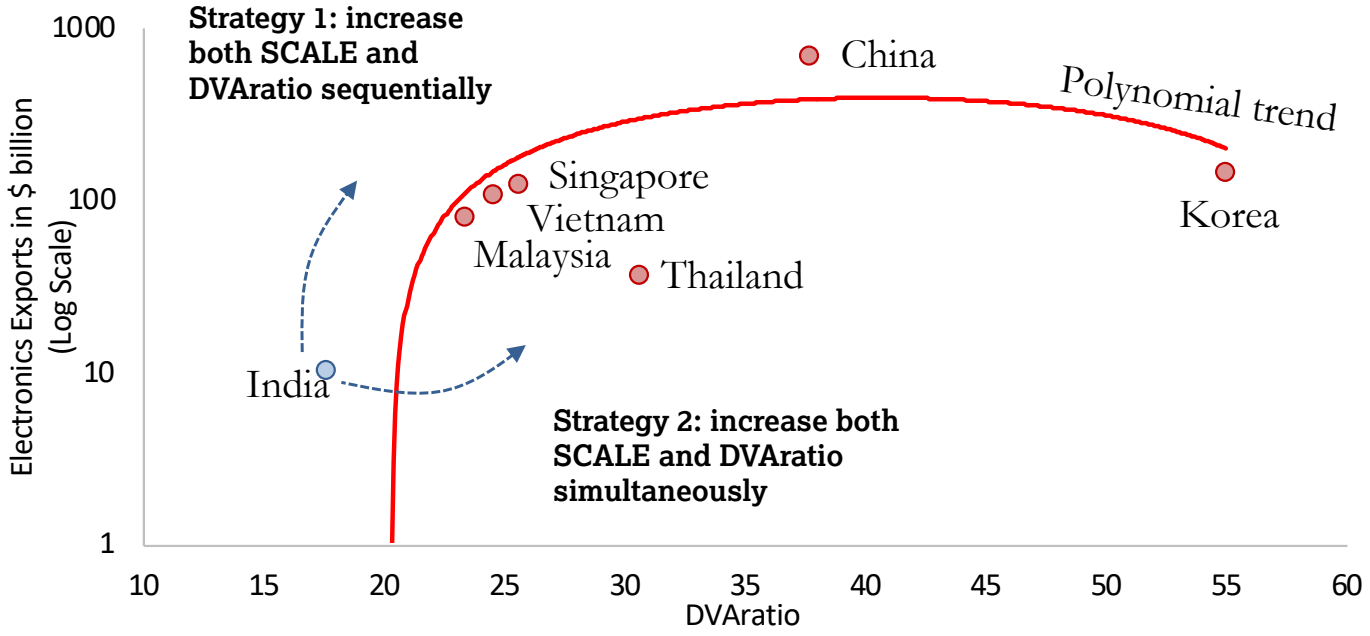
Note: DVA shares for 2019 & 2020 are assumed to be same as that of 2018

The knowledge that we pushed forward is that the current path involving a simultaneous increase in exports and greater use of domestic content is unlikely to put India on the same trajectory as China and Vietnam, especially in the absence of a competitive domestic ecosystem of ancillary suppliers. This is because the trajectory followed by East Asian nations has been totally opposite. To explain, there have been efforts to lower local content requirements (LCRs) or DVAratio by China and Vietnam to attract investments, gain entry into WTO and be better linked into the global supply chains (see Figures 1 and 2).

Successful electronic exporters in East Asia, including these two, have followed a different rule than India (as indicated clearly in Figure 3) of first trying to achieve global scale in exports in the initial years of development (short-run), even if it means having lower local content. And, gradually once SCALE is achieved, then their emphasis shifted to increasing DVA to the higher levels (medium- to long-run).

Parallel consistent efforts have also been intensely incorporated by them to do root-level healing for robust domestic competitiveness while remaining focused on SCALE. This is because they realised the fact that DVA rise takes time, for which the country gradually needs to build a competitive ecosystem of suppliers and investors. The regression analysis also shows that it is not easy to change DVA just by policies. This realisation is inevitable for the Indian government, policymakers and industry bodies engaged in the electronics sector.

Figure 3: Successful countries have first achieved SCALE before increasing DVAratio



Source: World Bank, OECD-WTO Trade in Value Added Database
Note: DVA for 2019 & 2020 same as 2018; Trendline is from 2010 to 2020

An alternative approach of "first globalise, then localise" in the case of the Indian electronics sector is thus suggested in the Report. This approach has strong empirical validity and will involve following the two sequential phases, i.e., the immediate goal should be to export at scale to the global market (globalise) and the subsequent objective could be to increase the share of local content (localise).

To explain, in the short-term, in phase one, India must focus to achieve SCALE with the export target of at least USD 30 billion (found on the basis of lessons from successful East Asian countries, see Figure 3). This would mean temporarily suspending localisation requirements, removing duties on intermediate items, and accelerating integration through bilateral and regional FTAs. The idea is that the sector should be able to source inputs from the lowest-cost suppliers anywhere in the world until it achieves a global scale.

Once global SCALE has been achieved, the policy emphasis in the second phase could be to encourage greater use of local content or increase Domestic Value Addition (DVAratio). But this will have a longer gestation period. So, along with the priority of exports expansion, the government should create a competitive domestic ecosystem of ancillary suppliers by using clear-cut strategies (Box 1). This must involve a technology upgradation programme, sourcing fairs, supporting industry development programmes, and workers training at scale. Just hiking customs duties will only feed protectionism and not sustained growth.

Conspicuously, the Indian electronics sector is now also exhibiting the deep urge in India to gain maximum benefits from globalising trends and ride the manufacturing bus that it had failed to catch in the past 30 years.

'Strategize each Policy footstep' should be the mantra of the Government of India. Cooperative collaboration by the state governments and the private sector is the right intention seed to grow the domestic ecosystem and push exports aggressively and then gradually march towards the ultimate need of increasing local content. The success of Indian electronics could then work as a rule book for many other developing countries that struggle to have competitiveness at home and at abroad.

I. Policies to achieve global scale

- Promote bilateral and regional FTAs
- Reduce or rollback custom duties on intermediate inputs
- Temporarily suspend policies that insist on local content
- Temporarily remove place-based restrictions on intermediate inputs
- Targeted and temporary fiscal incentives like the PLI programme

II. Policies to increase local content

- Announce a strategy to develop the domestic ecosystem that involves a technology upgradation assistance programme, sourcing fairs, supporting industry development programme and workers training at scale
- Set clear targets and timeline for upgrading domestic suppliers to tier I and II suppliers

III. Policies that are important for both scale and local contents

- Macro-fiscal stability
- Competitive exchange rate
- Ease of doing business
- Lowering/reducing regulatory burden and reducing cost of transport and logistics

Author

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India's Opportunity to be a Global Leader in the **Hearable and Wearable** Sector

By: Surbhi Jain & Rishabh Ahuja

Hearables and wearables could be a key contributor to the government's goal of achieving USD 300 billion in domestic electronics production by 2025-26. Indian firms, supported by Production Linked Incentives (PLI) and economies of scale, will be propelled to take off as global leaders in this sector.

India's electronics manufacturing moment is here. The country has become the second-largest mobile manufacturer in the world and in 2022-23, India exported more than INR 90,000 crore worth of mobile phones. The government's Phased Manufacturing Programme (PMP) and the PLI Scheme for Mobile Phones have been key to this success. Under the Government of India's vision, India plans to achieve USD 300 billion in domestic electronics production by 2025-26. The country's burgeoning hearables and wearables industry could contribute significantly to that target. To that end, PLI schemes are the need of the hour.

Market Dynamics of the Hearable and Wearable Sector

In 2022, the hearables and wearables global market was around USD 70.4 billion (comprising more than 500 million units) and is expected to reach USD 84.6 billion by 2026. The Indian market exited 2022 with a strong 46.9% YoY (year-over-year) growth. The volume increased to more than 100 million units worth USD 2.8 billion in 2022 and is expected to grow to 133.5 million units, worth USD 3.2 billion by 2025-26.

Some market factors driving growth in this product segment include changing lifestyles, rising incomes, and improved living standards, which are moving consumers to spend more. Furthermore, the market has

chances for growth due to technical developments, and increased availability of low-cost, high-quality products.

India is a large-volume and low-value market in nature. In comparison to the Rest of the World's average selling price (ASP), the Indian market ASP is nearly 1/4th the global market ASP.

At the same time, it is estimated that in 2022, India's domestic demand was more than 19% of the global demand in terms of volume[1]. In fact, India is one of the fastest-growing Earphones markets in the world accounting for a 21% share in Global Volumes and only a 5% share in Global Value.[2]

In the 2025-26 vision, hearables and wearables production is estimated at USD 8 billion with massive export potential.

India's Progress in Manufacturing Hearables and Wearables

As with other electronics, the government introduced the Phased Manufacturing Program for the hearable-wearable industry in Feb 2022. While the PMP's results are gradual, India is building capacity to satisfy the domestic demand and capitalise on export potential.

About 70-80% of the demand for wearables such as smartwatches and hearables like wireless earphones in India is now being met through local manufacturing[3] after the government launched the PMP for the sector and slashed duties on most of the components required to make the products.

With no production in FY 2020-21, the production of wearables and hearables in India has increased from USD 250 million in 2021-22 to USD 1 billion in 2022-23.

Several Indian brands have also risen to dominate the domestic market. Among the top five wearable brands in India, the top three are Indian brands - Imagine Marketing (BoAt), Nexxbase (Noise), and Fire-Boltt.

Why PLI is the need of the hour?

While the duty differential on importing finished products will spur local production going ahead, several issues remain that hamper a potentially meteoric rise in manufacturing wearable and hearable products locally.

A complimentary (PLI) scheme could help to tackle many of these.

Reasons for PLI H&W

1. Address the cost disabilities in India
2. Create economies of scale and global champions
3. Increase DVA
4. Generate Employment

[1] ICEA and Feedback Advisory Analysis

[2] ICEA and Feedback Advisory Analysis

[3] Inputs from various Wearables & Hearables suppliers

Address the cost disabilities in comparison to Vietnam and China

As per industry estimates, manufacturing in India still faces a cost disability of 8-10% for hearables/ wearables as compared to China and Vietnam, requiring a focused intervention.

Create Economies of Scale

The PLI scheme, with emphasis on exports and capturing the global market, can create economies of scale in India for hearables and wearables, enabling the creation of global champions and following the clarion call of the Hon'ble Prime Minister of 'Make in India for the World'.

Increase Domestic Value Addition

This Production-Linked Incentive (PLI) Scheme can propel the deepening of the local manufacturing ecosystem by playing a complementary role to the other PLI schemes in Components, Mobiles, as well as IT Hardware, incentivising manufacturers to localise the components, starting with PCB assembly and then moving towards the localisation of batteries and displays as well. This can lead to a huge increase in domestic value addition and transform India's manufacturing sector.

Employment Generation and Economic Multiplier

Hearables and wearables assembly have a higher workforce-to-turnover ratio of 4:1. This means more people can be employed in this sector compared to mobile or IT hardware in terms of the ratio of volume vs. employment. This makes the segment an attractive choice for job creation. Furthermore, the omnipresence of Indian brands in the sector creates

a lever for domestic local product design and testing infrastructure. Thereby also addressing some of India's global market challenges, such as research and development, technology transfer, creating a deep electronics manufacturing ecosystem, and the benefits of resilient value chains in the electronics ecosystem.

In summary, the Production-Linked Incentive (PLI) Scheme focused on hearables and wearables in India can unlock the sector's immense potential. By creating an economy of scale, incentivising the localisation of components, and focusing on job creation, the scheme can transform India's manufacturing sector and make it a formidable force in the global market.

Authors

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The author, Surbhi, brings a wealth of experience in Corporate Communication, and Public Policy in South and South East Asia, specifically in the telecoms sector, manufacturing, and international trade. Her expertise in global value chains has been instrumental in leading the diversification of electronics manufacturing from China to South Asia.

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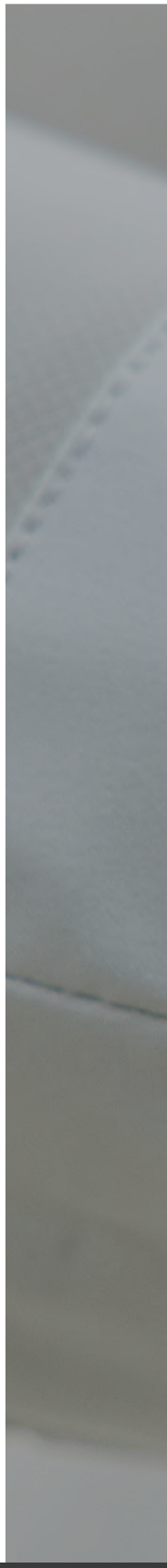
Rishabh works with the India Cellular & Electronics Association (ICEA), to bridge the gap between the private sector and the government to establish India as a global electronics manufacturing hub. He is an alumnus of the Indian School of Public Policy (ISPP).



Driving Domestic Innovation and Self-Reliance in Electronics Industry in India

CENTRE OF EXCELLENCE, NOIDA

A joint initiative by the Ministry of Electronics and Information Technology (MeitY), Government of India, in partnership with the Government of Uttar Pradesh, and Industry.

- Ramashish Ray

To address this extremely precarious dependency on imports, India needs to upgrade its design, and R&D capabilities to be able to enhance its share in the value chain.

India has made significant strides in boosting local manufacturing and nurturing its exports in the electronics and mobile industry through initiatives like the Phased Manufacturing Programme (PMP) and the Production Linked Incentives (PLI). The implementation of these schemes has generated substantial benefits for the industry and the nation alike. In 2021-22, India produced over INR 2,75,000 Cr of mobile phones and in FY 2022-23, India exceeded its targets and exported USD 11.1 billion of mobile phones.

India has now become the second-largest mobile manufacturing nation in the world. However, there is still a long way to go to enhance India's domestic value addition to the value chain of products like mobile phones and its accessories. Currently, India only contributes a small percentage of the total value chain, with over 75% of mobile and electronics components being imported from a single country.

To address this extremely precarious dependency on imports, India needs to upgrade its design, and R&D capabilities to be able to enhance its share in the value chain.

Therefore, India Cellular & Electronics Association (ICEA) formulated a strategy in 2020 for the establishment of a Centre of Excellence (CoE) for designing mobile handset accessories and other electronic products based on Li-ion cells.

Understanding the pertinence of this strategy, the Centre of Excellence was established as a joint initiative

by the Ministry of Electronics and Information Technology (MeitY), Government of India, in partnership with the Government of Uttar Pradesh, and ICEA. The project is executed by the Centre for Development of Advanced Computing (CDAC) in Noida and is housed in a 4000 sq. ft. facility.

The CoE has been fully operational since the start of 2023.

The goals of the strategy formulated are first, to support the growth of India's nascent Lithium Ion Cell-based devices by generating demand for these products. Secondly, begin the process of indigenisation by designing and developing a set of locally manufactured products that are less complex but have mass usage. Thirdly, to experiment with a CoE model that involves stakeholders from the Union Government (MeitY), State Government (UP), and the industry (represented by ICEA) to ensure a focused effort on product creation that leads to immediate import substitution. And, lastly, to establish clearer norms for products in this category that promote standardisation and quality control.

The key products that are being developed through this initiative include Charging Systems, Wireless Power Products, Hearables, Speakers, LED Drivers, Battery Management Systems, and Power and BT/Wifi Modules besides their embedded software. These products come under the category of "Mobile Enhancements".

The Mobile enhancements market though less complex electronically still imports 80% of its needs. And, on a conservative estimate, this category is suffering from poor import control and regulation. For example, more than 10 million chargers are sold a month but many samples are found lacking in terms of efficiency, and safety thereby leading to higher energy consumption per user and higher E-waste due to frequent breakages and changes.

Therefore, considering the market and trade conditions, the objectives of the CoE are

01

To provide requisite R&D, Design and Testing infrastructure to local industries to make India self-reliant in mobile manufacturing.•

02

To seed a design hub for Small and Medium Enterprises (SMEs) in the mobile handset and accessories ecosystem products based on Li-ion cells (post-cell).

03

To provide a complete cycle of design, development and commercialization of the products.

The Noida facility of the CoE provides state-of-the-art R&D equipment and a dedicated team of engineers to help manufacturers and brands design and test their products. It also has hot desks for use by MSMEs, facilities for equipment usage with safeguards, and space for brainstorming.

The in-house capabilities of the CoE include

- ECAD & MCAD designing facility 3D printer with poly jet technologies
- Analog & Digital, RF smart LAB
- EMI & EMC, ESD safety LAB
- PCB Mate with rapid prototyping
- Complete facility for PCB assembly and development
- Reliability chamber facility for environmental stress testing

Industry leaders such as boAt, Titan, and Flex are partnering with the CoE to accelerate their R&D processes and improve the quality of their products.

The CoE aims to establish a fully functional testing lab empanelled by BIS, develop 25 SMEs/entrepreneurs, build the capacity of 500 candidates, provide consultancy services for 50 SMEs, offer standardization and testing support for global needs, and launch a grand challenge for 14 envisaged products.

By providing training, support, and resources, the CoE is designed to help manufacturers and brands have a smoother transition to Design in India following Make in India – reducing reliance on country-specific imports. The Centre of Excellence is thus contributing significantly to improving the overall quality of mobile accessories based on lithium-ion cells in India.

The establishment of the CoE for mobile enhancements is a significant step towards enhancing India's contribution to the value chain of products like mobile phones. With a focus on boosting local manufacturing and nurturing exports, initiatives like these have the potential to transform India into a design and innovation hub for electronics and mobile devices.

Author

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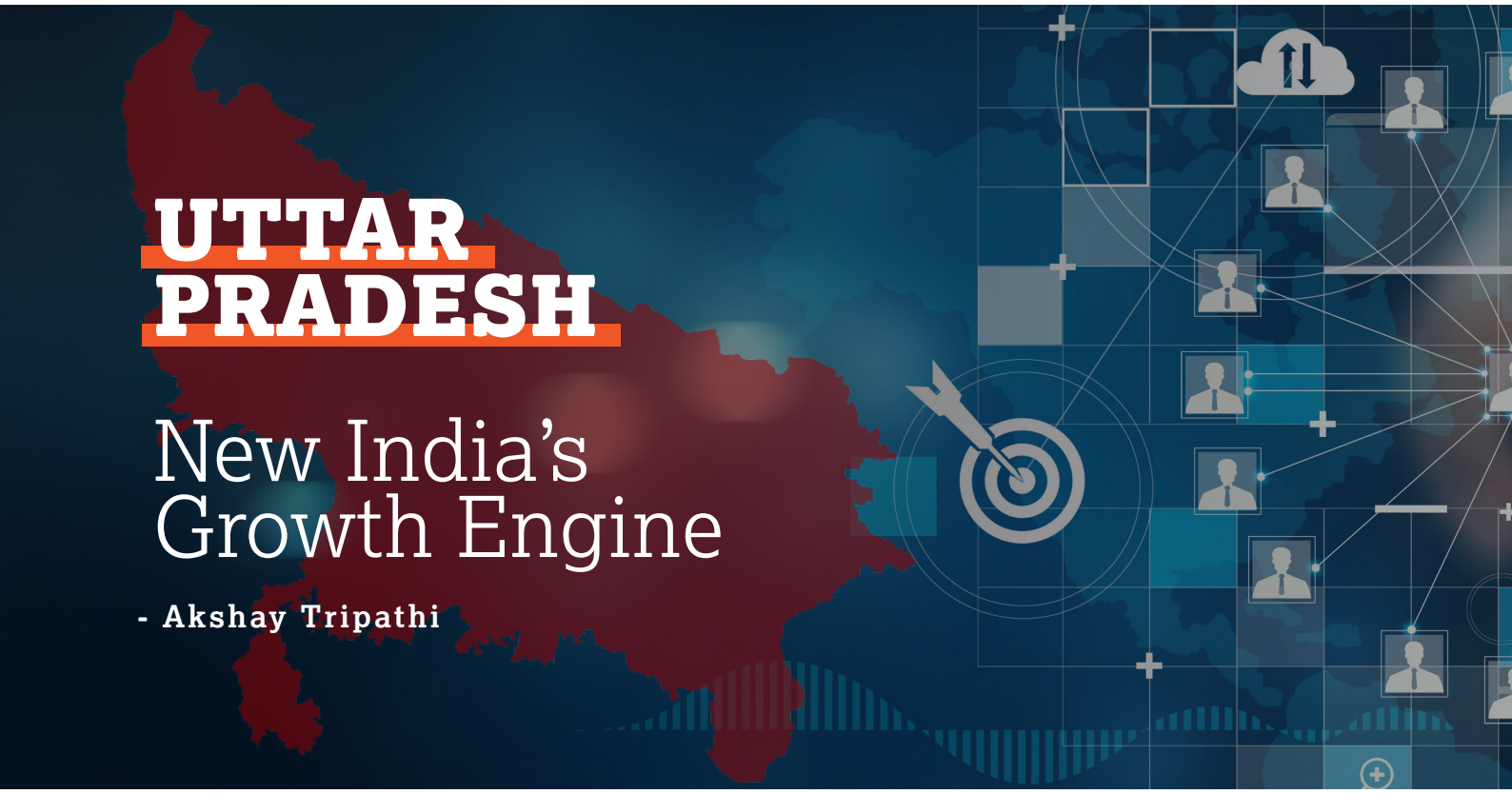


UTTAR PRADESH

New India's Growth Engine

- Akshay Tripathi

Uttar Pradesh aspires to become a One Trillion-dollar (USD) Economy and be a major contributor to the Hon'ble Prime Minister's vision of making India a 5 - trillion-dollar (USD) economy.

Uttar Pradesh is one of the fast-growing economies of India and contributes nearly 8% to National GDP. Being home to 240 million people, it has India's largest population size, and hence, India's largest consumer and labour market. Uttar Pradesh aspires to become a One Trillion-dollar (USD) Economy and be a major contributor to the Hon'ble Prime Minister's vision of making India a 5 - trillion-dollar (USD) economy.

Under the effective and successful guidance of the Hon'ble Prime Minister and leadership of the Hon'ble Chief Minister, the State has witnessed a remarkable improvement in infrastructure and business environment and has undergone significant transformation over the past few years. The state has become a preferred investment destination for industries worldwide and has made significant strides in social and economic development.

The government has taken proactive initiatives to facilitate investments such as creating transparent single window systems Nivesh Sarathi, Nivesh Mitra, Mukhyamantri Udyami Mitra, and Incentive Monitoring System to assist the entrepreneurs from signing the MoUs to getting the investment on the ground.

The state organized a three-day Uttar Pradesh Global Investors Summit in Lucknow from the 10th to the 12th of February 2023, which attracted more than 10,000 delegates. The State Government of UP partnered with countries such as the Netherlands, Denmark, Singapore, Japan, South Korea, Australia, Italy, UAE, United Kingdom, and Mauritius for the Global Investors Summit. The Government of Uttar Pradesh

has received investment proposals worth INR 33.50 lakh crore with potential employment of 93 lakhs in a successfully concluded global investment summit. Out of which investment proposals worth INR 3.79 lakh crore with potential employment of 2.4 lakhs have been received in the IT and Electronics sector.

UP is a fast-emerging hub for Electronics System Design and Manufacturing. Uttar Pradesh holds the unique distinction of contributing nearly 65% of India's total mobile manufacturing. It is home to nearly 55% of India's mobile component manufacturers. Nearly 40% of India's mobile manufacturers operate in UP and over 200+ ESDM companies are based in UP. Further, the State Govt is endeavouring to develop clusters for Semiconductor manufacturing and Fab units.

The State Government is committed to offering competitive infrastructure and a favourable policy environment to potential investors. In line with this, a dedicated Electronics manufacturing policy was launched in 2020 to make Uttar Pradesh the most preferred investment destination for the ESDM and Semiconductor sector. The policy is more comprehensive and more investor friendly. Financial incentives offered under this policy are over and above that offered by the Government of India. Some major incentives that are covered under this policy are:

01	Capital Subsidy at the rate of 15% of Fixed Capital Investment (FCI) for investments less than INR 1000 crores and for investments more than or equal to INR 1000 crores additional capital subsidy of 10% shall be given on investments exceeding INR 1000 crores.
02	5% additional capital subsidy to investor acting as an Anchor unit and guaranteeing to get ancillary units along.
03	5% additional capital subsidy for investors engaged in focus areas like Defence Electronics, Strategic Electronics, Robotics, etc.

04	Interest Subsidy at the rate of 5% up to a maximum of INR 1 crore per annum per unit for 7 years.
05	100% Stamp Duty exemption
06	Patent Cost Reimbursement of up to INR 5 lakhs for domestic and INR 10 lakhs for international patent filing
07	Land Subsidy at the rate of 25% in Madhyanchal and Paschimanchal regions and at the rate of 50% in Bundelkhand and Poorvanchal regions
08	Electricity Duty Exemption at the rate of 50% in Paschimanchal, 75% in Madhyanchal, and 100% in Poorvanchal & Bundelkhand regions for the period of 10 years
09	100% EPF Reimbursement for UP domicile professional workers working in the ESDM sector.

The Government of Uttar Pradesh is fully committed to facilitating the investors and entrepreneurs for establishing and smoothly carrying out their business operations in the State. Nivesh Mitra, the single window portal, is one of the steps in this direction. Nivesh Mitra is an end-to-end online platform (from online application/documents submission, online fee payment, and online status tracking to digitally signed NOC) to provide NOCs/Clearances/Licenses related to Pre-Establishment and Pre-Operation including Renewals and Additional Certificates required for setting up and running a business in Uttar Pradesh.

Nivesh Mitra offers 406 online services from 33 departments such as Labour / PCB / UPPCL / Revenue / Stamp & Registration / Legal Metrology / Fire services / Urban/Housing / IDAs and many others. With over 97% of license applications disposal rate, Nivesh Mitra has become one of the most efficient single window portals.

Nivesh Mitra has also integrated with the National Single Window System (NSWS), which is envisaged to provide clearances from all central ministries and states for starting a business in India. Furthermore, Nivesh Mitra also bagged the 'Award of excellence' in February 2021 from the Computer Society of India and the 'Gold Category' award in the prestigious 'SKOCH Award 2019'.

Through these initiatives, and many more, the state of Uttar Pradesh is facilitating investors and entrepreneurs to make it a promising destination for business opportunities in India.

Author

Akshay Tripathi

IAS, Special Secretary, IT and Electronics, and Managing Director, Uttar Pradesh Electronics Corporation Limited, Government of Uttar Pradesh.

Assessing the Economic Impact of India's UPI

- Piyush Gupta & Chirag Chopra

India's robust digital public infrastructure has played a pivotal role in enabling the country's digital transformation, providing citizen-centric and transparent governance services, and facilitating breakthroughs in various fields, such as the DigiLocker, an online repository of citizens' documents.

India has made significant progress in developing its digital public infrastructure (DPI). DPI refers to the digital systems and services that are available to the public, provided by government or public entities, and operated under a set of enabling rules, to enable the delivery of public services and facilitate economic activity. Some of the notable achievements of India's DPI include the creation of Aadhaar, a unique biometric-based identification system, and the launch of the Unified Payment Interface (UPI), a real-time digital payment system that has revolutionised digital payments in India.

India's robust digital public infrastructure has played a pivotal role in enabling the country's digital transformation, providing citizen-centric and transparent governance services, and facilitating breakthroughs in various fields, such as the DigiLocker, an online repository of citizens' documents. Furthermore, the digital infrastructure played a significant role in enabling the country's response to the COVID-19 pandemic, with the Aarogya Setu and CoWin apps helping to track and contain the spread of the virus and facilitate the vaccination of a large number of people in a short period.

When we talk about digital public infrastructure, UPI is something which needs to be specially mentioned

for the impact it has generated. The Unified Payment Interface (UPI), launched by the National Payments Corporation of India (NPCI) in 2016, enables citizens to transfer money from one bank account to another instantly. UPI has revolutionised digital payments in India, enabling individuals and businesses to make transactions seamlessly and securely.

Over the years, payment methods have evolved significantly as technology has advanced and societal preferences have changed. From bartering and using precious metals as currency to the introduction of digital payments, the way we pay for goods and services has undergone massive transformations.

The UPI is a prime example of this as it has seen tremendous growth over the years, with over 8 billion transactions, worth INR 12.98 lakh crore, processed in January 2023 alone (approx. 3,100 transactions per second), this is a 75% Y-O-Y increase in terms of the number of transactions. In fact, as per the report published by ACI Worldwide in 2022, India leads globally in terms of real–time payment transactions with 48.6 billion transactions processed in 2021. It is interesting to note that China is in second position with only 38% of the real-time payment transactions processed in India in the same year. [26]

UPI has initiated a significant behavioural change in the Indian populace as small and micro transactions, such as purchasing a cup of chai for INR 10 or buying a bag of fresh vegetables for INR 150, are increasingly being conducted through digital payments.

[26] Yuen, M. (2023, February 17). Real-time payment transactions by country. Insider Intelligence. https://www.insiderintelligence.com/charts/real-time-payment-transactions-by-country/

Figure 1: Number of UPI transactions over the years

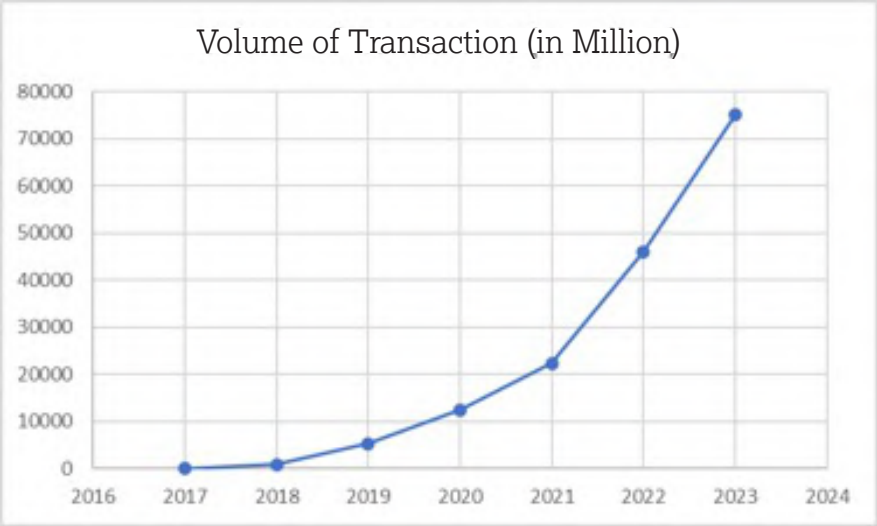
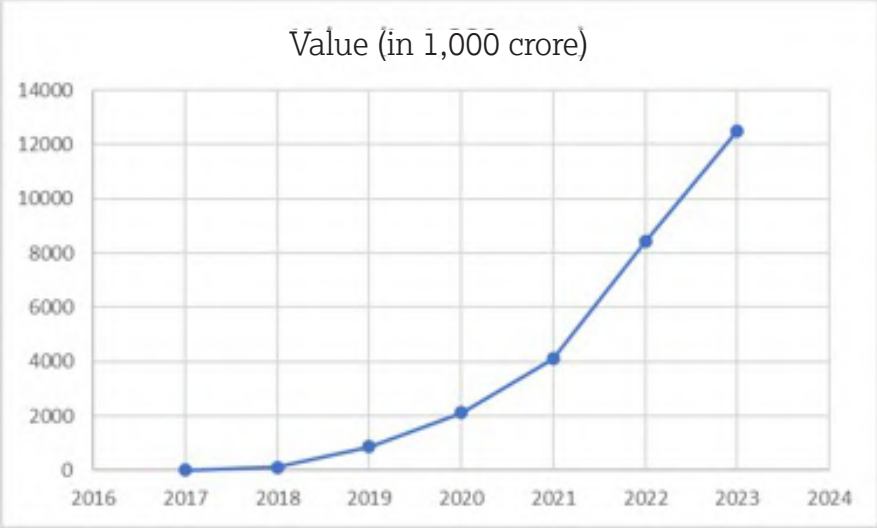


Figure 2: Value of UPI transactions over the years (in INR 1,000 crore)



Source: NPCI

However, despite the significant investments made in the development of digital public infrastructure in India, there is limited research on the impact of these initiatives.

Therefore, to understand the impact of UPI in India, we undertook primary research using surveys of UPI users from all age groups across the country including Tier-1 and Tier-2 cities.

The study aimed to estimate the monetary savings by using UPI over other prominent methods and assumes that the money transacted through UPI would have been still transacted but by another method with a different cost to the economy. This economic cost is being measured in the study by taking into account the costs of transactions such as the Merchant Discount Rate (MDR) fees of credit and debit cards, costs of UPI transactions, and the cost of printing currency notes.

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1,480 people responded to the survey from all age groups across the country. The survey assessed the preference of transaction medium of the people amongst cash, credit, and debit cards and we considered a range of first and third preferences for calculating a spread based on the total amount transacted through UPI till February 2023.

Till February 2023, approximately INR 300 lakh crore has been transacted through UPI methods. Based on our research and analysis, we estimate that this amount, if not transacted through UPI and transacted through cash, credit/debit cards, or other modes of payment, would have cost the economy approximately INR 5.5 lakh crore which can go to the extent of INR 7.2 lakh crore depending on the alternatives people have opted in the absence of UPI.

The cost of UPI transactions is taken into consideration and has been deducted to arrive at these savings. This implies that UPI has saved the economy approximately INR 5.5 lakh crore since its inception. This is a significant amount and highlights the impact of UPI on the Indian economy.

Moreover, the study also revealed that UPI has become the most preferred mode of payment in India, with over 43% of respondents stating that they prefer UPI over other modes of payment. The ease of use, speed, and security of UPI were cited as the primary reasons for its popularity.

In addition, it can be easily said that UPI has not only made digital payments accessible to all but has also enabled small and medium-sized enterprises (SMEs) to participate in the digital economy. By reducing the reliance on cash transactions, SMEs can now access formal credit and other financial services, thereby improving their competitiveness.

The effectiveness and large-scale impact of UPI can also be judged by the fact that it has become the most common medium of transactions in India as close to 300 million individuals and 50 million merchants are now using it and the system is also expanding its presence globally, with Singapore and the UAE being its latest adopters.[27]

Authors

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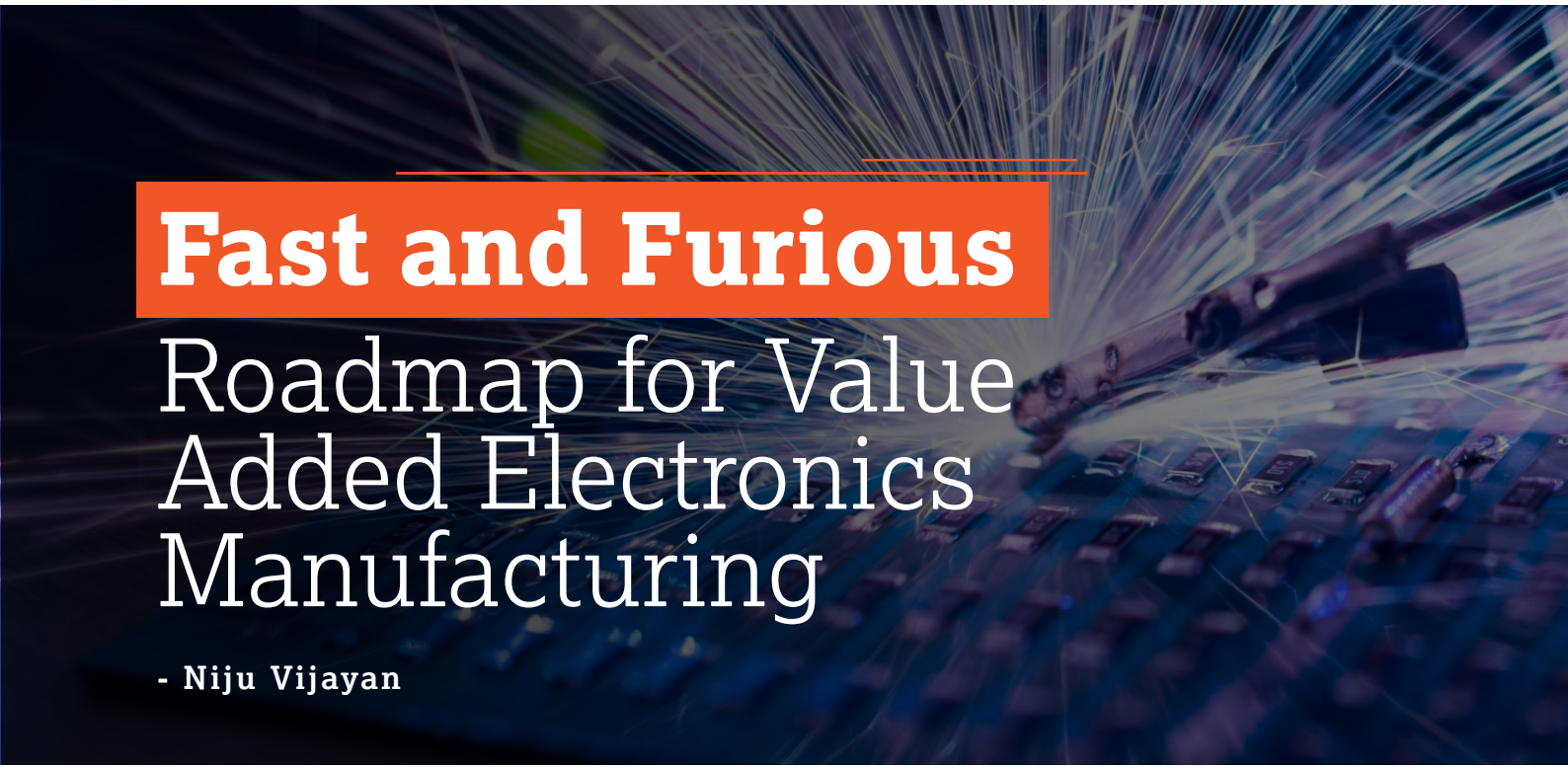
Chirag Chopra is an electronics and communication graduate from NSIT, Delhi and Delhi School of Economics (DSE) and has worked in multiple Big4 firms in risk advisory, government advisory and management consulting roles. He has also worked in a leading political consultancy firm.

[27] Where Digital Payments, Even for a 10-Cent Chai, Are Colossal in Scale. (2023). The New York Times. https://www.nytimes.com/2023/03/01/business/india-digital-payments-upi.html



Fast and Furious

Roadmap for Value Added Electronics Manufacturing

- Niju Vijayan

The transformation potential of electronics in India's economic development through consumption, innovation, manufacturing and exports is now widely recognized. Local manufacturing of products and components takes centre stage as the enabling environment evolves to address opportunities. The importance of electronics manufacturing has taken a firm hold on the collective psyche of the stakeholders ranging from industry participants to investors to policymakers and even the aspiring students' community. The goal of USD 300 billion industry size by 2026 is not just exciting but appears achievable too. Mobile handset production trajectory over the last 8 years has instilled belief in other electronic segments to replicate the success and become globally competitive. The size of the opportunity is compelling but India's current level of electronics value addition ranges from 15-25% and places it among the lower rungs of manufacturing countries. The presence of a large number of captive design centres engaged in cutting-edge development is no consolation as they operate as low-cost fuelled satellite centres for the global majors.

The global economic churn which started during the pandemic and continues unabated due to political factors has firmly placed India in an enviable position. The Global Value Chains reconfiguration is far from settled and investors are constantly searching for safer alternatives for manufacturing.

As India actively invites assembly activities to migrate from other locations, it feeds into the cautionary voices of the perils of increasing low-value manufacturing. Apprehensions are also raised on the longevity of the competitive edge enjoyed by India after the incentive policies move into the sunset. In the race to attract investment and build the electronics industry, many countries follow copybook practices and hence this argument is not devoid of merit. At the same time, the position enjoyed by India bestows it with unmatched advantages in the long term.

The domestic consumption driven by the 1.4 billion population is the strongest pillar that acts as a magnet for product manufacturers. India's thrust on digitization through strategic infrastructure development is acting as a force multiplier for greater adoption of products and services. Given the competitive character and need to control logistics costs, manufacturers need geographic proximity. The vast pool of human capital at a highly competitive cost helps brings down the cost of production significantly for global players. Empirical data on the industry is sufficient to prove the success of global players in not just assembly activities but scaling them

to become global supply centres too.

So, how fast and furious should India's roadmap from assembly to component-level manufacturing be, in order to create a durable global manufacturing hub? Well, the answer may not be complicated. The runway to create a globally competitive electronics ecosystem could stretch between 7 to 10 years, considering all elements work in unison. There is a sense of urgency because revolutionary developments are taking place in communications (5G/6G), electric mobility, drones, AR/VR etc, where white space beckons India. Assembly activities undoubtedly will exhibit dependence on imported components but this layer will stimulate localization of components manufacturing and eventually design. If the government and industry work in tandem, the large-scale assembly will bear fruit in 3-5 years while its feeder components manufacturing can become viable in 5-8 years. It needs to be borne in mind that the current push by the government can fructify in a semiconductor fab by 2026.

A few critical elements for a durable and rewarding industry are skills and local design contribution. Skills are a direct factor of industry maturity and it's apparent that skills development has a long way to go in India. The availability of semi-skilled manpower is sufficient to address the manpower-intensive assembly activities, but industry handholding and targeted programs can address mid to high-end skills as the industry elevates itself 5 years from now. The catchment area for high-end design activities also needs to be enlarged for an uninterrupted supply. The risk of flight of manufacturing can be effectively restricted if local design and IP are created across applications. Local IP will not just moor the manufacturing in India but enable the exploration of adjacencies that will have a multiplier effect. The focus on fabless design companies needs to ensure that this segment becomes a force to reckon with over the next 7 years.

Hence there is no ambiguity that the current path adopted by India to intensify assembly activities bodes well for the future. This game plan must undeniably include the plot for transforming the industry into a design-led manufacturing one, at a furious pace. India has chosen to grow its electronics industry into a key contributor to GDP and there can't be complacency. As Ginni Rometty, ex-CEO of IBM once commented: "Growth and comfort do not coexist."

Author

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Recent news on electronics manufacturing

IT Hardware

Govt may revise PLI outlay for IT hardware to 20,000 crore

The Indian government is set to launch an updated version of its production linked incentive (PLI) scheme for IT hardware, with an increased outlay of around Rs 20,000 crore. The scheme aims to attract major electronics manufacturing companies such as Apple and HP, and boost exports in the sector. Key changes in the scheme include an increased overall average incentive rate to more than 5%, increased flexibility for applicants to decide their own start and end dates, and additional incentives for companies that manufacture certain components locally. The previous scheme saw investments of only a little more than Rs 120 crore, far short of the projected investments of Rs 2,500 crore.

More info:
https://indianexpress.com/article/business/economy/govt-may-revise-pli-outlay-for-it-hardware-to-20000-cr-8482841/

Optiemus forays into laptop manufacturing

Optiemus Electronics, a homegrown electronics manufacturing company in India, has announced its entry into the laptop manufacturing market by partnering with startup Primebook to manufacture 100,000 affordable laptops for students by March 2024. Optiemus, currently participating in the government's production-linked incentive scheme for mobile and electronics manufacturing, aims to diversify its expertise in electronics manufacturing. The partnership will help Primebook reduce production costs through indigenous manufacturing and position itself as a purely Indian brand.

More info:
https://www.financialexpress.com/life/technology-optiemus-forays-into-laptop-manufacturing-3016842/

New PLI scheme for IT server, hardware to offer more sops for IP designed in India

The Central government will soon launch an information technology server and IT hardware production linked incentive (PLI) scheme.It will also offer additional incentives for manufacturers that incorporate Indian-designed intellectual property into their products, union Minister of State for Electronics and IT Rajeev Chandrasekhar. Virtually addressing the VLSI Design Conference 2023,

Chandrasekhar said the government has announced the Future Design Programme, which invests $200 million in startups that will design or co-design IP, tools or devices for the next generation of applications in India.

"By 2024, we believe India would have stepped into the semiconductor manufacturing space and catalysed a more domestic design and innovation ecosystem where we are encouraging startups to work with the global majors to develop IP, to develop devices either co-owned or owned for which the government has announced Future Design Programme," he said.

Source: https://telanganatoday.com/centre-to-soon-launch-pli-scheme-for-it-server-hardware-rajeev-chandrasekhar

Bhagwati Products in talks with top IT hardware brands for manufacturing, to invest additional Rs 10 cr

India's leading electronics contract manufacturer Bhagwati Products, which is the first domestic company to benefit from the government's Production-Linked Incentive (PLI) Scheme for IT hardware, is in talks with the top four IT hardware brands in the country.

Under the PLI scheme, Bhagwati is currently manufacturing laptops and tablets for Acer and Realme, along with a few smaller brands. Bhagwati qualified incremental sales thresholds and investment criteria, as per the scheme's requirements and bagged Rs 5.30 crore disbursement by the Ministry of Electronics and Information Technology for 2021-22. The company has been manufacturing IT hardware at its state-of-the-art manufacturing facilities in India - Bhiwadi (Rajasthan) in the North and Hyderabad (Telangana) in the South since 2020. It has a current annual manufacturing capacity of 10 million smartphones and 1.2 million IT products.

Source: https://www.businesstoday.in/industry/it/story/bhagwati-products-in-talks-with-top-it-hardware-brands-for-manufacturing-to-invest-additional-rs-10-cr-359240-2023-01-06

Walmart in talks with Indian manufacturers to source mobile accessories, IT hardware

Walmart is in talks with leading Indian electronics contract manufacturers to procure white label electronic products such as IT hardware, mobile accessories,

wearables and more, to sell them in the US under its sub-brands. Several industry executives familiar with the matter told ET that manufacturers such as Dixon Technologies and Optiemus Electronics are in the fray for orders amidst the US retail major's drive to shift sourcing, especially on the electronics side, to India. "They have been scouting a lot in India to figure out what the capabilities of the manufacturers are," one of the executives, who did not wish to be named, told ET. Walmart, which owns majority stakes in Flipkart and PhonePe, is looking to source a wide range of products such as cables, chargers, screen protectors, home appliances, hearables, wearables, tablets, laptops, and lighting. Employees of Walmart have met multiple contract manufacturers, inquiring about their capacities, processes, and testing methods, the executive said.

Source: https://www.induqin.com/post/walmart-in-talks-with-indian-manufacturers-to-source-mobile-accessories-it-hardware

Samsung may make premium laptops now in India

Samsung Electronics is open to producing its premium laptops locally in India, leveraging the incentive scheme offered by the government if the South Korean firm achieves sufficient volume and scale, said a senior executive. "India market is important for us for several reasons... we do understand that 'made in India' is important in the Indian market. That's why many of our Galaxy products are produced locally," Mincheol Lee, vice president at Samsung Electronics, told media. "Just like we did for other markets, if we can see sufficient volume and scale of this business in the India market, we will definitely consider the possibility of producing laptops locally."Lee said Samsung global will work closely with its Indian operations to increase sales of its laptops and reach the scale to consider local production.

Source: https://content.techgig.com/technology/samsung-may-make-premium-laptops-now-in-india/articleshow/97798772.cms

Mobile Phone Ecosystem

Samsung to continue investment in R&D and manufacturing in India

Samsung is concentrating on India as a centre to produce smartphones for export to other nations and is also collaborating with local partners to remain competitive. The CEO stated that while talking about the problems caused by inflation in India, buyers increasingly look for solid products that they can use over a longer length of time. "We will continue our investment to bring the optimised and or smart factory to the Noida facilities. We will continue to make investments in that area. I believe that our investment in the smart factory will increase production competitiveness "Roh stated. In 1996, the company established a manufacturing and R&D centre in India, where it now employs nearly 70,000 people.

Source: https://economictimes.indiatimes.com

DoT Block Lost or Stolen Mobile Service Now Live for All Users in India

CEIR serves as a central system for all network operators to share blacklisted mobile devices, ensuring that devices blacklisted in one network will not work on another, even if the Subscriber Identity Module (SIM) card in the device is changed. The Department of Telecommunications (DoT) established the Central Equipment Identity Registry (CEIR), which connects to the IMEI databases of all mobile operators in India, with the goal of reducing the counterfeit mobile phone market, discouraging mobile phone theft, protecting consumer interests, and assisting law enforcement authorities in lawful interception. On September 13, 2019, CEIR was launched in Dadra & Nagar Haveli, Goa, and Maharashtra, followed by Delhi on December 30, 2019.

Source: https://telecomtalk.info.com

Foxconn wins AirPod order, plans $200 mn factory in Telangana

Foxconn, a Taiwanese contract manufacturer, has won an order to manufacture Apple Inc's AirPods and plans to build a factory in India to produce the wireless earphones, according to two people with direct knowledge of the matter. Foxconn, the world's largest contract electronics manufacturer and assembler of roughly 70% of all iPhones, will become an AirPod supplier for the first time, highlighting the company's efforts to diversify production away from China. AirPods are currently manufactured by a number of Chinese

companies. According to one source, Foxconn will invest more than $200 million in Telangana's new India AirPod plant. The value of the AirPod order was not immediately clear.

Source: https://www.thehindubusinessline.com/

Phones priced around Rs 15,000 may speed up 5G adoption in India

According to industry executives, the sweet spot for 5G smartphone affordability will be between $10,000 and $15,000 in 2023. They added that telecom companies and handset manufacturers will need to collaborate to lower prices, which will be essential to promoting the adoption of the newest technology. According to Xiaomi India President Muralikrishnan B, "We believe that the price point of 10-15,000 would be the magical sweet spot to significantly stimulate 5G adoption in a substantial manner." He was addressing the ET Telecom 5G audience.

Source: https://economictimes.indiatimes.com/

PLI scheme boost: Apple creates 100,000 new direct jobs in 19 months

Apple has created 100,000 new direct jobs in India's electronics sector, making it the largest creator of blue-collar jobs in the sector. This was achieved through the company's key vendors and ecosystem of component suppliers who manufacture iPhones under the government's smartphone Production Linked Incentive (PLI) scheme. The three vendors who assemble iPhones, Foxconn Hon Hai, Pegatron and Wistron, have generated 60% of the new jobs, while the remaining jobs were created by Apple's ecosystem of suppliers such as Tata Electronics, Salcomp, Avary, Foxlink, Sunwoda, and Jabil. The government estimated that 200,000 direct jobs would be created in five years under the smartphone PLI scheme, and the industry is well on its way to achieving this target. Additionally, Apple became the first company to export over $1 billion worth of iPhones within a month in December 2022, and accounted for around 40% of the total smartphone exports in value from India in the nine-month period of April-December 2022.

Source: https://www.business-standard.com/article/economy-policy/apple-vendors-suppliers-create-100k-jobs-in-19-months-of-pli-scheme-123022701005_1.html

Tata nears iPhone plant takeover Wistron Corp.

The airline-to-software conglomerate has been in talks with the factory's owner, Taiwan's Wistron Corp., for months, and is looking to complete the purchase by the end of March. Apple Inc.'s iPhones are mainly assembled by Taiwanese manufacturing giants like Wistron and Foxconn Technology Group. Tata's deal would advance India's efforts to create local contenders to challenge China's dominance in electronics, which has been jeopardised by political tensions with the US and Covid-related hurdles.

Source: https://economictimes.indiatimes.com/

Salcomp to double workforce in India in 2-3 years

Finnish manufacturer Salcomp plans to increase its Indian workforce from 12,000 to more than 25,000 over the next two to three years. The company, a major supplier of chargers to Apple, acquired Nokia's Sriperumbudur plant in Chennai, which closed in 2014 due to a tax dispute. Salcomp is also building a housing complex for about 15,000 people in the state, according to Managing Director Sasikumar Gendham. He said the global electronics industry is expected to grow at a compound annual growth rate of 5% and that companies are increasingly focused on supply chain diversification away from China.

Source: https://www.thehindubusinessline.com/companies/salcomp-to-double-workforce-in-india-in-2-3-years/article66504776.ece

India: A Bright Spot and a Leader in 5G Rollout

India is emerging as a global leader in the digital infrastructure with the fastest 5G rollout, according to the CEOs of Nokia and Ericsson. They praised India's systematic approach to building a digital ecosystem that can support innovation and growth. In an interview with Moneycontrol, Pekka Lundmark, CEO of Nokia, said that India has a huge potential to leverage 5G for various use cases such as smart cities, agriculture, healthcare and education. He also said that India has a strong talent pool and a vibrant startup scene that can drive digital transformation. Similarly, Börje Ekholm, CEO of

Ericsson, said that India is one of the most exciting markets for 5G and that Ericsson is committed to supporting its customers and partners in India. He also said that India has a clear vision and policy framework for 5G deployment and spectrum allocation.

Source: https://www.moneycontrol.com/news/business/global-ceos-see-india-as-a-bright-spot-leader-in-5g-rollout-10255161.html

As local manufacturing warms up, made in India wearables, hearables set to storm markets

Fresh off a successful year in 2022, Indian brands selling wearables and accessories are looking at ramping up local manufacturing. The move comes at a time when electronics manufacturing service (EMS) providers in India, too, are looking to ramp up such capabilities, and see wearables as a growth area for their businesses. For instance, Noida-based Optiemus Electronics is looking to double its manufacturing capacity for true-wireless (TWS) headphones, from half-a-million units per month to a million per month this year. The company makes smartwatches and TWS products for brands such as Noise and Boult Audio, and is expected to open its third factory dedicated to wearables in the first half of 2023. For smartwatches, it aims to expand capacities from 1.2 million per month to 1.5 million per month. "We continue to invest in expanding our manufacturing capabilities and will open our third plant in Noida soon. We are actively enabling new lines for TWS with the capability to manufacture products with enhanced technologies like ENC (environmental noise cancellation) and ANC (active noise cancellation) as well," said Nitesh Gupta, director, Optiemus Electronics Ltd.

Source: https://www.livemint.com/companies/start-ups/made-in-india-wearables-hearables-set-to-storm-mkts-11677770280227.html

India's First Centre of Excellence in Online Gaming to be set up in Shillong

The Minister of State for Electronics & Information Technology and Skill Development & Entrepreneurship, Shri Rajeev Chandrasekhar, announced that India's first Centre of Excellence in Online Gaming will be set up in Shillong. The Digital India Startup Hub through the Software Technology Parks of India will lead the project, with the aim of catalysing startups and entrepreneurs from the entire North East Region to build the Next Gen Online Gaming ecosystem. The minister also announced the setting up of a state-of-the-art facility under the National Institute of Electronics and IT (NIELIT) to provide training on cutting-edge Digital Skills in Shillong. The Ministry of Skill Development & Entrepreneurship under PMKVY4.0 has set a target to skill around 50,000 youth in Meghalaya and 60,000 in Tripura and 35,000 in Nagaland across a spectrum of approved courses.

Source: https://www.pib.gov.in/PressReleasePage.aspx?PRID=1891007

Consumer Electronics

LG Electronics India to invest INR. 200 crs, starts local manufacturing of premium Side by Side Refrigerators

The facility, located at Ranjangaon, Pune, which opened with an investment of approximately ₹200 crores will manufacture side-by-side refrigerators in addition to double-door and single-door refrigerators. With an annual production capacity of 200,000 side-by-side refrigerator units, this manufacturing expansion will play a key role in addressing growing consumer demand and extending the company's portfolio in the Indian market. The new facility was inaugurated in the presence of Hyun Uk Lee-Global Refrigerator President- LG Electronics, Mr. Hong Ju Jeon-MD-LG Electronics India, Mr. Hyoung Sub Ji-Director-Home Appliances & Air conditioners-LG Electronics India & other senior dignitaries. With an investment of approximately Rs. 200 crore, the new facility equipped with advanced technologies and machineries, is set to manufacture the Side-by-Side Refrigerators in addition to Double-door and Single-door refrigerators.

More Info: https://www.lg.com

AC, refrigerator manufacturers and cold beverage makers expect hot sales in the summer, boost production

Sales of air conditioners, coolers, refrigerators and fans are rising a month early this year, with February heat breaking record levels. Godrej Appliances is targeting a growth of 40% this summer over last year from its entire range of cooling appliances like air conditioners, refrigerators, air coolers and deep freezers. Cooling appliances are in demand starting from March, but with the early onset of summer this year, manufacturers are already clocking good sales numbers, and the coming season is likely to see peak demand.

More Info:
https://www.moneycontrol.com/news/business/ac-refrigerator-manufacturers-and-cold-beverage-makers-expect-hot-sales-in-the-summer-boost-production-10167881.html

Voltas To Invest Rs 1,000 Crore In Expanding Production Capacity

The company will spend over ₹1,000 crore to increase its manufacturing capacity, including at a new plant close to Chennai, while a second proposed ₹500 crore compressor plant in partnership with China's Highly International is still awaiting government approval. The proposed investments are intended to support the pace of growth of the Tata-owned home appliance manufacturer, ensure its position as a leader in commercial refrigeration and air conditioning, and realise its ambition to rank among the top three brands in home appliances like refrigerators and washing machines.

More Info:
https://www.indiainfoline.com/article/news-top-story/voltas-to-invest-rs-1-000-crore-in-expanding-production-capacity-122110700010_1.html

Mitsubishi Electric to Build Plant in India for Room Air Conditioners and A/C Equipment Compressors

Mitsubishi Electric Corporation announced in Jan 2023 that it will invest some 26.7 billion yen (about U.S.$ 222.5 million), in its subsidiary company Mitsubishi Electric India Pvt. Ltd. to establish a factory for the production of room air conditioners and compressors in India. Local production, targeted to start in October 2025, is expected to help the company meet growing demand in the Indian market. Initial annual capacity will total 300,000 room air conditioner outdoor units and, beginning in December 2025, 650,000 compressors. The demand to replace older air conditioning and refrigeration systems with newer models is expected to continue growing as consumers and companies shift to energy-saving and low-GWP refrigerants. Mitsubishi Electric's Advance & Innovation 2025 strategy, introduced in November 2021, is targeting sales of air conditioning and refrigeration systems worth 1.26 trillion yen (about U.S.$ 10.5 billion) and operating profit of 12% by the fiscal year ending March 2026.

More Info:
https://www.mitsubishielectric.com/news/2023/0112.html
https://www.businesswire.com

Made-in-India TV shipment up 33%, TWS share grows 37% in Jul-Sep 2022

Shipments of indigenously made television grew by 33 per cent to over 5 million units in the July-September 2022 quarter compared to the previous quarter, market research firm Counterpoint Research said. According to the report, TWS (True Wireless Stereo) segment led the electronics wearable category in terms of local manufacturing with almost 37 per cent of its shipments being manufactured in India. "Made-in-India TV shipments grew 33 per cent quarter-on-quarter in the third quarter of 2022 to reach over 5 million units. In the electronic wearables category, the TWS segment led in terms of local manufacturing with almost 37 per cent of its shipments being manufactured in India," the report said. Electronics manufacturing services company Optiemus dominated the local manufacturing and contributed to more than 90 per cent of the shipments, the report said.

More Info:
https://www.business-standard.com/article/companies/made-in-india-tv-shipment-up-33-tws-share-grows-37-in-jul-sep-2022-123011001231_1.html

Electric Vehicles / Auto-Electronics

Tamil Nadu Government unveils new EV policy

The Tamil Nadu government has launched the 'Tamil Nadu Electric Vehicles Policy 2023' to transform the state into a preferred destination for electric vehicle (EV) manufacturing in Southeast Asia, accelerate EV adoption, enhance the development of the EV ecosystem, and develop EV cities. The policy addresses the registration of commercial EVs and provides incentives for commercial EV adoption. It promises to revise demand and energy tariffs for public charging stations and incentivize charging during non-peak hours to promote the use of renewable energy. Companies setting up public charging stations and battery-swapping stations will also be eligible for subsidies.

Source: https://www.thehindubusinessline.com/economy/policy/tn-govt-unveils-a-new-ev-policy-with-4-pronged-objectives/article66508252.ece

Battery-swapping design norms to be voluntary

The Union government is expected to release a battery-swapping policy with voluntary design standardisation. The decision was made after the industry expressed concerns about the lack of mechanisms to check the performance of batteries. The proposed policy will focus on safety and performance, and the Bureau of Indian Standards will formulate quality norms. However, the industry also urged the government to reduce the GST for swappable batteries and extend the FAME II subsidy beyond 2024. Battery swapping is seen as a commercially feasible solution for India's EV market, and the draft policy aims to support a phased transition to interoperability between ecosystems.

Source: https://www.business-standard.com/article/economy-policy/battery-swapping-design-norms-to-be-voluntary-policy-to-be-out-this-month-123010301069_1.html

Govt incentives to drive EV penetration in India, charging infrastructure key: Moody's

Government incentives, including those to consumers, local battery manufacturing, state-level subsidies and cut in GST rates would help drive EV penetration in India, Moody's has said. In a report, Moody's Investors Service said India has the fourth-largest car market globally, but electric vehicle (EV) penetration is currently only around 1 per cent. The pace of increase in EV sales and towards the government's target of 30 per cent by 2030 will also depend on the country's charging infrastructure, and consumers' readiness to switch to EVs from traditional ICE vehicles, or those traditional engines powered by petrol, diesel, or natural gas. "We expect various government incentives will drive an increase in EV penetration. These include consumer incentives, production-linked incentives for advanced battery storage to drive local cell manufacturing, goods and services tax (GST) rate cuts, and other state-level subsidies," Moody's said.
Source: https://indianexpress.com/article/business/economy/india-incentives-drive-ev-penetration-charging-infrastructure-key-moodys-8551894/

India EV profile: $4 bn market in component manufacturing

According to Ashim Sharma, Senior Partner & Group Head Business Performance Improvement Consulting (Auto, Engg. & Logistics) Nomura Research Institute, increased EV sales will support a rapidly expanding market for Indian component manufacturers, presenting a $4 billion opportunity in component manufacturing by 2025. Cells and battery packs, quick charging infrastructure, affordable electric technology in growing markets, and battery swapping technologies present enormous opportunities for India. Furthermore, EV charging stations in India will increase sevenfold from the current stock of 3,980 to 28,093 by 2025, beginning with nine major cities with populations greater than 4 million, including Delhi, Mumbai, and Bengaluru, and progressing to state capitals and other major population areas, Sharma said on Monday, speaking at the Bangalore Chamber of Industry and Commerce's EV Summit. (BCIC). Industry participants also identified obstacles in the EV domain, such as a shortage of R&D in the electro-transition sector, the need for innovative charging schemes, and a mismatch in new skills required for new jobs.

Source: https://allindiaev.com/india-ev-profile-4-bn-market-in-component-manufacturing/

India can become No.1 EV manufacturer. Gadkari explains how

Speaking at an event organised by the Confederation of Indian Industry (CII), Union minister Nitin Gadkari said that if India can become world's number one automobile manufacturer in electric vehicle segment if it uses the recently discovered reserve of lithium in Jammu and Kashmir. Lithium is an essential element that is used in producing batteries for electric vehciles. Recently, lithium reserve was discovered in Jammu & Kashmir. The estimated 5.9-million tonne reserve of lithium, a crucial mineral for the manufacturing of electric vehicles and solar panels, had been discovered in Reasi district by the Geological Survey of India (GSI). "Every year, we import 1,200 tonnes of lithium. Now, in Jammu and Kashmir, we got lithium. (If) we can use this lithium ion, we will be the number one automobile manufacturing country in the world," he said. India is the third largest vehicle market in 2022 after China and the USA, beating Japan.

Source: https://www.hindustantimes.com/car-bike/india-can-become-no-1-ev-manufacturer-gadkari-explains-how-101679656991511.html

Semiconductor

First India chip fab to be announced soon: Ashwini Vaishnaw

India's Union Minister for Electronics and Information Technology, Ashwini Vaishnaw, has stated that India's first semiconductor fabrication unit will be announced in the coming weeks. The government had previously announced a USD 10 billion package to incentivise the manufacturing of chips in India in December 2021. The country is competing with the United States, South Korea, and European nations to attract global companies to set up semiconductor manufacturing plants. The shortage of chips has led to supply disruption in automobiles and electronics, making domestic manufacturing of semiconductors a priority for the government. Vaishnaw also mentioned India's success in becoming an exporter of mobile phones and the development of its own end-to-end telecom stack.

Source: Business Standard, March 15th 2023

U.S. CHIPS Act fund bars chipmakers from China expansion for 10 years

The U.S. government has announced new rules for its $39 billion fund to support domestic chipmakers and boost their competitiveness against rivals from China and other countries. The fund, which was created by the CHIPS Act passed by Congress last year, aims to incentivize companies to invest in advanced semiconductor manufacturing and research in the U.S. However, there is a catch: chipmakers that receive money from the fund must agree not to expand their capacity in China for 10 years. They must also refrain from engaging in any joint research or technology licensing with China that involves sensitive technology or products. The rules are designed to prevent U.S. taxpayer money from benefiting China's chip industry, which is seen as a strategic threat by Washington. The fund is part of a broader effort by the U.S. to counter China's rising influence and technological prowess in areas such as artificial intelligence, 5G, biotechnology and quantum computing. The U.S. has also imposed export restrictions and sanctions on Chinese chip companies such as Huawei and SMIC over national security concerns.

Source:https://asia.nikkei.com/Politics/International-relations/US-China-tensions/U.S.-CHIPS-Act-fund-bars-chipmakers-from-China-expansion-for-10-years

India's Key to Becoming A Global Semiconductor Hub: Skilled Manpower In Semiconductor Manufacturing

Skilling will always remain the core of 'Atmanirbhar Bharat'. As per a report by Talent 101, the global semiconductor industry is facing a significant skills gap, with an estimated 10,000 open positions in USA alone. The same report also states that the industry will require more than one million skilled professionals by 2025 to keep up with the growing demand for semiconductors. This shortage is expected to aggravate in the coming years as demand for semiconductors continues to grow. With a population of over 1.3 billion and a strong education system, India has the potential to become a talent powerhouse in the semiconductor industry to mitigate this acute shortage of talent. However, to do so, India must focus on building the right skills and capabilities. As per a report by the India Brand Equity Foundation (IBEF), India is home to over 200 semiconductor design and embedded software companies and therefore it is an opportunity, presenting itself. As the country's demand for semiconductors continues to grow at a rapid pace, meeting this demand can be a challenge and thereby a dire need to increase its pool of skilled manpower to support the industry.

Source: https://www.outlookindia.com/business/india-s-key-to-becoming-a-global-semiconductor-hub-skilled-manpower-in-semiconductor-manufacturing-news-272441

Semiconductor manufacturing: 'TSMC, Samsung, Intel would eventually come to India'

The year 2023 will be the year of semiconductor story in India and around 50-55 design startups would come up to design fabs, Rajeev Chandrasekhar, Minister of State for Electronics and Information Technology said. Speaking at a Twitter Space, Chandrasekhar said, whether world's biggest semiconductor manufacturers like TSMC (Taiwan), Samsung or Intel come, the government is certainly in touch with them and eventually they would come to India. "I think whether TSMC and Intel or Samsung come, I'm no one to predict that right now, but we are certainly in touch with all of them. They certainly understand where India is going, geopolitically and from a market and consumption point of view, one of the largest potential markets in the world," he said while interacting with several startups.

Source: https://www.thehindubusinessline.com/info-tech/semiconductor-manufacturing-tsmc-samsung-intel-would-eventually-come-to-india-says-rajeev-chandrasekhar/article66629928.ece

MeitY organised 'Semicon-India Conference of Electronics Manufacturing Supply Chain Ecosystem'

The Minister for Communications, Electronics & Information Technology and Railways, Shri Ashwini Vaishnaw inaugurated the SemiconIndia Conference of Electronics Manufacturing Supply

Chain Ecosystem. The conference was attended by senior officials from MeitY, state governments, delegates from the global semiconductor industry, potential semicon investors, and academicians. Shri Vaishnaw highlighted the success achieved in telecom manufacturing and Vande Bharat development enabled by the government. The Secretary, MeitY, Shri Alkesh Kumar Sharma, welcomed all the dignitaries and emphasised that electronics manufacturing is not sustainable without the development of a semiconductor ecosystem in India. Shri Ajit Manocha, President SEMI, provided a global overview of the semiconductor industry and appreciated the efforts taken by the government for the development of semiconductor and display manufacturing ecosystem in India.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=1900415

Samsung Electronics to invest $230 bln through 2042 in South Korea chipmaking base

Samsung Electronics, the world's largest memory chip maker, announced on Monday that it will invest $205.64 billion (230 trillion won) in South Korea to expand its semiconductor manufacturing facilities through 2042. The investment will focus on building new production lines at its Pyeongtaek plant, located south of Seoul. The company aims to increase the production of advanced chips used in smartphones, artificial intelligence, and data centres to meet the growing demand for these products worldwide. Samsung's investment comes at a time when the global shortage of chips has impacted various industries, including automakers.

Source: Reuters, March 15, 2023

Reading and writing data faster, Intrinsic Semiconductor Technologies raises £7 million

Intrinsic Semiconductor Technologies, a UK-based semiconductor startup, has raised £7 million ($9.6 million) in a funding round led by Parkwalk Advisors. The company has developed a technology that can speed up the process of reading and writing data in memory chips, potentially enabling faster and more efficient computing. Intrinsic's technology uses advanced materials to enhance the performance of memory chips, reducing the amount of power required to read and write data. The company plans to use the funding to further develop its technology and expand its team. The investment is expected to help Intrinsic Semiconductor Technologies commercialise its technology and bring it to market.

Source: Tech EU, March 13, 2023

India in talks with 4 semiconductor companies to set up fabs here: Report

"Apart from applications that the government has at this point, there are four large opportunities, which are in the final stage. So, as and when we open the second window, they will come," a person aware of the matter told ET. The Centre invited proposals for setting up semiconductor facilities in India last year. In December 2021, it announced a $10 billion package to incentivise the manufacturing of chips in India. The India Semiconductor Mission (ISM) was made the nodal agency of the program. The Centre is offering a 50 per cent subsidy on fab units, and states are offering a 10-25 per cent subsidy over and above the central share. In the first round of applications, five companies had shown interest in setting up chip factories in India. This included three proposals for chip manufacturing, including by the International Semiconductor Consortium (ISMC) consortium led by Abu-Dhabi-based Next Orbit Ventures.

Source: https://www.business-standard.com/article/technology/india-in-talks-with-4-semiconductor-companies-to-set-up-fabs-here-report-123021000169_1.html

Gresham semiconductor plant gets multi-million-dollar investment

Microchip, a semiconductor company based in Arizona, has announced a multi-million dollar investment in its Gresham plant in Oregon. The investment will allow the plant to expand its production capabilities and hire more employees, with the aim of meeting the growing demand for microcontrollers and other semiconductor products. The Gresham plant is one of Microchip's largest facilities and plays a crucial role in the company's operations. The investment is expected to boost the local economy and support the development of the semiconductor industry in the region.

Source: KPTV, March 14, 2023

Chinese auto chips only: Inside Xi's self-sufficiency campaign

China is pursuing a self-sufficiency campaign in semiconductor production, with a focus on

automotive chips. The government is taking the lead in developing the industry, which faces challenges from U.S. sanctions and global supply shortages. According to Nikkei Asia, China aims to produce 70% of its auto chips domestically by 2025, up from 30% currently. The country has invested billions of dollars in chip projects and offered incentives to attract talent and customers. However, China still lags behind global rivals in terms of technology and quality. The country also faces competition from other regions that are boosting their chip capacities, such as Europe, Japan and India. The article suggests that China's auto chip push is part of its broader strategy to reduce its dependence on foreign technology and enhance its national security and economic competitiveness.

Source: Nikkei Asia, March 15, 2023

Japan lifts chipmaking export controls on South Korea

Japan has removed export restrictions on three key materials for semiconductor and display production to South Korea, ending a trade dispute that started in 2019. The move came after South Korea announced a solution to the wartime labour issue that had strained bilateral ties for years. The materials are hydrogen fluoride, fluorinated polyimide and photoresist. They are essential for making memory chips and OLED screens, which are major exports of South Korea. Japan had imposed stricter controls on their exports to South Korea in July 2019, citing national security concerns. South Korea had retaliated by removing Japan from its list of trusted trade partners and threatening to end a military intelligence-sharing pact. The trade row had hurt both countries' economies and disrupted global supply chains. It also undermined their security cooperation amid rising threats from North Korea and China. The US had urged both allies to mend their relations.

Source: https://asia.nikkei.com/Spotlight/Japan-South-Korea-rift/Japan-lifts-chipmaking-export-controls-on-South-Korea

APEC: Silicon carbide transistors for air-cored motor

Infinitum, an air cored motor company, announced a technology collaboration with Germany's Infineon Technologies at APEC in Florida to incorporate Infineon's silicon carbide power mosfets into its motors. The current generation of Infinitum motors have integrated electronics, operate on 460V, and are rated from 3 to 12kW. Unfortunately, no additional information about the deal is available, so Electronics Weekly has requested it - stay tuned.

Source: https://www.electronicsweekly.com/

Agri-Tech

ChatGPT Triggering Revolution in Agriculture Advancement

ChatGPT, an AI-powered language model, can assist farmers of all sizes by providing crop and livestock management protocols. Using cameras and sensors, it can monitor crops and domestic animals, alerting farmers to potential problems before they become significant. It can also automate tasks such as sowing, harvesting, and estimating crop growth, reducing human error. By coordinating with advanced weather forecast stations, it can control irrigation systems to optimise water usage.

Source: Successful Farming (Online News) For more info: https://www.agriculture.com/news/technology/what-are-five-ways-chatgtp-will-revolutionize-agriculture-in-the-us

Traction, Climate Fieldview Collaborate so Farmers can manage Field Records

Traction, a farm accounting solution, has partnered with Climate Field View to allow farmers to easily share their field records from their Field View account. This collaboration streamlines the process of combining field-level data insights and farm accounting, providing accurate field profitability analysis and current inventory tracking.

By integrating with the Field View platform, Traction eliminates the need for manual data entry and simplifies the process of checking profitability, margins, and product inventories. The platform automatically prepares field records, specific cost of product, and equipment from the accounting data, tying the information back to actual accounting numbers.

The goal of the partnership is to provide a simplified and straightforward solution for farmers to collect and analyse their data, ultimately improving their bottom line.

Source: Successful Farming (Online News) For more info: https://www.

agriculture.com/news/technology/traction-climate-fieldview-connect-so-farmers-can-seamlessly-share-field-records

Technology-enabled farming solutions empowering Indian farmers

For a long time, traditional agricultural methods have had little room for technology. However, new companies are making efforts to change the way farming is done while also protecting farmers from inhaling poisonous insecticides and pesticides during spraying.

These companies are empowering farmers with drone technology to monitor crop health and apply insecticides and pesticides, as well as broadcast seeds, all in less than 10 minutes per acre. This technology is not only saving farmers a lot of labour during spraying and fertiliser application but also conserving fresh water which is used during spraying.

This trend comes amid the federal government's ambitious plan to make India a hub for drones by 2030. By incorporating technology into agriculture, these companies are transforming the way farming is done in India while also addressing critical environmental and health issues.

Source: BBC
For more info: https://www.bbc.com/news/av/world-asia-india-64248510

EOS SAT-1, the First Agri-Focused Satellite Constellation, Successfully Launched into Orbit

EOS Data Analytics has launched its first satellite, EOS SAT-1, as part of the first agri-focused satellite constellation. The constellation is designed to assist agribusinesses in monitoring crop growth, detecting crop threats, optimising input use, and reducing the need for unnecessary field inspections. Built by Dragonfly Aerospace, the EOS SAT constellation will consist of seven small optical satellites in total, with EOS SAT-2 and the following satellites expected to be put into orbit between 2023 and 2024. The full EOS SAT constellation is scheduled to be operational by 2025, covering up to 12 million square kilometres of farmlands and forests around the world daily.

For more info:
https://www.farmingtechnologytoday.com/news/data-analytics/giant-leap-for-first-agri-focused-satellite-constellation.html

About India Cellular & Electronics Association (ICEA)

ICEA is the leading industry body representing the entire electronics ecosystem in India, including components, subassemblies, EMS, and finished goods across various ESDM verticals such as mobile phones, consumer electronics, and electric vehicles. Our members comprise Fortune 500 companies, including lead brands, EMS companies, and technology providers across multiple sectors, including IT hardware, semiconductors, and hearables & wearables.

It is working closely with the Government of India to achieve its vision of establishing a USD 300 billion electronics manufacturing ecosystem by 2025–2026. ICEA has been instrumental in conceptualizing the roadmap of the Phased Manufacturing Program (PMP), a first-of-its-kind program in India's history that has resulted in a 1300% increase in mobile phone manufacturing, from USD 2.5 billion to USD 36 billion in just six years.

It has also pioneered the Production-Linked Incentive (PLI) scheme for mobile phones, which has set the trend for such schemes in multiple sectors in India. We have closely worked with all key stakeholders, including industry and government, to encourage landmark schemes such as the Modified Electronics Manufacturing Clusters (EMC 2.0) Scheme and the Scheme for Promotion of Electronic Components Manufacturing and Semiconductors (SPECS).

The goal of the organisation is to build a robust electronics manufacturing ecosystem with a specific focus on enhancing design and R&D capabilities and establishing India as the Export Hub for different electronics hardware verticals, such as mobile phones and its components, consumer electronics, IoT devices, strategic electronics, auto electronics, wearable and hearable devices, among others.

Its long-term vision is to transform India into an electronics manufacturing hub worth USD 300 billion by 2025-26, with contributions from exports estimated to remain at USD 120 billion. Electronics hardware exports are estimated to be one of the largest export categories in India over the next few years.

Over the past decade, ICEA has partnered with industry stakeholders to work with various state governments, such as Gujarat, UP, AP, Telangana, and Karnataka, to promote investment and outreach activities in multiple countries such as China mainland, Taiwan, Korea, Japan, USA, Germany, Israel, and others to establish a strong ESDM ecosystem to serve India and the world.

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ICEA Activities

ICEA signs MoU with the Government of Uttar Pradesh during the Uttar Pradesh Global Investors Summit (UPGIS) 2023 to encourage electronics manufacturing in the State.

ICEA signs MoU with the Government of Andhra Pradesh during the Andhra Pradesh Global Investors Summit (APGIS) 2023 to promote the ESDM Sector.

Globalise to Localise Report launched on 29th August 2022 by Shri Rajeev Chandrasekhar, Hon'ble Minister of State for Electronics and IT, Skill Development and Entrepreneurship.

Digital Broadcast Radio in India Report launched on 4th August 2022 by Shri Apurva Chandra Secretary, Ministry of Information & Broadcasting.

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