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CUTS INTERNATIONAL & CUTS INSTITUTE FOR REGULATION & COMPETITION

ROUNDTABLE ON

DESIGN IN INDIA TO MAXIMISE 5G OPPORTUNITIES

Friday, 30 November 2018, New Delhi

EVENT REPORT

1. INAUGURAL SESSION

Topic: "Make in India is important but Design in India is equally important"

Chair: Pradeep S Mehta, Secretary General, CUTS International

Speakers: Vikram Tiwathia, Deputy Director General, Cellular Operators Association of India; Shubha N. Bhambhani, Principal General Manager (C&M), Bharat Sanchar Nigam Ltd.; Arvind Mayaram, Chairman, CUTS Institute for Regulation & Competition (CIRC).

Proceedings

The session focussed on empowering India to enter the global manufacturing value chain concerning the Information and Communication Technology (ICT) sector, and reap the maximum benefits from the upcoming 5G Ecosystem. Emphasis was laid on encouraging India to focus on 'Design in India' rather than 'Make in India'; to promote innovation and develop relevant skillsets required for best utilisation of 5G opportunities in India.

In the background of the "5G High Level Forum Steering Committee Report" of the Department of Telecommunications (DoT), discussions revolved around the need to promote the awareness of 5G; understanding the meaning of 5G; India's potential to explore 5G opportunities; benefits of developing a 5G ecosystem in India; need for attracting investments; major challenges attached in exploring these opportunities; shortcomings being faced in adapting the 5G technology etc.

It was noted, that in Indian mobile manufacturers were largely assembling mobile phones, with no contribution to its Research and Development (R&D). It was, therefore, suggested that India should focus on designing smartphone components, along with participating in, and contributing to global standards development processes. The spectrum of 5G opportunities is expected to be much larger than its predecessors, and India needs to maximise the benefits from it.

The suggested way forward included incentivising skill development for creating quality job opportunities, uplifting India's participation in the Global Value Chain (GVC) for attract investments, all of which will eventually contribute to consumer welfare. Potential use cases of the 5G mobile technology in India were also discussed, such as smart agriculture, smart cities, driverless cars etc., identification and deployment of which required investments in in on-field trials. Leveraging 5G technology was considered imperative in various social sectors like education and healthcare.

Further, it must be noted that unlike transition from 3G to 4G, which showed a considerable amount of continuity, the same is not true for transition from 4G to 5G. A significant amount of infrastructural and technological changes would be need, including bandwidth. The key question is who will invest for such changes and how will the investment get recouped? At present, the telecom industry is struggling on investment front.

The panel discussed the following key questions:

1. What steps does the government need to take to attract 5G investments in India?
2. What does the government in collaboration with industry players need to do to attract foreign investments and develop skills in the ICT sector?
3. What are the roles of various stakeholders in developing the skills in ICT sector?

Various challenges were identified by the speakers in making the best utilisation of 5G opportunities in India. These included: lack of awareness amongst people about 5G opportunities; low level of participation of India in International Standards Development Organisations (SDOs) concerning 5G; infrastructure and connectivity challenges; lack of coherence within Ministries for 5G planning and implementation; insufficient broadband connectivity threshold for absorbing the 5G etc.

The speakers suggested a few suggestions to overcome the challenges by undertaking the capacity building, making the start-ups and various stakeholder aware of the opportunities attached with 5G; corporates and government both to undertake the capacity building task; training the training institutes; engaging into public-private models to achieve the desired results; properly utilising government funds etc. One specific recommendation to tackle poor connectivity and infrastructural issues was backhaul improvement. It was acknowledged that to handle exponential march of technology and data growth, the backhaul (that carries traffic back from smartphones to the core network) portion of the network also needs to improve significantly. Other recommendations revolved around improvement in the health of the sector as a whole so that investments could be promoted.

The session also witnessed the release of a CUTS' report titled 'Standards Development and the 5G opportunity', which focuses on importance of developing standards and exploring 5G opportunities for India. An executive summary of a report titled 'Linkages between IP and Start-ups' was released by CIRC.

2. Roundtable Discussion

Topic: "Role of key stakeholders in attracting investments and developing skills in India's ICT sector"

Chair: Arvind Mayaram, Chairman, CUTS Institute for Regulation & Competition

Speakers: Yaduvendra Mathur, Additional Secretary, NITI Aayog; Vipin Tyagi, Executive Director, C-DoT; Santanu Mukherjee, Advocate, Supreme Court; Debashish Bhattacharya, Director - Technology & Policy, Broadband India Forum; Tarun Khurana, Partner and Patent Attorney, Khurana & Khurana Advocates and IP Attorneys.

Proceedings

This session witnessed detailed discussions on the way forward for India to move up the GVC from 'manufacturing' of ICT equipment to 'designing' of such equipment, in the context of 5G ecosystem.

At the outset, four critical areas for India to leverage the 5G opportunity were highlighted: (1) *policy* to map out India's vision for 5G; (2) *regulation* to determine how fast we grow; (3) *finance* to support high-risk research and innovation; and (4) *market growth* that will determine India's ability to support the emergence of new age markets.

Vis-à-vis *policy,* it was first and foremost felt that in order to shift from manufacturing to designing in the ICT sector, India needs to adopt designed thinking and an approach of policymaking - that emerges from practice and is evidence-based. The approach on evidence-based policy making, i.e. "policy follows from practice" – requires collection and management of on ground data which then feeds into the policy framework to make it effective. Such an approach is crucial for devising optimal regulations. Without relying on evidence, sub-optimal regulatory provisions usually emerge that can go on to kill innovation and start-ups.

With regard to *regulation*, the importance of framing light-touch regulations was emphasised. Regulations will need to be flexible enough so that the usual process of catching-up with rapidly advancing technology becomes easier. Moreover, in order to build trust in technology, regulators would need to be extra sensitive towards the security, privacy and ethical issues that will emerge in the future.

With regard to *finance* and *market growth,* the need to frame incentivisation mechanisms for encouraging innovation through investments was emphasised. This is because if India seeks to increase its global competitiveness in the evolving digital space, there is no doubt that core innovation through R&D needs to be encouraged. 'Growth without innovation is like a tree without roots.' This would require investments, market access for start-ups and generation of fundamental innovation capabilities. To that end, commercialisation of IPRs and adequate protection of IP will play a key role.

Specifically, in the ICT product manufacturing space, India needs to take the next step and move from assembling of Semi-Knocked Down (SKDs) to actually adding value. Presently, the local value addition stands at a meagre six percent in India (China's value addition in 60 percent). For this to happen, Indian manufacturers do *not* require the support of protectionist policies (such as favourable licensing rates for domestic players) because as soon as the government indulges in protectionism (for e.g. deciding what the patent royalty rates will be), it jeopardises the incentives of the firms to innovate and supports inefficiency. What is currently required is incentivisation for generating Intellectual Property Rights (IPRs) through attracting investments and encouraging Indian firms to focus on R&D. For this, the entire innovation ecosystem would need to be revisited or renovated.

Another area that India needs to work on is its participation in international standards development bodies. We may learn from the Chinese experience in this regard. China has been able to capture the global market because of its dual policy of: (a) incentivising local players to innovate; and (b) encouraging them to leverage the global standards development process. Indian companies however, missed the bus and never invested in technology development and R&D. Because of this, Indian firms have largely remained implementers of technology and participation in SDOs has not been their strong suit. Generating and commercialising IPRs, especially through patent-licensing will give a fighting chance to Indian companies (as they can cross-licence) and would enable them to compete globally. Therefore, start-ups and Indian firms need to invest in R&D and leverage the standards development processes and the government needs to primarily focus on incentivising this process.

India would also need to keep in mind that the dynamics of telecom equipment (basic equipment that enables connectivity) manufacturing is different from that of mobile set manufacturing. The former is a B2B market, and is much more technical/complex (as against the latter). The market functions in a global cluster where only a few regional clusters serve the entire global demand. Presently, India imports around US$40bn worth of such equipment. Thus, in order to become more competitive in telecom equipment manufacturing, the focus should be on how the import dependence in telecom equipment can be brought down and also how India can manufacture not just for its domestic needs but for exports as well, i.e. “Make in India for India and the world”.

Overall, the current Indian innovation ecosystem can be improved by taking the following steps:

a) Setting up of R&D hubs for IP creation
b) Identifying India-specific use cases for 5G and actively encouraging participation in the international standards development process
c) Removal of artificial barriers and infrastructure bottlenecks
d) Enabling market conditions, attracting investment for R&D and minimising transactional costs to manufacture not just for India but also for the world
e) Tackling the duty arbitrage for improved value creation
f) Facilitating and setting up of trials and world-class semi-conductor fabs in India
g) Improving certainty of law for adequate protection of innovation; primarily by revisiting the conservative patentability criteria set by Section 3(k) of the Patents Act *vis-à-vis* patentability of software. Also, revisiting the patent workability conditions under Form 27 (b) and updating it to fit modern realities
h) Improving broadband connectivity in India which will complement the upcoming 5G ecosystem
i) Taking an evidence-based, multi-stakeholder approach towards policy-making

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