

**PREPARATIONS FOR THE 1999 MINISTERIAL CONFERENCE**

Transfer of Technology

*Communication from India*

The following communication, dated 30 September 1999, has been received from the Permanent Mission of India.

**Background**

1. The importance of transfer of technology (TOT) for developing countries is obvious enough. Technology plays an important role in creation of competitive advantages and is an integral part of any developmental strategy.
2. All available literature proves beyond a doubt that the developed countries are the main repository of the latest technology. The asymmetrical distribution of R&D expenditures is illustrated by the fact that developing countries account for just 6 per cent of global R&D expenditure. Even in developed countries only seven OECD countries account for as much as 90 per cent of total R&D expenditure.
3. Contrary to popular belief, the phenomenon of globalization has not resulted in much dissemination and transfer of technology. While transnational corporations are decentralizing a lot of operations such as production and sourcing internationally, it is nevertheless true that R&D activities are not sufficiently internationalized. So despite globalization, R&D and associated technology remains highly centralized in industrialized countries and the companies are more likely to expand their research to other developed countries rather than developing countries.
4. There are also "strategic alliances" at work between transnational corporations, which conspire to prevent and impede TOT to developing countries.
5. In sum, technology is mainly concentrated in a handful of developed countries, there is substantial evidence that despite globalization not much TOT is taking place to developing countries and the situation is not likely to change any time soon.

**Modes of TOT**

6. There are basically two fundamental ways at present in which TOT takes place from developed countries to developing countries. One, is through Foreign Direct Investment (FDI). While FDI does have some potential to facilitate TOT, it is also true that it places severe limitations on the developing countries, depending on the negotiating strength of the latter. Also, equity participation of the technology holder alone does not always ensure TOT.

7. The second mode of TOT would appear to be licensing and contractual means. Licences may provide an easy and economical way of TOT; besides, it would also be the first option for SMEs who lack the financial resources to enter into FDI or equity ventures with large transnational corporations. Licensing used to be the favoured mode in the 60s and the 70s. But, henceforth, it is going to be increasingly difficult, if not impossible, to acquire TOT through licensing means. Apart from the fact that TNCs may not want to transfer state-of-the-art technologies through this mode, financial constraints are likely to make this mode well-nigh impossible.

### **WTO Agreements which refer to TOT**

8. A number of WTO Agreements specifically mention the TOT. The following is an illustrative list:

- (a) **TRIPS:** The TRIPS Agreement in Articles 7 and 8 specifically deal with TOT. Article 7 clearly says that the protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare. Similarly, Article 8 says that Members may adopt measures to promote technological development provided those measures are consistent with the provisions of this Agreement. Also, this Article acknowledges that appropriate measures (provided they are consistent with the TRIPS Agreement) may be needed to prevent the resort to practices which adversely affect the international transfer of technology. Also, Article 66.2 of the TRIPS Agreement obliges developed-country Member countries to provide incentives under their legislation to enterprises and institutions in their territories for the purpose of promoting and encouraging the TOT to least-developed Countries in order to enable them to create a sound and viable technological base.
- (b) **GATS:** paragraph 1(a) of Article IV, mentions access to technology on a commercial basis. Paragraph 2(c) of the same Article in obliges developed countries to establish contact points for the availability of services technology.
- (c) **TBT:** The TBT Agreement in Article 11 talks of technical assistance, but the technology aspects in this field cannot be exaggerated.
- (d) **SPS:** The SPS Agreement, once again, talks of technical assistance in Article 9, but the issue of transfer of technology is all too obvious.

### **Strengthening and operationalizing WTO Agreements which refer to TOT**

9. It is obvious that TOT is crucial for developing countries; it is equally clear that there are a certain number of WTO Agreements which mention TOT explicitly or allude to it. However, these are more in the nature of either pious wishes or best-endeavour clauses that have remained a dead letter.

10. The need of the hour is therefore to strengthen the language in existing agreements to make the provisions legally binding commitments.

11. It would also be important to recognize the importance of TOT and therefore the mandated negotiations in the WTO would need to factor this in. This is true of the Services and the TRIPS Agreement; in Services, there would be a new round of negotiations and the TRIPS Agreement would come up for review in 2000.

12. There are also possibilities of providing in the Subsidies Agreement incentives for TOT from developed countries to developing countries. For instance, it could be made clear that subsidies incurred in developed countries for ensuring TOT to developing countries shall be deemed non-actionable. There is at present a contradiction inasmuch as there are some subsidies on R&D that are not actionable, but then there are domestic legal provisions in some major countries that impede the transfer of that very technology to developing countries. This anomaly would need to be removed.

### **Establishment of a Working Group on TOT**

13. In view of the above, it is proposed that a Working Group be established on the subject of transfer of technology. The Group will have the following mandate:

- (a) to first identify the problems and constraints faced by developing countries in gaining access to the latest technology available in the developed countries;
- (b) to look at all existing WTO Agreements with a view to making the necessary changes for facilitating and ensuring the transfer of technology on fair and advantageous terms;
- (c) to consider dual-use technologies in all its aspects including why it is not transferred to developing countries sometimes even on commercial terms;
- (d) to factor in TOT as a critically important issue for developing countries in all future negotiations;
- (e) to look at the possibility of establishing an institutional TOT machinery within the WTO Secretariat that would have not only the data base but also vital information on legal and administrative framework, financing mechanisms available and also the expertise to carry out assessment of technology needs;
- (f) suggest specific support measures to facilitate and ensure TOT from developed countries to developing countries. These may include: foster access to technologies; cooperate in the development of scientific and technological resources including the creation and growth of national innovation systems; grant credits for financing the acquisition of technology; provide assistance and cooperation in the development and administration of laws and regulations likely to facilitate TOT; strengthen the negotiating capacity for TOT transactions; and assist in protecting and commercializing local innovations; and
- (g) study the design of incentives, including tax incentives that developed country Members could grant to enterprises and institutions in their own countries in order to disseminate and transfer Technology to developing countries.

### **Conclusion**

14. Technologies hold great potential for human development. But strong policy action is needed internationally to ensure that the rules of international trade are framed to turn the technologies towards developing country needs.

15. The questions that need to be posed and for which answers have to be found are:

Does the control, direction and use of technology:

- (a) promote innovation and sharing of knowledge;
  - (b) restore social balance or concentrate power in the hands of a few;
  - (c) favour profits or precaution;
  - (d) bring benefits for the many or profits for the few;
  - (e) respect diverse systems of property ownership;
  - (f) empower or disempower people; and
  - (g) make technology accessible to those who need it in developing countries.
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