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Attending to this matter: Ashwani Kumar

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Shri Arvind Kumar
Advisor (BB&PA)
Telecom Regulatory Authority of India
New Delhi.

Subject: Response to TRAI Consultation Paper No:12/2017 on "Promoting Local Telecom Equipment Manufacturing"

Dear Sir,

We at Ericsson wish to reiterate our strong belief in the India's growth story and are fully committed to be part of the government's inclusive growth plans. Ericsson is committed to domestic manufacturing of products and the example is our substantial investments in India, including on setting-up manufacturing units. We appreciate the aspirational goal of India to become the next major manufacturing hub for domestic consumption.

Ericsson has been associated with the Indian telecom industry for over 114 years. Our customer base spans across all the major operators in the region. Our partnership with India began in 1903, when we supplied manual switchboards to the Government of India.

Over the past 140 years of its global journey, Ericsson has been at the forefront of communications technology. Today, we are committed to maximizing customer value by continuously evolving our business portfolio and leading the ICT industry. We are a global leader in delivering ICT solutions. In fact, 40% of the world's mobile traffic is carried over Ericsson networks. We have customers in over 180 countries and our offerings include comprehensive industry solutions ranging from Cloud services and Mobile Broadband to Network Design and Optimization.

Our services, software and infrastructure - especially in mobility, broadband and the cloud - are enabling the communications industry and other sectors to do better business, increase efficiency, improve user experience and capture new opportunities.

Ericsson has one of the industry's strongest patent portfolios with a total count of over 42,000 granted patents. R&D is at the heart of our business and approximately 23,700 employees are dedicated to our R&D activities. This commitment to R&D allows us to drive forward our vision for a Networked Society - one where everyone and everything is connected in real time - enabling new ways to collaborate, share and get informed.

We wish to submit a few points for your consideration that will help to expedite the above mission and will help the growth of high value and scale of manufacturing in India.

1. Domestic manufacturing – A perspective

The matter of telecom equipment manufacturing in the country has been debated in various fora and it is evident that several actions are needed to support this vision. Any exercise in piecemeal would not achieve the intended results of local manufacturing. Without the requisite ground-preparations, forced localization policies will limit the flexibility in procurements with the potential to increase cost, supply-chain disruptions, decreases choice, and impair the ability of the government to meet its end objectives for local manufacturing.

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In today's manufacturing, scale is everything. We reiterate that the focus of local manufacturing in India should be exports from Indian manufacturing hubs rather than a priority for just imports substitution. The efforts should be made on global competitiveness of Made in India products in global markets so that large scale is secured by the ICT products.

Estonia and China are leaders in manufacturing not because of their own domestic market but because of being the hub for global manufacturing. They are also leaders in manufacturing because most of the world's top companies have made these countries, their base for manufacturing.

India's manufacturing has got to be addressed as a complete ground up ecosystem. Easy availability to quality components and raw materials is possible, only if global raw material suppliers are incentivized to manufacture domestically from a FAB unit in India. This will accelerate manufacturing and build widespread manufacturing capability, jobs and in the future Indian companies will spin-off from there.

The Indian Government should also find a way to encourage companies who have a long-term vision, commitment for the country and technology. Giving a preferential treatment to them will help in eventually nurturing a product vision, investments in Research & Development, exports and creating a global supply-chain eco-system.

For India to become a center for telecom equipment manufacturing, there are many important and fundamental issues that need to be tackled realistically.

1.1. Global view on manufacturing

It is evident that the hi-tech industry is globally dispersed and inter-dependent. The countries, who dominate manufacturing sector, have developed expertise in select areas in the hi-tech equipment value chain, but, none of them are solely self-sufficient across entire value chain, as some components / sub-assemblies are still needed to be imported to create a final product.

Various parts of products are made at locations subject to cost of labor, availability of skills and availability of components and raw materials. As a result, the fact is they are plugged in to the global supply-chain.

From global perspective, we observe the following trends:

- The progression of various leading manufacturing countries started with import substitution inching towards export orientation in a gradual manner.
- Technological capabilities have been developed starting with assembly, following a backward integration approach through manufacturing to design.
- This shift from assembly to design has been driven by many technology development programs.
- While addressing the manufacturing environment, this is an established and acknowledged fact that electronic manufacturing requires more targeted incentives, creating necessary infrastructure, ease of approvals, conducive export conditions and related processes than just the tax based incentives.
- Kick-starting high-tech electronics manufacturing calls for developing specialized clusters with anchor and synergistic tenants; and this to happen, government role is critical as evidenced across numerous successful countries, most recent ones being Estonia and Thailand.

2. Nature of telecom manufacturing

Telecom network products cater to a limited customer segment i.e. telecom operators, essentially a B2B market with a limited number of clients. This is a market which caters to specific customers with diverse network evolution stages. Product based solutions are built according to highly regimented global standards. To manage the complexity and costs, it is inevitable to keep the development and manufacturing localized at some global locations to distribute the costs over large volumes across countries of operations.

While on the contrary, in the case of consumer products, owing to low complexity but large volumes allow distributed development and manufacturing. Therefore, a carefully evaluated balance between localization and globalization is key to keep the costs optimized. The policy should be so structured to provide stimulus to both equitably.

We suggest that the government should promote overall electronics manufacturing eco-system within the country which should be plugged into the global supply chain. As you are aware, the current raw material and electronic components ecosystem in the country is still developing and needs to be expedited.

3. Preferential Market Access Policy for Government (PMA-G) Procurement

A study of global situation leads to believe that creating barriers for global companies is never a productive solution. Telecom technology is rapidly evolving market with substantial R&D budgets to the tune of about USD 5 Bn annually and handful of OEM's left in the market raising the share of development budget among the few. The development cycle of new generation of mobile technologies is reducing with each upcoming generation. That said, the R&D spends on telecom technologies is exorbitantly high and laid with huge business risks due to telecom/ ICT being highly regulated sector.

Despite the challenges mentioned above, Ericsson has manufactured over 400,000 radio base stations, besides other products such as core nodes, microwave radios etc., from its Indian facilities for 2G, 3G and 4G technologies and ramping it up further. Despite this, Ericsson is not qualified to participate in Govt. procurement tenders because of the PMA conditions, since the telecom/ ICT requirements are network and/or solution based but not product based.

The complexity in a network/ solution based RFP's for a telecom equipment manufacturer to qualify for PMA based RFP' in India are - some products such as BTS are in large volume (hence produced in India) and few products such as IN, UDM, AAA, BNG, OSS require in a very small quantity (less than 5 for a pan-India, hence produced at one location globally). It is not viable to produce the low volume products from multiple locations for a global OEM, as it loses the advantage of **economies of scale.**

3.1. Challenges in local value addition

The current policy is founded upon higher value addition norms calculated in terms of BOM %. With high thresholds for value addition parameters, needed to qualify for PMA based RFP's are dis-incentivizing large global manufacturers to qualify the value addition requirements, while they are the essential levers for local manufacturing. This has been endorsed by the COAI and Booz & Co. study.[1]

The study revealed that components, PCB and packaging material accounts for roughly 80% of the product cost and without local IC fabrication facilities, value addition beyond 20% is not possible. We would like to re-emphasize that this percentage of value addition is subject to the development of the component ecosystem in India.

[1] Booz study on Equipment Manufacturing Policy (https://coai.com/content/equipment-manufacturing)

Moreover, to leverage the cost competitiveness of the products manufactured in India, it is inevitable that components and raw material are locally available and products are manufactured not only for local consumption but for exports to the world. This is essential to ensure necessary economies of scale.

3.2. Changes needed in PMA

The initiative of OEMs having invested huge capital to set up manufacturing facilities in India for domestic consumption and exports of hi-tech products should be recognized and incentivized.

To further encourage manufacturing in India, such OEMs (local or global) should be considered as domestic OEMs with respect to PMA, to factor in the risks and investments incurred by such OEMs and the business benefits to the nation.

Till such time, we have the ground readiness for local manufacturing, there is a need to review the approach to PMA policy. There are actions that would need to be done which are explained as below.

- The methodology of computation of value addition needs to be re-considered. The local value addition should take in to account the credibility of the manufacturer, investments in infrastructure (machine, land, power and related costs), track of services and goods exported, contribution of the manufacturer to employment generation and skill building in addition to locally developed PCB/Boards including assembly, integration, packaging, testing etc. conducted locally. We request Government of India to favorably consider the following parameters while qualifying Telecom procurements under PMA (G) policy
    - Existing manufacturing unit of a global OEM who is **present over a certain number of years**, with **a certain turnover and employment for telecom in India as a whole entity,** should be recognized as an Indian manufacturer and qualified for all the government procurement.
    - PMA should not apply to products which do not have enough vendor base or those for which it is not viable to manufacture in multiple locations.
    - Exports should be considered as a value addition % in PMA. Such a change would enable larger volumes and thereby would also encourage global large-scale component manufacturers to set up manufacturing in India, which would lay the foundation for real benefits out of local manufacturing.
    - Till such time, India develops a local-components manufacturing ecosystem, all the Silicon components imported as raw material, should be considered as equivalent to domestic value addition, if they are used to produce the final PCB assembly locally, through the SMT process.
        - Simultaneously, as a 1st Stage, Indian Government with the support from leading global equipment manufacturers, should ensure to bring those global Silicon manufacturers to stock the silicon components in India as stockists, dealers, distributors
        - At 2nd Stage, encourage the global Silicon manufacturers to manufacture the Silicon in India, once the FAB Unit is ready and supply to domestic needs as well as exports to rest of the world as a HUB meeting the global requirements.
    - Since, Assembly, Integration and Testing is an integral part of any product being manufactured at a facility, % of all associated costs must be considered as %VA in the final product being manufactured. We propose internationally well accepted and recognized manufacturing practices to be adopted by India. The three stages as laid out in Substantial Transformation should be accepted as meeting the value addition (VA) criteria in line with the policy. These three stages include:
        - Stage 1: Final Assembly & Test (FAT) - to be deemed to constitute value add of 25%

- Stage 2: FAT + PCBA (Printed Circuit Board Assembly) - to be deemed to constitute value add of 50%
- Stage 3: FAT + PCBA + domestic component sourcing - to be deemed to constitute value add of 80%

- Contract manufacturing should be used as a tool to increase the growth of manufacturing in India, like all global manufacturing hubs in other countries.

However, in the interim, as infrastructural / legislative and fiscal policies get restructured, we request that the government considers global technology organizations like Ericsson, with its strong commitment over a century to India's economic growth, at par with any other Indian entity for qualifying for all Government procurements.

4. Role of Global Standards

To succeed in global market place, products need to be built as per global quality, safety and technology standards. Global harmonized technology standards ensure economies of scale, global roaming, interoperability and multi-vendor options. This is inevitable to keep the direction and topics of research well aligned with the industry needs and in perfect alignment with the approach taking shape in relevant global SDOs. The enhanced focus of the national SDO should primarily be to conduct comprehensive and holistic requirements analysis (business, technology and regulatory) and to act as a platform for alignment between industry and research institutions. The objective of local SDO should be that global harmonized standards include the India specific requirements while remaining aligned with global technical regulations being developed in India. A continuous calibration between industry and research institution is what is needed to ensure that global standards address the India specific requirements in the final harmonized outcome.

5. Certification and Testing of Telecom Equipments

The idea of product certification is to ensure that products are built with adequate measures comprising Safety, EMI/EMC compatibility, Security and Radio coexistence. We draw your attention to the fact that the list of products that are to be subjected to testing and certification have already been meeting relevant legal and regulatory requirements in over 180 different markets including India and large global telecom OEM's such as Ericsson ensure high environmental and social standards. Telecom products are developed based on the global standards and undergo various testing and certification process at globally reputed international labs for health, environment, safety, conformity assessments, etc.

Besides, telecom operators in India, does include the mandatory compliances & standards in their RFP's and such undertakings are very much an integral part of the OEM's compliances, that are contractually binding with both telecom operators as well as prevailing statutory/ regulatory requirements of country.

Since most of the equipment coming from Global OEMs already come with pre-certification from Conformance Assessment Bodies (CAB) or from internationally reputed test labs on specific international technical specifications), duplication of testing will definitely compromise ease of doing business – adding to cost and time lines. USA regulator, FCC has simplified the testing regime through its notification dated July 14, 2017 that states **Quote** "Replacing these two process (self-approval & verification) with one will provide a unified process for the authorization of those RF devices that are well suited for self-approval; i.e. equipment that has a strong record of compliance and for which there is minimal risk of harmful interference" **Un Quote**.

FCC also state that the existing Supplier Declaration of Conformity (SDoC), at the EU, where a responsible party must prepare a European Commission SDoC, when introducing an RF product to the market. The proposal states that the responsible party for equipment would test equipment for compliance to specified standards or requirements and self-certify to public by way a statement supplied with product that the equipment complies with the rules.

While the world is looking at India as an investment destination in a weak global economic growth phenomenon, Indian government under the able leadership of Prime Minister Shri Modi is working hard in building confidence with large global investors and to attract FDI in India.

The proposed and the existing multiple testing regimes would only take back India to the pre-liberalization times weakening our position on ease of doing business in India.

We request the Government of India to drop the idea of mandatory testing of telecom equipment, at least for the globally reputed companies on product compliances and impose a SDoC regime in line with US FCC and EU, where the vendors undertake to certify the compliance to the standards and requirements as specified by the Government, validity of those declarations can be verified by the authorities at any point of time.

6. Re-import of used spares post repair and ease of import of used R&D equipment

Currently Ministry of Environment and Forest (MoEF) and MeitY (Ministry of Electronics and Information Technology) to prevent old electronics equipment into India under the e-waste policy and the "Make in India & Digital India Campaigns" to reduce electronics import in the country have restricted import of old electronics equipment older than one years and to re-export within 3 years.

The processes should allow-

- Easy and free movement of new and used capital goods/ test equipment in and out of the country.
- Raw material import and re-export of unused/excess/obsolete
- High tech faulty products for Repair and Return business targeting global volume

7. Ease of Doing Business

Any duties & taxes structure/tariff barriers would distract foreign investor confidence and may become barrier to develop environment for the telecom industry's growth and investment to boost domestic production of telecom products.

1. 24/7 customs clearances, fast track clearances for manufacturing
2. Also, extend SEZ like benefits to non SEZ units which are large in terms of value of manufacturing
3. We urge, Government of India, Ministry of Communications to withdraw the additional import duties on ITA-1 and ITA-2 products and help the manufacturing eco-system in India flourish with domestic as well as foreign investments.

We request your kind consideration of the stated suggestions while taking a decision about telecom products and its eco-system in India. This would not only encourage global companies like Ericsson to invest more and at the same time improve confidence on ease of doing business in India.

Thanking you,

Yours sincerely,

Sreenivasa Reddy

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