

My primary comment is about 3.5.

We should primarily depend on entrepreneurs to set up companies which will drive and leverage r&d. Government should fund such entrepreneurs either taking stakes or loans. About rs 1000 crores should be set up government every year for this for telecom sector.

Jena, should I write separately or will you be able to cover this on my behalf.

Ashok

Chairman, TRAI,

Dear Sir, Please refer to your consultation paper on Telecom Manufacturing in India. Here are some of my views.

Thanking you,

Ashok Jhunjhunwala

IIT Madras

1. What should be the objective and focus of the R&D effort for the year 2020?
 - a. Generate at least 25% of global IPR and enable at least 50% of equipment used to be manufactured in India.

2. Flowing from the above, what should be the objective and focus of the R&D effort for 2015?
 - a. Combination of IPR generation for 4G wireless and for IMT standards and creating companies which can design and develop products and manufacture and sell commercially.

3. What is the level of 'Indian Products' that we should attempt to achieve at the end of 2015 and 2020?
 - a. 25% by 2015, 50% by 2020.

4. What is the broad level of investment required for this effort?
 - a. Create and fund R&D entities associated with IITs and such institutes.
 - b. Create private sector entrepreneurs in the area (and provide government support as equity / loan)

5. Which Institutions, whether in the Public or private sector, are best suited to carry out this effort? And why?
 - a. IITs, TCOEs and CeWIT in public sector; a number of companies in private sector. New ones can come in.
6. What can be the linkages established with Institutions or Indians abroad? Will this reduce time delays?
 - a. Let it be handled by research organisations and companies. A large number of Indians are now coming back.
7. What should be the role of the Government and the Industry in regard to the R&D effort? In particular, what should be the investment, if any, by the Government?
 - a. Provide financial support
 - b. Enable Indian companies to test and introduce their equipment in Indian network.
8. Should an R&D fund be set up? If so, how can the fund be managed effectively to meet its objectives?
 - a. Yes; more than one fund should be set up. Some could be run by DOT with an advisory and approving body like project co-ordinators of TCOEs and others with smaller venture fund. Emphasis has to be IPRs and equipment for next generation telecom services.
9. What could be the fiscal incentives to be offered by the Government? Should such incentives be linked to any outcome?
 - a. R&D organisations should be given tax free status and first three years of product manufacturing can have tax-free status.
10. What are the components that can be manufactured in the country with due consideration to commercial viability?
 - a. Systems should come first; it will then drive components.
11. What should be the degree of indigenous manufacture of components that we can reasonably achieve in time frames of 5 and 10 years?
 - a. Same as in 10.

12. What, do you think, is the feasibility of setting up of commercially viable fabricating units to manufacture chips, ICs?
 - a. Same as in 10
13. Is the Duty on components currently being levied high? If so, on what components can the duty be reduced? What are the financial implications and the corresponding benefits?
 - a. Yes, it will help.
14. Should electronic Manufacturing service companies be incentivised? If so, how?
 - a. No comments
15. Should the concept of mandatory use of Indian products/Indian manufactured products be introduced in the Indian context? If so, can this be introduced immediately or should it be introduced at a later date? If so, by what date?
 - a. Yes, some phased usage must be mandatory or a percentage of revenue has to be given to a R&D fund.
16. What could be the percentage to be stipulated for both these categories?
 - a. In a phased manner I could be considered.
17. What should be, if any, the incentives to be given to individual service providers for use of Indian equipment?
 - a. The disincentive in terms of higher-percentage outflow will be better.
18. Likewise, what could be the disincentives, if any, for use of imported equipment? This is compatible with international agreements?
 - a. See answer to question 15.
19. What could be the duty structure to be imposed on imported goods?
 - a. No comments.
20. Should a percentage of the Indian market be reserved for the Indian manufacturers? If so, what should be the percentage?
 - a. See answer to question 15.
21. What, if any, could be the implications of such a step?

- a. Indian R&D, IPR and manufacturing will grow.
22. What, if any, are the advantages of setting up of clusters for manufacture of Telecom equipment within the country?
- a. No comments.
23. What is the investment required for setting up of such clusters?
- a. No comments
24. How can the financing of such clusters be best done, based on international experience?
- a. No comments
25. What would be the lead time required for setting up of such clusters?
- a. No comments
26. What are the considerations for the location of such clusters?
- a. No comments
27. What, in your opinion, would be the best agency to set up and manage such a Common facility/ies?
- a. No comments
28. What would be the facilities and the level of investment required in such a facility?
- a. No comments.
29. How will such an investment pay for itself?
- a. No comments
30. What, in your opinion is the likely requirement of Capital for companies that could take up the manufacture of telecom equipment?
- a. They could require support / equity to the tune of 250 Crores or so. Rs 100 Crores could come from government.

31. What could be the best manner of facilitating availability of capital to such firms?
 - a. Equity + loans

32. Would setting up of Institutions like ITRI be desirable and feasible?
 - a. No desirable

33. What would you suggest should be the tax structure in respect of imported and indigenous manufacture of telecom equipment, keeping in view the international agreements?
 - a. No commets