

## **A OBJECT OF THE STUDY AND BACKGROUND**

### **Background**

India has emerged as a global R&D hub. GE, the largest company in the world has adopted India as its global R&D hub. Top multinationals are using outsourcing to stay competitive in the world market, it is said that as many as 400 top US companies have outsourced operations to India. India has moved from BPO (Back Office Processing Operations) to KPO (Knowledge Processing Operations). Outsourcing is also visible in the pharma, auto and textile industry.

### **Object**

The main object of the study has been to list the major players of FDI in R&D sector and analyse their behaviour in terms of investment, R & D effort, choice of industry, employment and future plans.

In addition, the relation of the S&T policy in India and FDI is to be analysed in the light of study findings. The project also studies GATS negotiation framework with respect to R&D services trade and recommends the directions for revisions and updation of the policy stances of the Government of India.

### **B. METHODOLOGY**

The following actions were taken to develop the database for the project.

Listing of FDI companies in the R&D sector from foreign investment approvals using sanctions of FIPB, SIA, DIPP and RBI in the five year period 1998-2003.

Widening of the approval databases with the help of interviews, field surveys, newspaper cuttings and the internet.

Selection of top 100 FDI companies with R&D Centres in India for detailed study.

Eight annexures containing key data were developed as below:

- I FDI in the R&D Sector – Summary Profile of Top 100 Companies
- II FDI in the R&D Sector – Detailed Profile of Top 100 Companies
- III FDI in the R&D Sector – Activity type, Exports, Domestic and combinations thereof
- IV FDI in the R&D Sector – Major R&D Segments
- V FDI in the R&D sector – Detailed R&D Segments Companywise
- VI FDI in the R&D Sector – Top 100 companies: Location and Contact detail
- VII FDI in the R&D Sector – Detailed Profile of 70 Companies for further exploration in Phase II of Project
- VIII Profiles of Major FDI Companies in the R&D Sector

### **C. HIGHLIGHTS**

The highlights of the findings are:

R&D Services has emerged as the third Segment in Export of IT Services, it occupies a share of 18.4% of software exports accounting for an annual value of \$2.3 bn.

R&D investment worth of \$1.13 bn has flowed into India during the five year period 1998-2003

Planned Investment in the R&D Sector totals to \$4.65 bn. The US footprint is the biggest and widest, followed by Germany. The R&D thrust is part of a larger and complex operation involving manufacturing, export and domestic markets.

Germany and Korea tie for Second place. France, Japan also show interest in India.

China too marks presence in India. Nine other countries start R&D ventures in India

22,980 R&D workers consisting of scientists, software engineers and other support staff manned the 100 FDI companies in the R&D sector.

Availability and price of work force is a big draw for location of R&D Centres in India. A Scientist in India at \$10,000 per year is cheap compared to the \$100,000 per year for a Scientist in US

Nearly half the FDI in the R&D Sector is in Bangalore, Delhi and Mumbai region rank second and third

The Bulk of the R&D Investment entered India during the three Year Period 1999-2001

Computer based R&D dominates, while drugs, auto, chemicals and agro too Show promise

The FDI majors in India are working on Latest Technologies – at least 415 Patents from India filed in US

Nearly half the FDI companies are cases of relocation of inhouse R&D in home country to offshore location in India

Partnerships with local companies are good at the start but partnerships are not forever – 56 percent of FDI companies prefer to work alone in India, with 100% foreign equity without local partners in equity

#### **D. RECOMMENDATIONS**

The recommendations of the Report are:

##### **1. Registry of FDI in the R&D Sector with DGFT**

It is recommended that a **registry FDI in the R&D sector** be established under the Foreign Trade (Development and Regulations) Act, 1992 law.

A system of special annual returns requiring information on key parameters like investment, area of operations, number of persons employed and value of export, apart from the profile of the organization and its link with the host company may be prescribed. A proper return form may be devised as a follow up to the recommendation in consultation with the DGFT.

The database developed for this project should be updated every year through the annual return and special surveys.

##### **2. R&D trade statistics in RBI**

RBI should create a category for export and import of R&D services banks asked to submit party wise periodic data to the Central Bank to develop the statistics on export and import of R&D services.

##### **3. Annual conference R&D Services trade**

It is suggested that the monthly monitoring and annual return to DGFT be culminated into an annual report followed by a conference held in Delhi and Bangalore every year

in the month of September. This conference could discuss the problems and prospects of the R&D units in the FDI sector.

#### **4. Coding of Specific R&D activity**

A scientific coding system based on the international harmonized system should be devised so that the data is generated in a proper way and administration is carried out in an easy manner. The annual return format should include the system of coding so that the companies make the information available in a proper way.

#### **5. Investment promotion**

A proactive programme to promote R&D in the FDI sector is suggested.

An assessment of the trends in World R&D and main actors in the scene is required to be done. This would help to reveal the areas where investment promotion activity can be stepped up. In the near future, the Government can consider setting up parks for the R&D sector as such and provide special facilities according to the demand of the major players. A programme to get the other leading giants including Government supported R &D bodies and non profit research institutions like Universities and research centres to establish or relocate their research centres in India.

#### **6. FDI policy for the R&D sector – 100% equity should be allowed up front in FDI in the R&D Sector**

The study of FDI in the R&D sector shows that the substantial inflow of \$1.4 bn has brought Indian Science and Technology in the mainstream of global R&D. The employment of 22979 scientists in the sector is significant. In addition, Indian companies have benefited significantly from partnerships with the FDI companies. Almost all the FDI companies have partnered with local companies at some point or the other.

In these circumstances, it is felt that Indian self interest will not be served by insisting on local Indian equity share in the FDI company. R&D is proprietorial in nature, and no FDI company will share the fruits of knowledge with the local company. Permission for 100 percent FDI in the R&D sector is recommended.

#### **7. FDI Based R&D Services and S&T Policy 2003 – An Assessment and Suggestions**

7.1. Encouragement to export of R&D services on the Mode 1 route of the GATS

7.2. Promotion of public policy to promote infrastructure of space and telecomm services for FDI in the R&D Sector.

7.3. Monitoring and reporting system on the activities and performance of FDI in the R&D sector.

7.4. Estimation of benefits to the economy by way of tax revenue, knowledge transfer to public bodies, registration of new findings and inventions in Indian operations under Indian law, and observation of local laws on workers safety and provident fund and other social security measures like health and insurance.

7.5. Study of Mode 4 (Movement of natural persons) exports of R&D workers from India to other parts of the world on the lines of software professionals.

#### **8. R&D Services at WTO & India – An Outline for a Negotiation Stance**

8.1 Ask for Market Access and also give Market Access to Foreign R&D

8.2 Explore export and import of Mode 2 (Cross Border Supply) of GATS

8.3 Promote Movement of S&T personnel under Mode 4

8.4 Other Suggestions

**Establish link**

between position on software services and R&D services in WTO negotiations.

**Offers should be Conditional** on what others offer on R&D Services and on outcome of rules negotiations

**Begin preparations**

for a Second round of offers expected at a later stage of the negotiations

**Consultation with stakeholders**

(R&D Services exporters) on other areas

**Maintain our commitment to preserve policy flexibility**

for R&D Services in the public domain (CSIR labs, universities etc.).

**8.5 Checks in Market Opening**

FDI in R&D Services and Transfer of Technology to Public Domain

Establish Liaison with FDI Companies to encourage flow of technology to Indian public labs and Universities