



MINISTÈRE
DE L'ÉCONOMIE,
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En bref

NUMÉRIQUE :

- Selon une étude menée par deux entreprises privées du numérique, au cours du premier semestre 2022, l'Inde a représenté 85 % des coupures d'Internet parmi les 10 pays émergents étudiés.
- Le développement des applications mobiles offrant des prêts instantanés et ayant des comportements frauduleux auprès de leur clients (ex : usurpation d'identité) représente un problème d'envergure en Inde (600 applications concernées pour un encours total de prêt de 500 MUSD).
- L'Inde dépasse la Chine et devient au 2^{ème} trimestre 2022 le 2^{ème} plus grand marché au monde pour les achats de montres connectées. Les marques indiennes Fire-Boltt et Noise sont classées 4^{ème} et 5^{ème} au niveau mondial.
- L'Inde souhaite que les fabricants de smartphones rendent leurs produits compatibles avec son système de navigation par satellite NavIC.
- Le *Production-Linked-Incentives* (PLI) - politique publique soutenant la production nationale de produits électroniques pourrait permettre à horizon 2025 qu'Apple localise 25 % de sa production en Inde, mais il s'agit toujours en grande partie d'assemblage et non de fabrication des composants.

TÉLÉCOMMUNICATIONS:

- Reliance Jio prévoit de lancer des services 5G d'ici mi-octobre de cette année, ce qui représente un investissement de 25 M\$.
- Le projet de loi indien sur les télécommunications propose une licence obligatoire pour les entreprises OTT (Over The Top) telles que Zoom et WhatsApp, une diminution du rôle du régulateur TRAI et un cadre pour faciliter les droits de passage des câbles et des infrastructures de télécommunications.

Revue de presse

1. NUMÉRIQUE

India has highest net shutdowns globally in H1 2022

Livemint, 05/08/2022

NEW DELHI : India accounted for as much as 85% of internet shutdowns in the first six months of 2022 out of the 10 countries where internet disruptions and restrictions were recorded, according to a new report.

The report published by internet watchdog NetBlocks and VPN service Surfshark said Asia was the most censored continent.

In India, Jammu and Kashmir saw the maximum shutdowns, though they were rampant in other parts of the country as well. On 17 June, a significant disruption of fixed-line and mobile internet connectivity was reported across Bihar, according to Netblocks. The incidents occurred due to government-imposed restrictions on telecommunications in the state to counter protests over Agnipath recruitment scheme, NetBlocks added.

Out of these 72 internet disruptions, social media platforms were targeted six times—twice in Europe and Africa, and once in Asia and South America.

Despite a decrease in cases, new internet disruptions affected more citizens, including a total of 1.89 billion people, up from 1.54 billion during the same period last year.

Not so free

Top ten countries by internet shutdowns.

Countries	Number of times internet was blocked from 2016-2021	Average duration (in days)
Syria	2	733
India	89	7.1
Yemen	1	6
Russia	4	4.8
Nicaragua	1	4 hours
Ecuador	1	4 hours
Pakistan	7	320
Somalia	1	31 hours
Iraq	5	3.8
Venezuela	2	28 hours

Time period: 2016-2021 Source: Surfshark

"The number of countries that use internet disruptions as a weapon to silence citizens' unrest remains worryingly high," said Agneska Sablovskaja, lead researcher at Surfshark. She said that most cases are of national or local magnitude where the internet is slowed or completely shut down, leaving its people without most of their communication means.

The report further showed that in the first half of 2022, the most commonly restricted social media app was Facebook, followed by Twitter and Whatsapp.

According to Surfshark, internet restrictions includes everything from nationwide or local internet shutdowns (partial and complete) along with social media censorship cases.

Predatory loan apps in India rake in huge fees, and are driving some users to suicide

TechCrunch, 26/08/2022

On a clear afternoon, Laxmi (name changed) was sitting in her office in Gujarat, India, when she received a message from her distant relative, saying that they received some of her "morphed" nude photos from multiple phone numbers on

WhatsApp along with a text that reads, “loan thief.”

“I was numbed and clueless,” she said.

It was the first time the 32-year-old customer service executive was informed about the circulation of her roughly edited photos after taking her mugshots from the government ID she had initially submitted to get credit from a mobile loan app called Fast Coin.

However, before that particular call, she received scores of threatening and abusive phone calls and messages from men who identified themselves as loan recovery agents.

All this started just a week after she applied for a small loan of around \$100 that she needed due to a severe financial crisis earlier this year.

Laxmi turned to a startup loan platform rather than a bank for many of the same reasons others do: she did not have the minimum salary typically needed for banks and other financial institutions in India to disburse loans; and upstarts generally not only require less vetting but their turnaround times are faster, and she needed to get the money in a single day to pay for her house rent. So instead of going to a bank, she chose to get the loan from Fast Coin, an app her office colleague suggested.

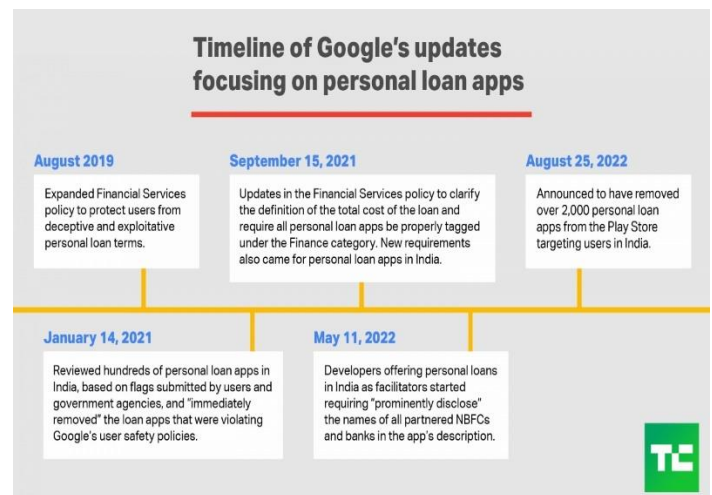
She had repaid the loan within a couple of weeks of getting her salary the following month, but she claims that in the following months, she paid a further \$630 over and above the original loan amount to get rid of abusive calls and messages. Yet the threats have continued.

Apps offering instant loans have grown since the emergence of the coronavirus pandemic, with hundreds of millions of dollars so far disbursed through them.

Fueled by a nationwide lockdown, India has been in the midst of a wider economic downturn. Unemployment in the country hit 23.52% of its total labor force in April 2020, per data shared

by the Mumbai-based economic think-tank Centre for Monitoring Indian Economy (CMIE). Those numbers are going in the right direction now: the rate dipped to 6.80% in July this year from the 6.96% reported in the same month last year and the 7.40% in July 2020, but they are all still rates higher than the U.S., U.K. and China, and point to why these loan apps get the traction they do.

Various stakeholders, including the government and Google, have been taking action against some of the most egregious loan apps in order to limit their impact in late 2020 and 2021. Law enforcement agencies in the country are also taking some efforts to raise awareness.



Nonetheless, it remains an ongoing problem. As Google pointed out this week, it’s pulled more than 2,000 dodgy loan platforms’ apps from its Play Store this year alone. But the problem is that people who have had the misfortune of using them are still facing abuse and harassment in the aftermath of their engagements.

Some are reportedly even taking their lives due to the immense pressure they get from these loan apps’ unregulated agents. According to local news reports, nearly two dozen suicide cases owing to harassment coming from loan app operators have been reported online. More than half a dozen of them were reported specifically from Hyderabad — a major tech center in the

country, and in fact home to Google's largest campus in the country.

Hyderabad cybercrime police officer KVM Prasad told TechCrunch that since January, the state's law enforcement agency has registered 134 cases and made 10 arrests related to loan apps. He also said that the police identified 314 suspicious loan apps. The agency sent its list to Google, he said, but few were deleted. Many of them are still available on the Play Store, he said, and their ranks are still growing.

"These loan apps are emerging like anything this year," Prasad said in an interview with TechCrunch.

He claimed that many of the apps were the same that Google initially pulled on request from the government in late 2020. The operators didn't disappear, though. Lazarus-style, they simply changed the names of their apps and carried on, contacting the old customers and disbursing loans on accounts without getting prior consent, and subsequently harassing users to repay, he said. (We have asked the agency to provide examples of apps that have been taken down but now are operating again under a different name, and we will update this as we learn more.)

Since January, the Hyderabad police have identified 250 billion transactions through these loan apps. Each of these transactions was between \$25-\$250, the police officer noted.

An investigation by India's anti-money laundering agency has separately found that **loans of over \$500 million were disbursed by these apps**, according to a report by The Economic Times.

Like the Hyderabad police, TechCrunch has learned that the Fintech Association of Consumer Empowerment (FACE) shared a list of loan apps with Google to get them pulled from the Play Store. Other state police departments and nodal agencies, including the Enforcement Directorate, are also investigating issues with loan apps and raising their concerns with Google.

The Android maker told TechCrunch that it did take action against some loan apps, without disclosing any specifics.

"We have reviewed hundreds of personal loan apps in India for compliance with the relevant policy, based on flags submitted by users and government agencies," a Google spokesperson said in a prepared statement emailed to TechCrunch. "For apps that remain non-compliant past the deadline, as is done for any policy non-compliance, we have been taking necessary enforcement action as part of our ongoing policy compliance sweeps, including removal of apps from the Play Store."

Last year, Google revised its Play Store developer program policy for financial services apps with additional requirements for loan apps in India, including the requirement to submit a copy of the license for review in case the developer is licensed by the Reserve Bank of India (RBI) for providing personal loans.

Since May, developers who are not registered by the central bank are also required to "prominently disclose" the name of all the registered Non-Banking Financial Companies (NBFCs) and banks that are giving loans through their apps. Google also made it mandatory for developers to ensure that their account name matches the name of the associated registered business name provided in their declaration.

"We will continue to assist the law enforcement agencies in their investigation of this issue," the spokesperson said.

Who needs a backdoor when you have a front door?

Predatory loan providers, however, are operating on a number of levels to do their dirty work.

First, they gain user data access, including users' contacts and call records, which they use for recovery and harassing people. In some cases, the operators of these apps get user consent by pretending to use their contacts in case they are

not reachable. Some apps, however, take all that data without getting any prior consent from users. A few apps also claim that they need access to contacts and call records for fraud prevention. Nevertheless, the actual purpose in most cases is to use the phone numbers obtained for recovery purposes, which sometimes become too harsh to bear.



Second, they're using channels like established app stores to connect with users. In the case of the Google Play Store, for example, ordinary consumers assume using an app available there is credible enough because of the vetting Google does before approving them to be listed.

"For a layperson, it is very difficult even to figure out whether the RBI has authorized a particular app," said Shehnaz Ahmed, a senior resident fellow and fintech lead at independent think-tank Vidhi Centre for Legal Policy.

The prevalence of dodgy apps on the Play Store is a longstanding issue, of course, not limited to predatory loan apps in India. In the case of the latter, Google has enlisted the help of users themselves, who are directed to report non-compliance of its developer program policy to alert Google, which in turn "take[s] appropriate actions" against those developers. But Srikanth Lakshmanan, a coordinator at consumer awareness collective Cashless Consumer, who closely reviewed a list of loan apps impacting people in South India, believes that Google is not

being held as accountable as it should be for the situation.

"Google does not want anyone else to say that they're also failing," he said.

In January last year, the RBI constituted a working group on digital lending to get a clearer picture of the issues with loan apps in the country. The group found nearly **600 illegal loan apps that were available across a list of Android app stores, including the Play Store.**

Rahul Sasi, co-founder of cybersecurity firm CloudSEK, who worked with the RBI's group for identifying questionable loan apps, said that flagging such apps was difficult even for Google. The current systems are trained to flag malicious apps with, say, malware in them; but not apps that can harm after some time of their installation, not just by way of malware but through the malicious actions of people connected to those apps' services.

It's tricky to know where to draw the line in some cases, and it raises big questions over what kind of data access any app should be allowed to have by default, lest it get abused.

"It's like Facebook," he said. "In that case, [you could claim it's] also a bad company [since] it has access to all the data on your phone."

Saikat Mitra, senior director and head of Trust and Safety at Google Asia-Pacific, also acknowledged while talking to reporters at the company's event this week that using only machine learning algorithms to flag such apps doesn't work.

"We can even go to the extent of reverse engineering code and look into that," the executive said. "But you have to understand the problem of loan apps compared to other apps basically is what we call 'offline bad,' which means the all the various [violations are] happening outside of the app, they're not happening on the app."

In the last few weeks, the RBI has considered some working group recommendations to toughen rules for digital lending in the country. Experts, however, believe that much work is still needed.

“What the RBI seems to be doing is going after the regulated entities to look at certain kinds of digital transactions... many other entities are operating in the market, which perhaps are currently under the RBI’s radar because of how the regulatory structure is organized,” said Ahmed.

Issues with legitimate players

Several loan apps that are not registered with the RBI or are not using a financial partner enrolled by the central bank are available in the market to target people looking for instant credit. However, this does not mean that the ones that appear legitimate and are registered with the RBI are doing fair business.

Lakshmanan of Cashless Consumer told TechCrunch that some well-funded startups operating in the digital lending space also indulge “in all sorts of shady practices” and harass people taking loans from their apps.

User reviews on the Play Store and Apple’s App Store suggest the same scenario as hundreds of abuse- and harassment-related complaints exist against many apps that are considered legal in the country.

TechCrunch shared the details of these apps with both Google and Apple to get their comments. Google did not give any direct response on the matter, and Apple did not respond to the request for comment.

Earlier this month, the RBI issued a circular to advise regulated lending platforms to have fair methods and practices related to loan recovery agents and “should not resort to intimidation or harassment” of their borrowers.

Gaurav Chopra, a founding member of Digital Lenders Association of India (DLAI) and founder of IndiaLends, told TechCrunch that the announcement made by the RBI was to reiterate the guidelines and make sure that everybody is aware of them. He also claimed that the adverse effects of loan apps had declined.

“I would say we are at probably less than 10% of what we saw two years back,” he said.

The DLAI has over 80 members on its board, including some of the widely used digital lending platforms.

Associations including DLAI and FACE are looking for a self-regulatory organization (SRO) to address consumer grievances on behalf of their members.

“At the end of the day, the RBI, while very robust, cannot deal with every single complaint in the most timely manner,” Chopra said while referring to the requirement of establishing an SRO.

However, market experts like Ahmed of Vidhi Centre for Legal Policy do not look for an SRO coming from the industry. They instead want the RBI to set up a grievance mechanism.

Adam J. Aviv, an associate professor of computer science at The George Washington University, said that even though Google and Apple have deployed privacy labels on their app stores, both companies seemed to have no priorities to use them to communicate risks involved with loan apps or to restrict their privacy-violating behavior.

“Both Google and Apple do place some restrictions on apps in other contexts, such as for children-focused apps or health apps, to comply with local laws and regulations. Similar policies could be put in place by governments for mobile loan apps. This might force the hand of the mobile app stores and the developers to meet minimum privacy standards for data collection requirements and uses of that data,” Aviv said.

Similar predatory loan app patterns in other developing markets

Just like India, people in countries including Mexico and Kenya are also facing abuse and harassment instances through loan apps. Experts believe that it is due to lax regulation.

Collins W. Munyendo, a graduate research assistant at The George Washington University who conducted research in loan apps impacting users in Kenya, said that developing countries are a ready-made market for perpetrators targeting money-seeking individuals.

He pointed out that unlike the U.S. and U.K. where people primarily have a credit history and a centralized way of generating credit scores, a similar system lacks in developing markets to a large extent. Some measures, including new legislation, though, did take place, particularly in Kenya, in the last few months to limit the circulation of such apps.

"Anyone could literally wake up and create one of these apps and put them out there because the regulatory framework just doesn't exist yet to control that space," he said.

India becomes second biggest smartwatch market, pips China in Q2 2022: Report

Bloomberg, 26/08/2022

India surpassed China to become the second biggest smartwatch market in the world for the first time in the June quarter, according to a Counterpoint Research report. Smartwatch shipments in India grew 347% year-on-year (YoY) during the quarter, while the global market grew at just 13% YoY, the UK-based market research firm said.

North America with 26% of shipments remains the largest smartwatch market, even though its shipments fell by 4% YoY. In comparison, India and China accounted for 22% and 21% of the

global market, respectively in the June quarter. Shipments in China fell by 10%.

India's growth was largely driven by shipments by homegrown brands Fire-Boltt and Noise, who made it to the list of global top five smartwatch brands for the first time. Noise registered a 298% YoY increase in shipments and did well in both online and offline markets. Despite this growth, Noise slipped down to the second position in India, while Fire-Boltt moved to the first place, according to Counterpoint.

"During the quarter, 30% of models shipped in the Indian market sold for less than \$50, and major local brands launched cost-effective models, lowering the entry barriers for consumers," said Sujeong Lim, Associate Director at Counterpoint Research.

Lim attributed the decline in shipments in China to the economic slowdown. As a result of this, all major Chinese brands such as Huawei, imoo, and Amazfit saw limited growth or decline, he added.

Apple retained the top slot in the global smartwatch market accounting for 29.3% of the overall shipments, followed by Samsung (9.2%) and Huawei (6.8%). Fire-Boltt (6.3%) and Noise (5.9%) moved to fourth and fifth position, respectively, replacing BBK Group's imoo and US-based Garmin.

Though Apple's shipments grew by 8% YoY, the excitement around the Apple Watch 7 series has weakened, resulting in a decline in its shipments in comparison to the March quarter. On the other hand, Samsung grew 40% YoY on account of the strong interest in the Galaxy 4 Watch series, particularly in North America and India. Apple is expected to launch Watch Series 8 on September 7.

Centre's push for indigenous navigation system on smartphones worries Samsung, Xiaomi & Apple.

The Print, 26/09/2022

New Delhi: India is pushing tech giants to make smartphones compatible with its home-grown navigation system within months, worrying the likes of Samsung, Xiaomi and Apple who fear elevated costs and disruptions as the move requires hardware changes, according to two industry sources and government documents seen by Reuters.

In line with Prime Minister Narendra Modi's drive for self-reliance, India has over the years expanded the use of its regional navigation satellite system called NavIC (Navigation with Indian Constellation).

The Indian government wants to reduce dependence on foreign systems, including the widely used U.S. Global Positioning System (GPS), and says NavIC provides more accurate domestic navigation and that its use would benefit the economy.

China, the European Union, Japan and Russia have their own global or regional navigation systems to rival GPS. Operational since 2018, NavIC's uptake is minimal; it is mandated in public vehicle location trackers, for example.

But government and industry documents show Modi's administration and space officials want to broaden its use, and have this year pushed smartphone giants to make hardware changes to support NavIC, in addition to GPS, in new phones they will sell from January 2023.

In private meetings in August and September, representatives of Apple Inc, Xiaomi Corp, Samsung Electronics Co Ltd and others pushed back, citing worries that making phones NavIC-compliant would mean higher research and production costs.

The changes would also require more testing clearances, which with a Jan. 1 deadline would disrupt businesses and planned launches, according to two smartphone industry sources and documents.

Samsung declined comment on the meetings, while Apple and Xiaomi did not respond to requests for comment. India's IT ministry and the space agency ISRO that are both involved in the project also did not respond.

Samsung in particular voiced concerns during a Sept. 2 closed-door meeting between top smartphone players and chipmakers with Indian IT ministry and space agency officials, according to the meeting's minutes reviewed by Reuters.

Samsung's India executive Binu George warned of cost worries, telling officials that NavIC support requires not just new smartphone chipsets but also many other components.

"This would add to cost as it requires hardware design changes and additional investments to support devices specific to India. Further, the companies have already prepared for models to be launched in 2024," the minutes quoted him as saying.

George did not respond to a request for comment.

The smartphone players have sought time until 2025 to implement the changes, and a final decision is expected in coming days, a senior government official said.

The minutes said the Indian space agency will provide technical support for implementing NavIC in new smartphones, adding another meeting may be called.

India VS Others

India's space agency has said systems like GPS and Russia's GLONASS are operated by their countries' defence agencies, making it possible for civilian service to be interrupted.

NavIC, it says, is fully under the control of the Indian government, which one day wants to take it global like GPS.

India would not be the first country to push smartphone makers to add support for a native navigation system.

Russia has sought to mandate inclusion of its own GLONASS system in smartphones sold locally to reduce reliance on GPS, which Washington can switch off for civilian subscribers as it did during military operations in Iraq.

China's Beidou was completed in June 2020, and, though not mandated, the official Xinhua news agency has reported that in 2021, 94.5% of China-made smartphones had Beidou support.

Xiaomi and Samsung together account for 38% of the smartphone market in India, the world's second biggest after China. Apple's more expensive smartphones have a roughly 3% share in India, data from Hong Kong-based research firm Counterpoint shows.

Other Chinese manufactures making up a further 28% of the market were also present at the Sept. 2 meeting, government minutes show. China's Realme, which has a 16% market share, did not attend, and neither did smaller manufacturers.

Apple's website says it already supports the five global and regional navigation networks including GPS, GLONASS and BeiDou in current iPhones. The Indian directive could force it to add a new one.

A key concern for players like Samsung and Xiaomi remains the higher cost of so-called dual band chipsets they would need to support both GPS and NavIC, as these companies are leaders in the sub-\$200 category in India's price-sensitive market, the smartphone industry sources said.

Chipset concern

For procuring NavIC-compliant chipsets, most smartphone makers are reliant on global giants such as U.S. chip designer Qualcomm Inc and Taiwan's MediaTek Inc.

Voluntary use of such chipsets has been limited in India as phone manufacturers remain hesitant to add the extra components – and cost – required to make it work, said Parv Sharma, senior semiconductor analyst at Counterpoint.

India's space agency said that by mid-2021, only about two dozen mobile handset models in India had NavIC capability. In total there are around 300, Counterpoint has said.

During the Sept. 2 meeting, MediaTek said all of the company's chipsets for 5G phones would support NavIC, with "some cost enhancement" and additional hardware. MediaTek added that it expected about 80% of mobile phones to be 5G-enabled in two years.

MediaTek declined to comment on Reuters queries. Qualcomm in a statement said it has been working with the Indian space agency to enable NavIC on its chipsets for years and will continue to do so.

Another lobbying push from smartphone players is to convince the Indian government to make NavIC available on the so-called L1 satellite frequency which is already used by GPS, and not only on the L5 frequency used by New Delhi.

That, executives say, will make it easier for manufacturers to integrate NavIC in chipsets which mostly support the L1 band the world over, curbing separate development costs for NavIC.

Indian space agency ISRO told the Sept. 2 gathering that was not immediately possible, as NavIC was likely to be available on the L1 band only by 2024-25, after more satellite launches, the meeting's record shows..

Electronics makers got the right push from the PLI scheme. But it is mostly an assembled story.

ET Tech, 28/09/2022

The contours of electronics manufacturing in India are changing swiftly.

This anecdote about Fuji's salesmen, from Rajesh Agarwal, chairman of Bhagwati Products, an electronics manufacturing services company, and one of the beneficiaries of the government's production-linked incentive (PLI) scheme illustrates the point.

Agarwal says that a few years ago, salesmen from the Japanese manufacturer of surface mount technology (SMT) machines, besides other equipment, would sit for long hours in manufacturing facilities explaining the importance of the SMT machines. That would be only if they were invited

These SMT machines help directly mount electronic components on printed circuit boards — a key component of modern electronics assembling.

If the salesmen were lucky, they would sell two, three, or maybe five machines a year, adds Agarwal.

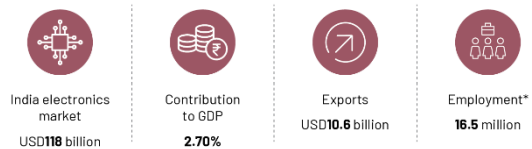
Today, they sell more than a dozen SMT machines every month. The Fuji salesmen are so busy that nowadays they don't have time even for casual visits, as business is booming.

Bhagwati Products, an INR1,350 crore contract manufacturer of electronic products, including laptops, tablets, smartphones, and televisions, is among those using Fuji gear.

This boom has taken long to come by.

The past couple of decades have seen China emerge as the world's factory. Even countries like Vietnam, which were just a shade behind India around the year 2000, now do nine times the electronics exports than India.

Electronics in India: a snapshot



Note: Figures for 2020-21, *direct & indirect for 2019-20.
Source: InvestIndia.gov.in

ETPrime

How did India miss this bus?

One can blame small local markets, infrastructure bottlenecks, frustratingly long processes to get approvals, patchy logistics, and other bottlenecks.

The PLI plug-in

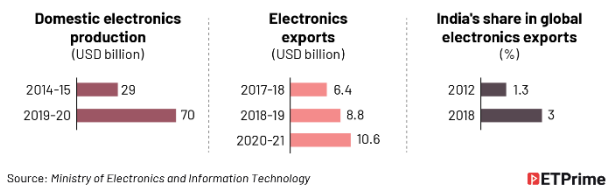
With the USD25 billion PLI scheme, where electronics cornered the second largest outlay of around USD 6 billion (after automobiles), Indian manufacturers like Bhagwati, Optimus, and Dixon, and giants including Wistron, Foxconn, and Pegatron, are seeing real change in the country.

While PLI offers cash incentives tied to turnover, the local market is also getting attractive. The Ministry of Electronics and Information Technology (MeitY) expects electronics consumption in India to balloon to USD 400 billion in 2025 from around USD 100 billion at present.

This large market, at a time when the world is coping with high interest rates and uncertain economic outlook, offers a great opportunity to manufacturers to increase local production.

The outlay under PLI for large-scale electronics manufacturing is INR40,951 crore and that for IT hardware is INR7,325 crore. The products covered include mobile phones, specified electronic components, laptops, tablets, personal computers, and servers.

Electronics manufacturing's moment



As many as 32 beneficiaries had been approved under the PLI scheme for largescale electronics manufacturing, of which 10 (five global and five domestic companies) were approved for mobile manufacturing.

For the quarter ending June 2022, the applicants under this PLI scheme had undertaken sales of INR167,770 crore, including exports of INR65,240 crore.

So far, the PLI scheme has generated 28,636 new jobs. The scheme, approved in March 2020 for five years, is expected to eventually bring in additional electronics production to the tune of INR1,069,432 crore and generate employment for 7,00,000 people.

Addressing the "disability gap"

The scheme partly addresses the "disability gap" that India has against other manufacturing destinations. According to MeitY, the domestic hardware electronics manufacturing sector faces a lack of a level-playing field vis-à-vis competing nations.

The sector suffers a disability of around 8.5% to 11% (this number represents how much more expensive it is to make in India compared to other competing nations) on account of lack of infrastructure, poor supply chains, logistics, high cost of finance, inadequate availability of quality power, limited design capabilities, and lack of R&D spends.

While the disabilities won't go away in a hurry, with PLI, the government is trying to bridge this gap by 4%-6%. The rest is expected to be

compensated as manufacturers become competitive with large-scale facilities and policymakers continue making their moves to create a more conducive manufacturing environment.

For example, last week, the government launched a new logistics plan to ease the flow of goods across the country. This will, over five years, reduce logistics costs from 13%-14% of the GDP to around 9%.

Ecosystem scales up

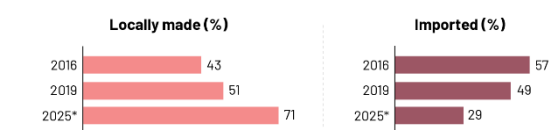
These initiatives are accelerating shifts in the factories. **JP Morgan expects Apple to make 25% of its iPhones, smartwatches, and iPads in India by 2025.** By the end of this year, the American investment bank expects the Cupertino giant to expand iPhone production to 5% in India via its contract manufacturers including Foxconn and Wistron.

Local companies shortlisted for PLI sops see this as an endorsement of their capabilities and expect more foreign collaborations to help them scale their electronics-manufacturing game.

Take Optimus Electronics, the wholly owned arm of Optimus Infracom, which started as a retailer of Nokia phones back in the mid-1990s and later added BlackBerry, Samsung, Plantronics, HTC, and others to its portfolio.

In 2009, it launched its own handset Zen Mobile. Later, as the Chinese dominance via Xiaomi, Oppo, and Vivo grew in India, the company shifted gears to make hearables and wearables. It tied up with Taiwanese manufacturing major Wistron for making electronic products locally.

Electronics: manufacture vs. import



*Estimates
Source: IESA

ETPrime

Optimus is among those approved for the PLI scheme for mobile phones, IT hardware and telecom products. It has two factories in Noida, Uttar Pradesh.

Early in September Padget Electronics a subsidiary of Noida-based contract manufacturer Dixon Technologies, became the first company to receive INR 53.28 crore disbursement under the PLI scheme after it achieved production targets set by the government under the scheme.

Now, the parent company Dixon is aiming to increase its electronics exports by six times in the current fiscal, up from INR600 crore last year.

Agarwal of Bhagwati Products says, "Those who have been approved for PLI have got recognition in the country for electronics manufacturing. Things can only improve from here in terms of scale and capability."

Bhagwati Products makes products for brands, including tablets and laptops for Acer, TVs for Realme, Skyworth, itel, and others. It has got PLI approval for three products — mobile phones, IT products (including laptops and monitors), and air conditioners.

Missing local brands

While PLI has provided the much-needed catalyst for electronics manufacturing, there's still a long way to go to create Indian brands and manufacturing from the ground up.

What passes for manufacturing is mostly assembly of kits imported from China and elsewhere.

Unlike automobile manufacturing, in electronics and IT hardware, the manufacturer and the product owner are often different. For instance, Apple, Oppo, Vivo outsource manufacturing while some like Samsung make smartphones mostly in-house.

Components, mainly integrated circuits (ICs), semiconductors, components that go on to printed circuit boards (PCBs), and display panels, are imported and constitute 50%-70% of the cost of the final product. As in TVs, panels are imported and cost between 60%-65% of the final product.

Agarwal says, "In any electronics, a majority of the components used are not made locally in India. For instance, there's no maker of memory chips or display screens in India."

The USD20 billion Vedanta-Foxconn display and chip fab in Gujarat, as announced early in September, won't roll out its first chips for at least another three to four years.

Also, the way the industry is structured, particularly in smartphones, very few companies dominate the market. Apple from the US, Samsung from South Korea, and Vivo, Oppo, and Xiaomi from China.

"These are the guys who call the shots when it comes to component sourcing," says an industry observer.

Components for smartphones come from Micron, Intel, MediaTek, TDK, Samsung, Qualcomm, Western Digital, Broadcom, and other global companies. So in this complex chain, even Chinese manufacturers are dependent on others for sourcing electronics components. "These companies have historically not seen India as a major market, as volumes were not there," says an industry veteran who wished not to be identified.

This could change, but as of now, components are shipped to manufacturers in China, who assemble them in kits and ship them to electronic manufacturers in India and elsewhere.

Manufacturers in India assemble them on SMT machines and other machines like the ones sold by Fujitsu, Hitachi, Juki, Panasonic, Yamaha, and others.

Satya Gupta, founder and CEO, EPIC Foundation says, "The components purchase order has to shift from China to India to enable local sourcing. China has had more than a decade's head start over India in electronics manufacturing. It will take time to change." EPIC is a not-for-profit organisation launched with the aim to revive the Indian electronics industry by creating Indian products and Indian brands.

Industry needs to work closely to aggregate demand for components. Say, there are electronic components that go into air conditioners, smart speakers, smart bulbs, and other smart gear, but different manufacturers are not able to consolidate demand. Hence not enough scale is there to make components manufacturing viable.

Nitin Kunkolienker, director, Synegra EMS, a maker of networking and telecom products says, "Capex needed for component manufacturing is very high. Besides there's no demand aggregation which makes it unviable." PLI incentivises the final product but misses out on improving supply chains, say industry experts.

So cargo handling and containerisation remain not only patchy, but expensive compared to other countries, leading to higher costs of products made locally compared to other countries.

Create own intellectual property, investing in R&D

Besides, almost everything India manufactures is from global brands and global design "Global companies are not willing to get into technology transfer design. Global companies are not willing to get into technology transfer arrangements. How will we create, say, tomorrow's Lenovo or Intel from India?" asks Gupta.

Interestingly, China also moved from assembly to manufacturing complete products and owning brands like Vivo, Oppo, and Xiaomi as they invested in R&D, innovation, which has been missing in India so far.

While assembly of electronics products by putting together kits imported from China and elsewhere is getting bigger, the challenge will be to build local brands as well.

Gupta says, "PLI is helping us do the assembly-line manufacturing. We have to move a step ahead and get into product ownership, intellectual property (IP) ownership, and brand ownership."

The bottom line

A components ecosystem is likely to come up as global manufacturing giants including Foxconn and Wistron expand their presence in India and seek local sourcing.

Agarwal looks at it as a 10-year journey to build a complete ecosystem. "It's phased manufacturing. You can't do that in a hurry. The automobile ecosystem took about four decades to build. In electronics, we are just starting to build scale, which will lead to backward integration. It's a slow process," he adds.

Sunil Vachani, chairman and managing director, Dixon Technologies, says the lack of components ecosystem is a big challenge for electronics manufacturing. "The next PLI or PLI 2.0 should focus on making components locally."

The way electronics manufacturing happens, nobody is completely self-sufficient, depending on multiple partners, economies of scale, and complex global supply chains.

But owning product intellectual property is a different ball game. PLI has kick started manufacturing, and the next logical step would be to invest in R&D and build own products. "That's when you create a seat on the global manufacturing table," says Gupta.

2. Télécommunications

India's Jio reveals 5G launch timeline, vendors and more

LightReading, 31/08/2022

India's largest service provider, Reliance Jio, has announced it will launch 5G standalone (SA) services by Diwali, which falls in the second half of October this year.

The company will initially focus on the metropolitan cities of Delhi, Mumbai, Kolkata and Chennai before expanding coverage to the entire country by December 2023. Jio's rival, Bharti Airtel is also planning to launch 5G in October.

"Jio's ambitious 5G rollout plan will be the fastest in the world," said Mukesh Ambani, chairman and managing director of Reliance Industries, in his address at the company's 45th annual general meeting.

The company will invest a total of 2 trillion Indian rupees (US\$25 billion) to build a pan-India 5G network.

'True 5G'

During the speech, Ambani and other Jio speakers referred to its 5G SA-based services as "true 5G" to differentiate from Airtel and Vodafone Idea's services, which are building 5G non-standalone (NSA).

Jio is the only Indian service provider which acquired 700MHz spectrum in the recently concluded auction to launch 5G SA.

"Most operators are deploying a version of 5G, called non-standalone 5G, which is essentially a 5G radio signal delivered over an existing 4G infrastructure," said Ambani.

"This non-standalone approach is a hasty way to nominally claim a 5G launch, but it won't deliver

the breakthrough improvements in performance and capability possible with 5G."

Awarding 5G contracts

Ambani also mentioned that Jio already has a well-established relationship with global vendors Ericsson, Nokia, Samsung and Cisco, and will now also be working with Qualcomm for 5G.

Qualcomm has also invested in Jio Platforms, the parent body of Reliance Jio Infocomm.

"I'm excited to be working together on cloud-native, scalable, and flexible 5G infrastructure, in both mmWave and sub-6GHz, to develop an ecosystem that can extend beyond India," said Cristiano Amon, CEO, Qualcomm, who participated in the AGM virtually.

In addition, Jio will also be working with Microsoft for Azure and Meta to develop immersive technology.

The operator is also collaborating with Google to develop affordable devices and Google Cloud "to offer Jio's private 5G stack and other 5G-enabled solutions to both domestic and global users at scale," and Intel for technologies used in its data centers, 5G edge locations and AI applications.

For 4G, Jio had an exclusive partnership with Korean vendor Samsung for its radio access network (RAN).

Airtel has also recently announced partnerships with Ericsson, Nokia and Samsung for building 5G networks.

"We have indigenously developed an end-to-end 5G stack which is fully cloud-native, software-defined, digitally managed, with support for even advanced features like quantum security," said Ambani.

"This is fully developed in-house by our 2,000-plus young Jio engineers, working tirelessly for the past three years. We have already deployed

this made-in-India 5G stack in our network, with sufficient capacity to serve hundreds of millions of users right from day one."

Jio bets on fixed wireless access (FWA)

Jio announced the launch of Jio AirFiber (or FWA), a plug-and-play device that will be connected to Jio's 5G network to provide a personal Wi-Fi hotspot. Users can also opt to use a virtual PC, Jio Cloud PC.

The service provider also revealed the aggressive target of connecting 100 million households through 5G fixed wireless access (FWA). India has one of the lowest rates of fixed broadband users, and FWA could help address this gap. It will also help Jio increase its average revenue per user (ARPU), as it can provide several services through FWA.

Jio and Meta partner For JioMart

In a separate release, Jio Platforms, in partnership with Meta, also announced the launch of end-to-end shopping on WhatsApp for JioMart.

India proposes far-reaching changes in telecom regulations

Lightreading, 26/09/2022

India's Department of Telecommunications (DoT) has come up with the draft Telecom Bill 2022, which proposes to change the equation between government and the telecom industry.

The key idea is that it consolidates three acts (the Indian Telegraph Act 1885, the Indian Wireless Telegraphy Act 1933 and the Telegraph Wires (Unlawful Protection) Act 1950) into one.

It recently circulated the first draft for public/stakeholders' comments. The bill primarily focuses on the ease of doing business, ensuring proper infrastructure, better use of 'valuable' spectrum and rules and regulations for litigation.

Below are some of the key amendments:

OTT players to come under a licensing regime

One of the most contentious issues in the industry is that service providers have been demanding the inclusion of "over-the-top" (OTT) players in the licensing regime.

If the proposed bill becomes law, services like Whatsapp, Zoom and Google Duo may soon require a license to operate in India as their calling and messaging services compete with the services offered by telcos.

Limiting TRAI

Significantly, it proposes to dilute the telecom regulator's role as a recommendatory body.

This would do away with the requirement for the telecom department to seek views from the Telecom Regulatory Authority of India (TRAI) before issuing a new license to a service provider.

Currently, the DoT has to refer recommendations back to TRAI for reconsideration.

The proposed legislation does away with this provision, severely limiting TRAI's powers.

Telecom infra push

The proposals seek to ease the licensing processes, getting authorization or registration for the use of telecom infrastructure, and so on.

The draft says that to provide infrastructure, an entity will have to obtain only a registration, not a license.

It seeks to remove obstacles to building networks by providing an enabling framework that facilitates RoW (Right of Way) issues.

Any public entity that receives an RoW application from a facility provider is asked to grant permission in an expeditious manner.

Rejection of an application, the bill says, can only be for limited substantive grounds.

Even with private property, a service provider can submit an RoW application. However, government intervention will be necessary if the owner rejects the application.

Regarding insolvency, restructuring

One of the most significant proposals centers on the clarification of the issue of ownership of airwaves when a service provider becomes bankrupt.

If a service provider goes through bankruptcy or insolvency, the assigned spectrum or airwaves will revert to the control of the government.

They can continue to provide telecom services as long as there is no default on the payment of dues, and all terms and conditions are complied with

The bill also seeks to simplify the framework for mergers, acquisitions and other forms of restructuring.

Once this takes place, service providers must inform the licensing authority, the DoT. The new entity has all the terms and conditions applicable to a licensee or registered entity.

Ensuring user protection

The draft bill has a provision related to the identity of the caller. The Telecom Department plans to start a Truecaller-like service, where the user knows who is calling, to prevent cyber fraud.

A legal framework has also been proposed to prevent the harassment of users by unsolicited calls and messages.

Other major changes include the expansion of the Universal Service Obligation Fund (USOF), currently used to provide telecom services to rural areas at affordable prices. The fund would be renamed the Telecom Development Fund, and also be used for research and skills development.

The draft is controversial. As stakeholders and the public have until 20 October 2022 to comment, the final bill is likely to be a much toned-down version.

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