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**Case study on outward foreign direct investment by Indian small and medium-sized enterprises***

**Executive summary**

Indian enterprises have been investing abroad for a long time, but it is only recently that Indian OFDI has captured increasing international attention because of the magnitude of OFDI projects and the frequency of M&A purchases by Indian enterprises. India is an emerging investor, with an OFDI stock of $6.6 billion in 2004, and its OFDI flows are increasing.

Indian SMEs and large enterprises are investing abroad for various reasons. Their motives include access to new markets, strengthening distribution channels, supporting exports, securing natural resources and access to technologies, skills, management expertise and brand names. The relaxation of exchange controls and liberalization of OFDI policy have played an important role in supporting Indian OFDI. The prospects for Indian OFDI are promising because of the improving competitiveness of Indian enterprises, the encouragement provided by the Government and the desire of Indian firms to internationalize through OFDI.

Indian software SMEs are more internationalized than the manufacturing SMEs. This development reflects the competitiveness of Indian SMEs in software activities and the need to venture abroad to improve it further.

Selected cases of Indian SMEs revealed that OFDI has contributed to increasing their competitiveness in expanding markets and enhanced their overseas trade-supporting networks. Through OFDI, Indian SMEs have benefited from access to technology, research infrastructures and skilled human resources in developed countries.

This paper is one of five case studies prepared by the UNCTAD secretariat as background documents for the Expert Meeting to facilitate discussions on enhancing enterprise competitiveness through OFDI. It looks at the outward OFDI behaviour of Indian firms and in the context of SMEs. The paper examines the trends, drivers and motivations, policy considerations and competitiveness of Indian firms with respect to OFDI.

[*] This document was submitted on the above-mentioned data as a result of delays in processing.

This document was prepared and edited by the UNCTAD secretariat with substantive inputs from Jaya Prakash Pradhan, Gujarat Institute of Development Research, and Manoj Kumar Sahoo, Centre for Economic Studies and Planning, Jawaharlal Nehru University, India.

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**Contents**

**Outward foreign direct investment by Indian small and medium-sized enterprises**

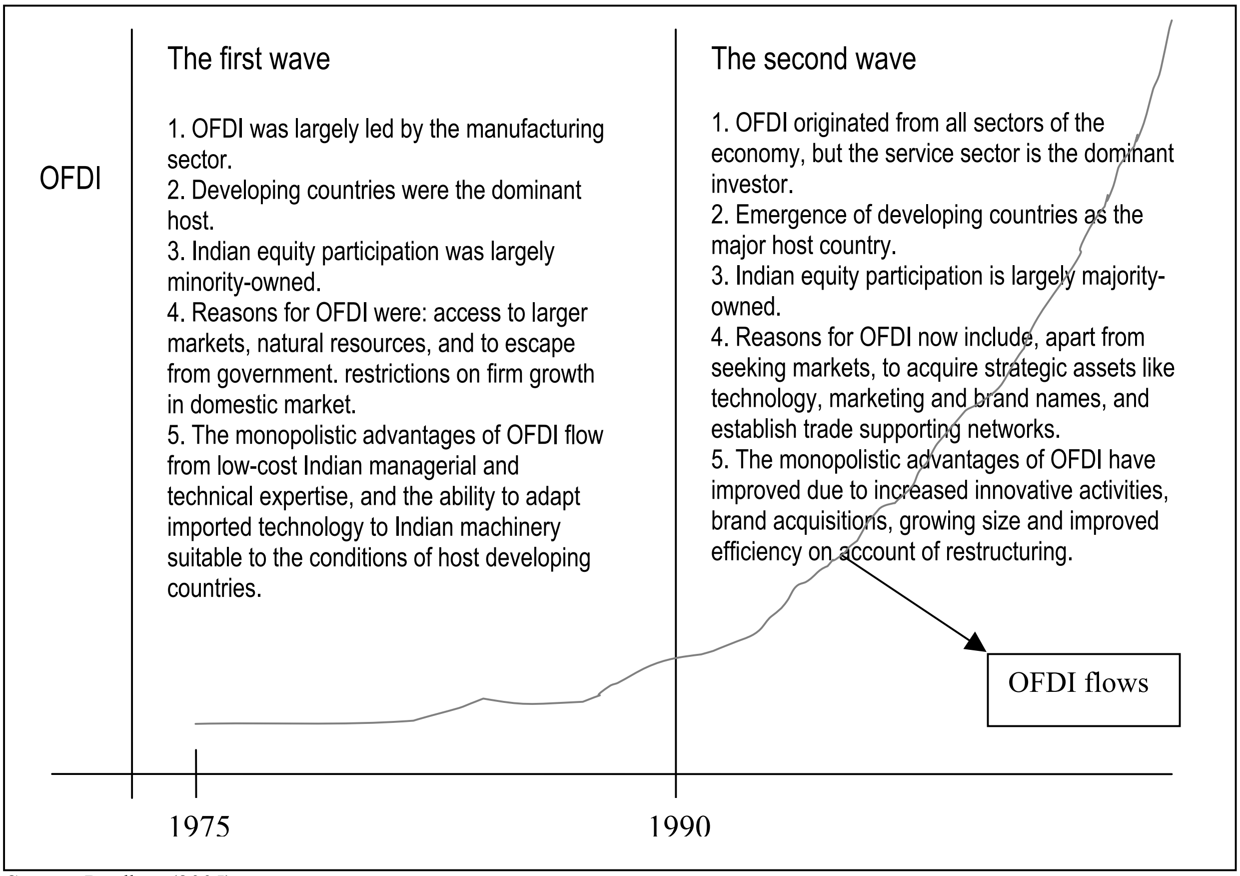
## I. Introduction

1. Small and medium-sized enterprises (SMEs) have recently emerged as an important participant in international production. Although their FDI may be small in terms of the amount invested (UNCTAD, 1998), their emergence has given rise to many theoretical as well as empirical questions worthy of investigation.

2. This paper examines the outward foreign direct investment (OFDI) behaviour of these new players and hopes to enlarge the frontiers of existing knowledge, with a focus on Indian experience and in the context of Indian SMEs.[1] The experience of India is interesting for two reasons: (i) India is a developing country; and (ii) it stands as one of the pioneering countries in the world to have pursued a long-term policy of protecting and promoting SMEs. Therefore, Indian results could be highly relevant for understanding the behaviour and characteristics of developing country SMEs undertaking transborder production activities.

## II. OFDI from India: Trends and development

**Figure 1. The evolution of Indian OFDI from "first wave" to "second wave"**




*Source:* Pradhan (2005).

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[1] For the purpose of this paper firms are classified into small, medium-sized and large firms according to the following rule: for an industry (defined as the 3-digit level of International Standard Industrial Classification Revision 3), firms with sales up to the 25th percentile are taken as small, those having sales greater than the 25th percentile and up to the 75th percentile are classified as medium-sized and those with sales greater than the 75th percentile are designated as large enterprises.

3. Indian enterprises have been investing abroad for a long time, but it is only in recent years that Indian OFDI has become more notable. The evolution of OFDI flows from India is better described in terms of the "two waves hypothesis". The first wave (FW) evolution of Indian OFDI is fundamentally different from the second wave (SW) in terms of size and growth, geographical spread, sectoral characteristics, pattern of ownership and motivations (figure 1). This two waves classification accommodates not only the impact of liberalization of OFDI policy through changes in the quantum of OFDI flows but also changes in the character and motivations of OFDI.

4. The SW represents a distinct break from the FW in terms of the number of Indian enterprises undertaking overseas production and the quantum of investment involved in such production. It was a period of dramatic expansion of Indian OFDI activities. As at December 1983, there were only 228 approved OFDI projects, compared with 4,533 approved projects during 1997-2004 (table 1). This significant rise in the number of OFDI projects contributed to a 177 times increase in Indian OFDI stock, from $0.037 billion in 1976 to $6.6 billion in 2004 (figure 2).

**Table 1. India: OFDI stock, 1976-2004**
**(Millions of dollars; number)**

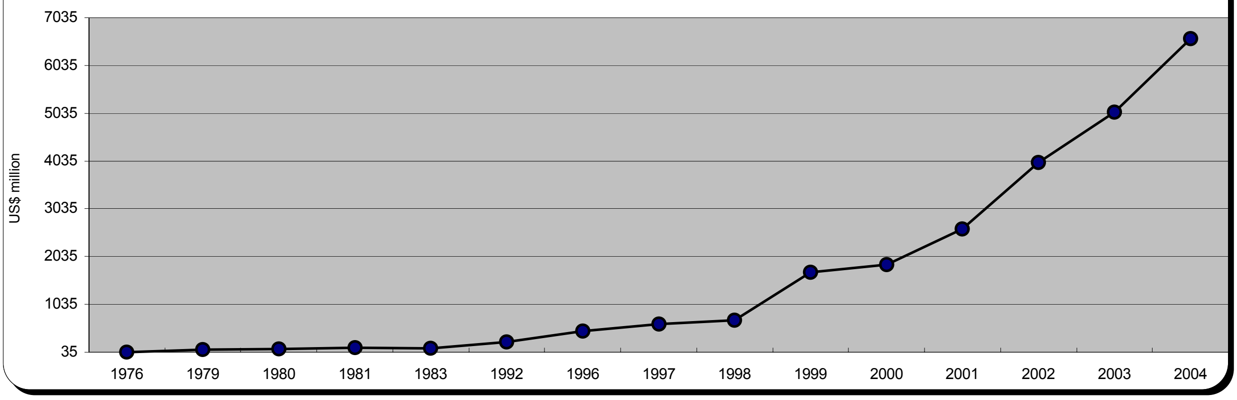
| Period | Direct investment abroad | Equity capital and reinvested earnings | Claims on affiliated enterprises | Other capital | No. of OFDI projects |
|---|---|---|---|---|---|
| Jan. 1976 | 37 | 37 | | 7 | 133* |
| Jan. 1979 | 86 | 86 | | | |
| Jan. 1980 | 101 | 101 | | | 192* |
| Dec. 1981 | 135 | 135 | | | 204* |
| Dec.1983 | 120 | 120 | | | 228* |
| March 1992 | 247 | 247 | | | |
| March 1996 | 481 | 481 | | | |
| March 1997 | 617 | 617 | 617 | - | |
| March 1998 | 706 | 706 | 706 | - | |
| March 1999 | 1 707 | 1 707 | 1 707 | - | |
| March 2000 | 1 859 | 1 858 | 1 858 | - | |
| March 2001 | 2 615 | 2 541 | 2 541 | 74 | |
| March 2002 | 4 005 | 3 810 | 3 810 | 195 | |
| March 2003 | 5 054 | 4 753 | 4 753 | 301 | |
| March 2004 | 6 592 | 6 211 | 6 211 | 381 | 4 533@ |

*Source:* (i) RBI releases International Investment Position (InIP) as on March 2003, Press Release: 2003-04/441; (ii) RBI releases International Investment Position (InIP) at India as at end March 2004, Press Release: 2004-2005/359; (iii) Reserve Bank of India Bulletin (2000) census of India's Foreign Liabilities and Assets as on March 31, 1997, pp. 1018-1021; (iv) Commerce Ministry as reported in R. B. Lall (1986), *Multinationals from the Third World*, table 2.1, pp. 14, OUP, Delhi.

*Note*: Figures for 1976-1983 include only equity capital; *-indicates the stock of OFDI project accumulated over the past whereas @ indicates the cumulative number of approved OFDI projects from 1997 to 2004. The number of year-wise OFDI approvals has been obtained from Finance Ministry at http://finmin.nic.in/the_ministry/dept_eco_affairs/investment_div/idi_05Jan2004.*htm*.

5. Indian OFDI has undergone significant changes in sectoral and geographical spreads. In the FW, Indian manufacturing enterprises dominated OFDI activities and in most cases they were directed to developing countries with levels of development similar to, or lower than, those of India. The manufacturing industry accounted for the lion's share of Indian OFDI approvals during the FW (table 2). The services industry accounted for about 33 per cent of the approvals in terms of equity value, while the extractive sector accounted for less than 2 per cent.

**Figure 2. India: OFDI stock, 1976-2004**




*Source:* Based on table 1.

6. Low- and middle-ranking technology manufacturing industries such as fertilizer and pesticides (18 per cent), leather (9 per cent), iron and steel (7 per cent, and wood and paper (5 per cent) were the main sources of Indian manufacturing OFDI in the FW. The three leading service industries in the period were financial services and leasing (12 per cent), hotels and tourism (11 per cent), and trading and marketing (6 per cent) (annex table 1).

7. In the SW, while the share of manufacturing sector decreased to 39 per cent of approved OFDI equity, that of service industries rose to 60 per cent of equity value and 52 per cent of OFDI approvals (table 2). The Indian information and telecommunication (IT) industry emerged as the largest source of Indian services OFDI, accounting for 32 per cent of total OFDI flows during the SW, followed by media, broadcasting and publishing (17 per cent). The leading manufacturing OFDI sources were fertilizers and pesticides (8 per cent) and pharmaceuticals (6 per cent) (annex table 1) Recent years have witnessed a significant increase in natural resources OFDI from India, contributed by acquisitions made by such companies as ONGC-Videsh.

8. Most of the approved OFDI in the SW were to the developed countries, which contrasted with the direction in the FW (table 2). In the FW, developing South-East and East Asia were the largest host regions, followed by Africa, West Asia, Central Asia and South Asia in that order (annex table 2). During the SW, Western Europe and North America emerged as the major host regions, accounting respectively for 34 per cent and 24 per cent of Indian OFDI equity. Among the developing regions, South-East Asia witnessed the largest decline in its share from 36 per cent to 9 per cent. Two developed countries, namely, the United Kingdom (27 per cent) and United States (24 per cent), were the major destinations for Indian OFDI in the SW.

**Table 2. Cumulative OFDI approvals by Indian enterprises, 1975-2000**
**(Millions of dollars; number; percentages)**

| ***Period*** | ***Total*** | | ***Sectoral composition*** | | | | | | ***Regional composition*** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ***Extractive*** | | ***Manufacturing*** | | ***Services*** | | ***Developing countries*** | | ***Developed countries*** | |
| | **No.** | **Equity** | **No.** | **Equity** | **No.** | **Equity** | **No.** | **Equity** | **No.** | **Equity** | **No.** | **Equity** |
| **1975-90 (First Wave)** | 230 (100) | 222.45 (100) | 3 (1.30) | 4.04 (1.82) | 128 (55.65) | 145.22 (65.28) | 99 (43.04) | 73.22 (32.91) | 165 (72.05) | 191.52 (86.09) | 64 (27.95) | 30.89 (13.89) |
| **1991-2000 (Second Wave)** | 2 561 (100) | 4262.23 (100) | 7 (0.27) | 61.14 (1.43) | 1 236 (48.26) | 1 678.92 (39.39) | 1 318 (51.46) | 2 522.17 (59.17) | 1 176 (45.9) | 1 719.82 (40.35) | 1 386 (54.10) | 2542.6 (59.65) |
| **1975-2000** | 2 791 (100) | 4484.68 (100) | 10 (0.36) | 65.18 (1.45) | 1 364 (48.87) | 1 824.14 (40.67) | 1 417 (50.77) | 2 595.39 (57.87) | 1 341 (48.05) | 1 911.34 (42.62) | 1 450 (51.95) | 2573.49 (57.38) |

*Source:* UNCTAD's estimates based on RIS OFDI database (2002).

*Notes*: In parentheses are Percentage shares of the total, are in parentheses.
The Research and Information System for the Non-Aligned and Other Developing Countries (RIS) had made an attempt to compile firm-level information on Indian OFDI from unpublished information of the Ministry of Commerce and published reports from the Indian Investment Centre. The compiled information covers a long period from —1975 to March 2001—, in the evolution of Indian OFDI. This dataset takes account of only the approved equity capital for projects in production and under implementation, not actual, and does not cover reinvested earnings and other capital.

9. Another significant feature of the SW is the emergence of mergers and acquisitions (M&As) as an important mode of internationalization by Indian enterprises in the 1990s. The late 1990s saw a surge in overseas acquisitions by Indian enterprises. As many as 119 overseas acquisitions were made by Indian enterprises in 2002-2003. Most of the acquisitions were in the software industry followed by pharmaceutical and mining activities (table 3). The lion's share of the M&A purchases in the same period was in developed countries, dominated by the United States and United Kingdom. Another feature of Indian overseas M&As is that they are highly concentrated in terms of size (Pradhan and Abraham, 2005). Indian enterprises are increasingly using M&As to venture abroad to access market, technology, strategic assets and benefits from operational synergies.

**Table 3. Overseas M&As by Indian enterprises, 2000-2003**
**(Number; percentage)**

| ***Sectoral composition*** | | | ***Regional composition*** | | |
|---|---|---|---|---|---|
| ***Sector*** | ***No.*** | ***Per cent*** | ***Region*** | ***No.*** | ***Per cent*** |
| Primary | 9 | 7.6 | Developed countries | 93 | 78.2 |
| Mining, petroleum and gas | 9 | 7.6 | United Kingdom | 16 | 13.4 |
| Industry | 34 | 28.6 | United States | 53 | 44.5 |
| Pharmaceuticals | 12 | 10.1 | Australia | 8 | 6.7 |
| Paints | 4 | 3.4 | Developing countries | 20 | 16.8 |
| Plastic & products | 4 | 3.4 | Africa | 5 | 4.2 |
| Services | 76 | 63.9 | Latin America and the Caribbean | 3 | 2.5 |
| Software | 67 | 56.3 | Asia and the Pacific | 12 | 10.1 |
| All sectors | 119 | 100 | All regions | 119 | 100 |

*Source:* Based on Pradhan and Abraham (2005).

10. The structure of Indian ownership participation has also undergone a complete shift in the SW as compared with the FW. While the share of minority ownership[2] OFDI projects declined from 64 per cent during the FW to only 24 per cent in the SW, the share of majority ownership[3] increased from 13 per cent to 57 per cent (table 4). The removal of policy restrictions on ownership participation during the SW period (section E) and the desire of Indian companies to have full ownership explain this phenomenon.

**Table 4. The second wave and changing ownership structure of Indian OFDI**
**(Number; percentage)**

| **Equity range (%)** | **First Wave (1975-90)** | | | **Second Wave (1991 - March 2001)** | | |
|---|---|---|---|---|---|---|
| | **No of OFDI Approval** | **Per cent** | **Cumulative per cent** | **No. of OFDI Approval** | **Per cent** | **Cumulative per cent** |
| 0 to 20% | 51 | 22.9 | 22.9 | 41 | 3.7 | 3.7 |
| 20 to 50% | 91 | 40.8 | 63.7 | 230 | 20.6 | 24.2 |
| 50 to 80% | 53 | 23.8 | 87.4 | 211 | 18.9 | 43.1 |
| 80-100% | 28 | 12.6 | 100 | 637 | 56.9 | 100 |
| Total | 223 | 100 | | 1119 | 100 | |

*Source*: UNCTAD's estimates based on RIS OFDI database (2002).

11. The unprecedented growth of OFDI during the SW is accompanied by significant changes in the financing patterns of OFDI. During the FW, when Indian firms began investing overseas their OFDI operations were financed largely through equity outflows from the home country. Following the liberalization of OFDI policy, these companies expanded their foreign production activities through reinvestment earnings. The share of re-invested earnings emerged as the most important component of OFDI flows, accounting for about 45 per cent-50 per cent of the total flows during the

2 Less than 50 per cent of equity ownership.
3 Greater than 80 per cent of equity ownership.

fiscal year 2000-2001 to the fiscal year 2002-2003 (table 5). It also implies that Indian firms are increasingly more confident with internationalization.

**Table 5. Distribution of Indian OFDI flows by components, fiscal year 2000-2003**
**(Percentage)**

| | FY 2000/2001 | FY 2001/2002 | FY 2002/2003 |
|---|---|---|---|
| Total OFDI | 100 | 100 | 100 |
| (i) Equity | 45 | 41 | 40 |
| (ii) Reinvested earnings | 45 | 50 | 49 |
| (iii) "Other capital" | 10 | 9 | 10 |

*Source*: Revised Data on Foreign Direct Investment, press release of the Ministry of Commerce and Industry, 30 June 2003.

## III. OFDI by SMEs: Emerging patterns

12. Indian SMEs are not far behind the larger enterprises in OFDI activities. For instance, OFDI approvals by SMEs accounted for 26 per cent cases of manufacturing activities and 41 per cent cases in the software industry. Software SMEs contributed significantly to OFDI stock (47 per cent), whereas manufacturing OFDI by SMEs was small (table 6). SMEs in the software industry are disproportionately more internationalized than SMEs in manufacturing activities; This reflects the competitiveness of Indian SMEs in software activities. The fact that the software industry is a skill-intensive industry and largely dependent upon foreign markets encouraged Indian SMEs to operate abroad.

**Table 6. OFDI stock, by firm sizes, as at 31 March 2001**
**(Millions of dollars; number; percentage)**

| Sectors[a] | | Firm size | | | | |
|---|---|---|---|---|---|---|
| | | Small | Medium | SMEs | Large | Total |
| Manufacturing | No. | 23 (3.08) | 172 (23.06) | 195 (26.14) | 551 (73.86) | 746 (100) |
| | Value | 5 (0.32) | 99 (6.37) | 104 (6.69) | 1450 (93.31) | 1554 (100) |
| Software | No. | 16 (5.44) | 105 (35.71) | 121 (41.16) | 173 (58.84) | 294 (100) |
| | Value | 10 (1.16) | 396 (46.10) | 405 (47.15) | 454 (52.85) | 859 (100) |

*Source*: UNCTAD's estimates based on RIS OFDI database (2002).

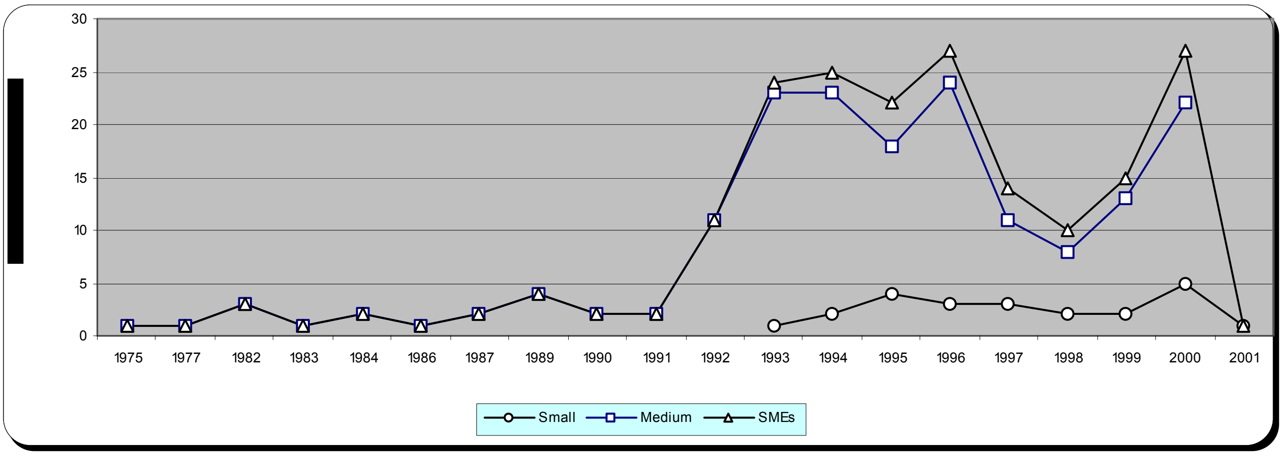
*Note*: Percentages are in parentheses.

[a] Owing to the lack of data on OFDI by SMEs, the authors constructed a database which classified OFDI by firm size by merging firm names from the Prowess database of the Centre for Monitoring the Indian Economy with information from government sources and the dataset from the Research and Information System for the Non-Aligned and Other Developing Countries (RIS). The merging was done at firm level to ensure that recent changes in firm's names and their abbreviations are correctly incorporated when classifying OFDI by firm sizes. Manufacturing and software were selected because they are the two largest investors from the Indian economy. Extending the exercise to other services sector would have required more time and resources.

13. The origin of larger enterprises' OFDI dated back to the Indo-Ethiopian Textiles established by the Birla group in 1960 near Addis Ababa. The beginning of joint ventures abroad by manufacturing SMEs can be traced back to two different time periods depending on the size of firms (medium-sized versus small enterprises). The OFDI process for medium-sized enterprises started when Indian Hume Pipe Company Ltd. commissioned a joint venture in Sri Lanka to manufacture hume pipes in 1975. The Indian entity held 56 per cent stake. The remaining equity share was held by the Sri Lankan partner, Industrial Indo Hume Pipe company. The earliest case of OFDI by small enterprises is the

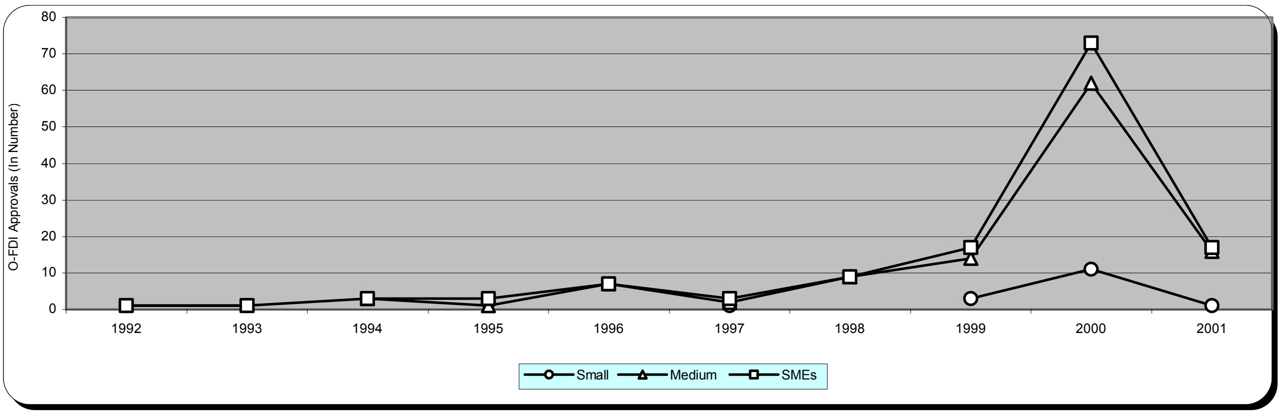
joint venture of Roto Pumps & Hydraulics (P) Ltd. with Sterling (Fluid equip) Ltd. of the United Kingdom to manufacture pumps in 1993. OFDI by manufacturing SMEs has become notable since 1991 when 177 overseas projects by SMEs were approved within a period of 10 years (figure 3). Indian SMEs received OFDI approvals in diverse industries such as light engineering, auto pumps and spares, electrical equipment, textiles and garments, and pharmaceuticals. OFDI by software SMEs, similar to manufacturing SMEs, has been prominent since the 1990s, which coincided with the second wave of Indian OFDI (figure 4).

Figure 3. OFDI approvals by Indian manufacturing SMEs, 1975 - March 2001
(Number)




*Source:* ibid.

Figure 4. OFDI approvals by Indian software SMEs, 1992 - March 2001
(Number)




*Source:* ibid.

14. Indian OFDI by SMEs is similar to that by Indian TNCs in that it originated from a broad spectrum of manufacturing industries. SMEs are visible in low-technology-intensive industries (food products, textiles and paper) and in high-technology-intensive industries (pharmaceuticals, office machinery and communications). OFDI by SMEs is prominent in such industries as textiles, leather, footwear, machinery and equipment and motor vehicles (annex tables 3 and 4).

15. Indian manufacturing SMEs invest in both developed and developing economies (annex table 5). Within the developing region, South-East and East Asian countries were the most favoured locations. They accounted for 17 per cent and 24 per cent respectively of OFDI approvals and stock. The Western European countries, emerged as the principal destination among the developed countries followed by North America. For software SMEs, the developed countries were the most favoured destinations. Within developing countries, South-East and East Asia were popular locations. North America emerged as the most important investment destination among the developed countries.

16. The United States and United Kingdom were the two largest destinations for OFDI by both Indian TNCs and SMEs (annex table 6). This shows that SMEs from India are not shying away from investing in developed countries even though they possess lower levels of technological, brand, and skill advantages vis-à-vis Indian TNCs and developed country enterprises. In fact, the lack of these specific advantages was a key reason driving these SMEs to invest in developed countries to augment the advantages.

17. Overseas M&As by Indian SMEs have been small, particularly in the manufacturing industry. A number of cases of overseas acquisitions by Indian SMEs were in the software industries and by such SMEs as Aftek Infosys Ltd., Datamatics Technosoft Ltd., KLG Systel Ltd., Leading Edge Infotech Ltd. and Moschip Semiconductor Technology Ltd.

18. Indian SMEs, namely A C E Laboratories Ltd. (pharmaceutical) and R E P L Engineering Ltd. (electrical engineering), have emerged as the top Indian manufacturing SMEs with five OFDI proposals each (annex table 7). Other Indian SMEs with OFDI activities include footwear, food, transport equipment and pump manufacturers.

19. There are several reasons for the difference between SMEs' OFDI behaviour and that of large enterprises. SMEs have insufficient resources to meet the costs of information collection (e.g. foreign markets, government regulations, consumer preference) and are less able to withstand the uncertainty and risk associated with OFDI activities. Because of these disadvantages, SMEs are invariably small in quantity as compared with OFDI by larger enterprises. Further, the quality and quantity of firm-specific assets owned are also different between SMEs, and larger enterprises. SMEs are less likely to be motivated to undertake OFDI for reasons of exploiting its competitive advantages. On the contrary, OFDI is more likely to be undertaken for the purpose of accessing foreign technologies or building trade-supporting infrastructures overseas. As OFDI by Indian SMEs is a relatively recent phenomenon, they might not have a well-planned strategy vis-à-vis the global market, compared with TNCs.

20. Indian manufacturing SMEs are relatively younger, are less able to undertake R&D and import foreign technologies, are less oriented towards selling activities and have lower profit margins than larger enterprises. In the software sector, SMEs are relatively younger and have a higher R&D intensity but lower technology import intensity, compared with the larger enterprises. While SMEs in the software sector are less export-oriented in their OFDI activities, compared with larger ones, they are relatively more export-oriented in the manufacturing sector.

## IV. Drivers and motivations of Indian OFDI

21. During the FW, Indian OFDI were mostly driven by the desire to escape from the restrictive business environment at home. The sluggish growth in domestic demand and restrictive government regulations encouraged many Indian enterprises to seek OFDI as an alternative route for growth (Lall, 1983). Attractive growth prospects in overseas markets motivated Indian OFDI during this period, as did the need to secure natural resources.

22. The motivations of OFDI changed radically during the SW. Along with the traditional objective of exploiting overseas markets and securing natural resources, the drivers for OFDI expanded to include accessing/acquiring firm-specific intangibles such as technology, skills, and marketing expertise, establishing trade-supporting infrastructure and circumventing emerging regional trading arrangements (Pradhan and Abraham, 2005). The relaxation of exchange controls and the significant liberalization of OFDI policies in the 1990s played an important role in encouraging Indian enterprises to invest abroad. More recently, the encouragement provided by the Government has also played a key role. Increasing global competition and the need to establish a firm global position have encouraged Indian enterprises to invest abroad to acquire brand names and production facilities.

## V. India's OFDI policy regime, 1978-2004[4]

23. India's policy regime for OFDI has been changing since 1978 when the concrete guidelines for Indian joint ventures (IJVs) and wholly owned subsidiaries (WOSs) abroad were issued. Although overseas investment was permitted before 1978, the Indian policy regime was yet to take concrete shape.

24. Two distinct phases in the evolution of Indian OFDI policy can be distinguished: the period between 1978 and 1992, when the 1978 guidelines were in place throughout, with minor revisions; and the period following 1992, when new guidelines for OFDI were brought in. While the first phase was characterized by a restrictive attitude towards OFDI, the second phase was marked by large-scale policy liberalization (box 1).

25. Indian OFDI in the 1990s grew dramatically after the implementation of the economic liberalization policy in 1991, which resulted in intense competition for survival and growth among firms. Indian firms, including SMEs, also faced competition from abroad as a result of globalization. The Government subsequently relaxed restrictions on Indian OFDI. The increasing competitive pressure at home and abroad, and the liberalization of OFDI, played an important role in driving Indian OFDI.

### The first phase

26. During the first phase of its evolution, the government policy towards OFDI had been motivated by two main objectives: (i) using OFDI as a strategy for fulfilling India's commitment to South-South cooperation; and (ii) promoting Indian exports through OFDI at minimum possible foreign exchange cost. OFDI was regarded as a vehicle to share India's development experience, technology and skills, which were far lower than those of developed countries, but more suitable and appropriate to the needs and socio-economic environment prevailing in developing countries.

27. In accordance with the spirit of South-South cooperation, the policy explicitly requires that Indian equity participation comply with the rules and regulations of the host country. The 1978 policy was designed to encourage the association of local parties, local development banks and financial institutions in the host countries with Indian OFDI ventures. This was to ensure that Indian capital in other developing countries does not operate in ways which India as a host country would not accept for inward foreign investments.

28. The policy sought to promote OFDI only in the form of joint ventures (JVs) with minority Indian ownership participation. The promotion of JV-led OFDI ensures that local capital also participates with Indian capital in the development process of host countries and this would be at lower foreign exchange costs. To further minimize the foreign exchange costs of OFDI, the policy required that Indian ownership participation be in the form of capitalization of exports or financed by Indian-made plant, machinery and know-how. The motivation for minimizing foreign exchange costs also found its practical form in not permitting cash remittances for OFDI, except for deserving cases.

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[4] This discussion draw heavily on Pradhan (2005).

**Box 1. Salient features of different phases of OFDI policy**

| | Phase I: 1978-1992 | Phase II: 1992 onwards |
|---|---|---|
| **Policy objectives** | • Promoting Indian OFDI as a tool of South-South cooperation<br>• Maximizing economic gains (mainly exporting of machinery and know-how) from OFDI at minimum foreign exchange costs | • Promoting OFDI as a tool of global competitiveness<br>• Maximizing exporting from India, acquiring overseas technology, gaining insider status in emerging trading blocs, etc. |
| **Strategies** | • Permission only for minority-owned joint ventures (JVs) | • Removal of ownership restrictions in overseas ventures |
| | • Equity participation should be through exports of Indian-made capital equipment and technology<br>• Capitalization of export of second-hand or reconditioned machinery against foreign equity is prohibited<br>• Cash remittances, except in deserving cases, are normally not permitted | • Foreign equity participation normally is allowed through cash transfer along with the usual way of capitalization of exports of plant, machinery and know-how.<br>• Equity participation through export of second-hand or reconditioned machinery is permitted<br>• Equity participation through the ADR/GDR route is allowed |
| | • Overseas JVs must be in the same line of business activity | • OFDI can be in any bona fide business activity |
| | • OFDI is permitted only through the normal route[5] | • Automatic route under Reserve Bank of India (RBI) is instituted for OFDI approval along the normal route. |

*Source*: UNCTAD.

**The second phase**

29. After pursuing a restrictive policy regime during the 1970s and 1980s, India shifted to a new, transparent and liberal OFDI policy regime during the 1990s. By the 1990s India had attained to a higher level of development with strong competencies in knowledge-based industries such as pharmaceuticals, software and automobiles. It had accumulated significant levels of technological expertise and knowledge, entrepreneurial development, management skill and infrastructure.

30. The modified guidelines for IJVs and WOSs were issued in October 1992 with the objective of making OFDI policy regime more transparent and commensurate with current global developments and Indian business realities. It is now motivated to use OFDI in promoting exports, acquiring technology abroad, building trade-supporting networks and gaining insider status in emerging trading blocs with the strategic objective of global competitiveness.

31. The 1992 policy removed the restriction on ownership participation and the Indian entity is free to decide on the exact level of ownership it wants to hold in overseas ventures. For a speedy and transparent approval system, the automatic clearance route under RBI was put in place for a specified investment limit. Under this route no prior approval from the regulatory authority such as the RBI or Government of India is required for setting up a JV/WOS abroad.

32. The amount of direct investment under automatic approval was raised continuously from $2 million in 1992, $15 million in 1995, $100 million in 1999 and any amount up to 200 per cent of their net worth in 2005. Indian firms operating in the Special Economic Zone are allowed to make overseas investments up to any amount under the automatic route. Investments under the automatic route have been allowed in unrelated business from the investing firm and in new sectors such as agricultural activities.

[5] There are two different routes for OFDI: the automatic and the normal. For a speedy and transparent approval system, the automatic clearance route was put in place for a specified investment limit. Under this route no prior approval from the regulatory authority such as the RBI or Government of India is required for setting up a IJV/WOS abroad.

**OFDI policy regime and SMEs**

33. As the existing Indian OFDI policy permits only those corporate entities and partnership firms that are registered under the Indian Factories Act, 1956, and the Indian Partnership Act, 1932, it prevents the largest chunk of SMEs operating in the unorganized segment of overall Indian manufacturing industry from undertaking OFDI operations. However, SMEs, which are classified under organized manufacturing, are legally eligible to undertake foreign value-adding activities.

34. During much of the first phase of policy evolution, SMEs faced policy constraints on their OFDI as equity participation has to be in terms of exporting indigenous machinery, equipment and technical know-how. SMEs during that phase were not original equipment manufacturers and did not possess the required technological capabilities to undertake OFDI. During the second phase, however, the previous restrictions that supported SMEs internationalization through OFDI were relaxed. However, many of the liberalized provisions such as liberal access to overseas financial markets and international securities markets did not help SMEs to engage in OFDI, as many of them did not have the capability to do so. Resource-constrained SMEs also did not benefit much from the increase in the cap on investment limit.

## VI. Indian OFDI and SME competitiveness

35. OFDI has helped increase the export competitiveness of Indian manufacturing SMEs and their R&D intensity[6] (in most years) as compared with those SMEs that did not invest abroad, although profitability did not seem to change through the internationalization process (table 6). Indian manufacturing SMEs are undertaking, in most cases, trade-supporting OFDI activities by establishing distribution and marketing centres in overseas market, enhancing their capability to ensure better sales and after-sales services. In this way, the foreign affiliates of Indian manufacturing SMEs appear to have played a significant role in enhancing export performance.

36. The case studies of seven Indian SMEs reveal interesting insights into the nature and impact of their OFDI operations.[7] First, OFDI undertaken by Indian SMEs has been primarily aimed at strengthening their export performance. Indian SMEs, unlike their TNCs counterparts, do not possess the necessary firm-specific competitive advantages to exploit value-adding activities abroad. SMEs such as ACE Laboratories Ltd., Roto Pumps Ltd. and CGVAK Software & Exports Ltd. indicated that they are using OFDI as a strategy to enhance marketing and trade-supporting networks overseas. Roto Pumps Ltd, in particular, used OFDI strategy to build marketing and warehouses overseas. Liberty Shoes Ltd., a subsidiary of an Indian TNC, used OFDI to establish retail outlets overseas. In this regard, OFDI has helped expand the market scope and access to new markets overseas for these SMEs.

37. In the area of R&D, Superhouse Ltd. demonstrated that Indian SMEs are also internationalizing their innovative activities and benefiting from them. This suggests that internationalization of R&D is not entirely a strategy of developed country enterprises: less technologically advanced firms from developing countries may also adopt the strategy to benefit from well-developed research infrastructures and availability of skilled manpower in overseas markets. In software industry, Aftek Infosys showed that Indian SMEs are first movers in adopting overseas acquisition strategy. Aftek Infosys used M&As strategy to access the European market and technology overseas to improve its competitiveness.

38. Whether OFDI for an individual firm is largely beneficial depends upon firm-specific strategies pursued. SMEs that diversify into too many activities and spread their limited financial, skill and manpower resources too thin are more likely to face critical survival issues, as was the case for REPL Ltd. In this connection, overexposure to OFDI activities could lead to inefficiency and decline in competitiveness.

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[6] Measured as in-house R&D expenses as a percentage of sales to represent firm's indigenous technological activities.
[7] They are ACE Laboratories, REPL Engineering, Liberty Shoes, Roto Pumps, Superhouse, Aftek Infosys and CGVAK Software & Exports.

**Table 6. Export intensity, profitability and R&D intensity of Indian manufacturing SMEs, 1991-2001**

| Year | Manufacturing SMEs | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Outward investing | | | | Non-outward investing | | | |
| | No. of Firms | Export Intensity (%) | Profitability (%) | R&D Intensity (%) | No. of Firms | Export Intensity (%) | Profitability (%) | R&D Intensity (%) |
| 1991 | 44 | 7.950 | 4.753 | 0.344 | 966 | 2.997 | 4.473 | 0.013 |
| 1992 | 51 | 11.264 | 4.225 | 0.025 | 1143 | 3.670 | 1.945 | 0.049 |
| 1993 | 73 | 14.060 | 3.974 | 0.029 | 1439 | 4.224 | 1.947 | 0.102 |
| 1994 | 102 | 20.920 | 6.366 | 0.254 | 1931 | 5.243 | 4.517 | 0.115 |
| 1995 | 106 | 20.812 | 7.066 | 0.411 | 2385 | 6.380 | 7.136 | 0.192 |
| 1996 | 110 | 21.718 | 4.914 | 0.433 | 2509 | 6.922 | 4.450 | 0.235 |
| 1997 | 101 | 18.404 | 2.394 | 0.184 | 2555 | 6.985 | 3.343 | 0.227 |
| 1998 | 96 | 20.388 | -2.809 | 0.326 | 2550 | 7.663 | 2.271 | 0.251 |
| 1999 | 103 | 22.204 | 0.129 | 0.294 | 2554 | 7.343 | 1.600 | 0.205 |
| 2000 | 104 | 21.333 | 0.485 | 0.136 | 2551 | 6.940 | 3.467 | 0.162 |
| 2001 | 83 | 21.978 | 5.090 | 0.461 | 1938 | 8.710 | 6.420 | 0.186 |

*Source*: Computation based on Prowess Database (2002) and RIS OFDI Dataset.

## VII. Policy considerations that support OFDI

39. India has a strong SMEs sector, which contributed about 50 per cent of industrial output and 42 per cent of India's overall exports. Indian SMEs are beginning to be notable in internationalization through OFDI. Their presence abroad is likely to be more significant than has been witnessed in the last decade. The liberalization of OFDI policy alone is not enough to encourage more SMEs to go abroad to participate in internationalization and benefit from it. OFDI activities by Indian SMEs are conditional upon both government policy initiatives and firm-specific endeavours.

40. A number of measures, fiscal and non-fiscal, which directly impinge upon the technological capabilities of SMEs are crucial for helping them fully exploit their OFDI potential. Low levels of technological capabilities of SMEs due to resource constraints, lack of technical and trained manpower and lack of access to facilities of public-funded research institutions discourage SMEs' overseas expansion. Given that SMEs suffer from low levels of skills and have limited capability to create their own brand names, support in skills upgrading (training, management development programmes), assistance in receiving certification from international quality testing agencies and steps towards quality improvement can be helpful. Measures that will enhance SMEs' access to finance are crucial for their growth at home as well as in the global market, and should be considered.

41. The provision of market information and investment opportunities in host countries is another area where the Government can support SMEs in realizing their full potential for OFDI. As government policies and the business environment may differ sharply between the home and the host country, SMEs need assistance from home and host Governments in dealing with legal matters, collecting information on overseas business opportunities and foreign market characteristics. Government policy framework supportive of international M&A could further help facilitate OFDI as a means to enhance enterprise competitiveness.

42. A major constraint hindering research on internationalization of SMEs is the lack of accurate and reliable data. Hence, development of a readily available database on SMEs undertaking OFDI is an important precondition for assessing and examining comprehensively the issues faced by Indian SMEs in internationalization through OFDI.

43. A number of strategic lessons could be considered by enterprises that explore internationalization strategies by OFDI. First, enterprises constrained by size and resources should not diversify production activities into a variety of products internationally. Specializing in a niche product is a good strategy for incremental internationalization rather than spreading the limited resources too thinly on many products and to many places. Second, enterprises operating in a particular product category could come together, collaborate and pool their resources for creating their own respective niche market segment. The need for an interactive platform that enables enterprises, particularly SMEs to share information, learning and jointly developed differentiated products can go a long way in overcoming their size limitations. Third, Indian enterprises could consciously invest in new technologies, particularly ICT. This is most critical as it enables them to access information on global markets, regulations and finding business partners abroad. Fourth, Indian enterprises could improve their capabilities and internationalization capacity by upgrading their technology, product differentiation and management skills in collaboration with business schools and management institutions. Fifth, Indian enterprises with easy access to finance or in a strong financial position could consider internationalization through using the M&As route. Indian enterprises could also observe good corporate governance and contribute to the host country's national development.

## VIII. Conclusion

44. Indian OFDI activities have emerged as distinguishing features of the Indian economy since the 1990s. The number of OFDI approvals, as well as the size of OFDI flows, has increased significantly in the past decade. This new wave of OFDI, termed the Second Wave, was accompanied by significant changes in the structure, characteristics and motivations which differ from those of OFDI in the pre-1990s.

45. OFDI from India has not been entirely led by larger enterprises. Indian SMEs have also played a significant role in this growing OFDI phenomenon. Indian OFDI by SMEs has been growing since the 1990s, a trend that is conspicuous in both the manufacturing and software industries. OFDI by Indian manufacturing SMEs is visible in low-technology-intensive industries and in high-technology-intensive industries. Indian SMEs invest in both developed and developing countries, but the software OFDI is more inclined to favour the developed region. There is also a growing tendency for Indian SMEs, as for TNCs, to pursue overseas acquisitions to expand markets and access to technology and other strategic assets.

46. Certain policy measures are needed to help Indian SMEs overcome the barriers to internationalizing through OFDI, including access to finance and provision of market information. Facilitative measures such as institutional support and incentives can be considered. The OFDI promotion programme is another area where both the public and the private sector can work together in strengthening India's position as an emerging outward investor, with the Indian SMEs featuring prominently in the process. The need for capacity building and strengthening Indian technological capability deserves closer attention by the Government, the private sector and research institutions.

47. On the whole, the significant liberalization of policies by the Government and the growing competitiveness of Indian enterprises in such industries as software and pharmaceuticals have played a significant role in supporting the rapid growth of Indian OFDI in recent years. The need to secure natural resources abroad, such as oil, gas and minerals, to support the rapid growth of industrial development at home has led the Government to actively encourage both public and private enterprises to venture abroad. Against this background, the prospect for Indian OFDI, including by Indian SMEs, is promising.

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## Annexes

### Table 1. The second wave and sectoral composition of Indian OFDI, 1975-1990 and 1991-March 2001
### (Millions of dollars; number; percentage)

| Sector | First Wave (1975-90) | | | | Second Wave (1991-March 2001) | | | |
|---|---|---|---|---|---|---|---|---|
| | No. | Equity | No. (% of total) | Equity (% of total) | No. | Equity | No. (% of total) | Equity (% of total) |
| Exploration & refining of oil | 1 | 0.02 | 0.43 | 0.01 | 5 | 61.10 | 0.20 | 1.43 |
| Exploration of minerals & precious stones | 2 | 4.02 | 0.87 | 1.81 | 2 | 0.04 | 0.08 | 0.00 |
| **Extractive** | 3 | 4.04 | 1.30 | 1.82 | 7 | 61.14 | 0.27 | 1.43 |
| Oilseeds, food products & processing | 10 | 9.06 | 4.35 | 4.07 | 91 | 69.34 | 3.55 | 1.63 |
| Textiles and garments | 12 | 9 | 5.22 | 4.05 | 158 | 112.56 | 6.17 | 2.64 |
| Wood, pulp and paper | 3 | 11.51 | 1.30 | 5.17 | 11 | 17.72 | 0.43 | 0.42 |
| Leather, shoes & carpets | 4 | 20.55 | 1.74 | 9.24 | 63 | 28.41 | 2.46 | 0.67 |
| Chemicals, petro-chemicals & paints | 18 | 7.82 | 7.83 | 3.52 | 94 | 92.13 | 3.67 | 2.16 |
| Drugs & pharmaceuticals | 8 | 4.72 | 3.48 | 2.12 | 163 | 270.24 | 6.36 | 6.34 |
| Rubber, plastic & tyres | 6 | 2.32 | 2.61 | 1.04 | 45 | 85.80 | 1.76 | 2.01 |
| Cement, glass & building material | 2 | 4.19 | 0.87 | 1.88 | 58 | 79.78 | 2.26 | 1.87 |
| Iron and steel | 10 | 16.17 | 4.35 | 7.27 | 47 | 50.65 | 1.84 | 1.19 |
| Electrical & electronic equipment | 6 | 2.11 | 2.61 | 0.95 | 63 | 90.86 | 2.46 | 2.13 |
| Automobiles and parts thereof | 6 | 3.21 | 2.61 | 1.44 | 26 | 24.00 | 1.02 | 0.56 |
| Gems & jewellery | 1 | 0.00 | 0.43 | 0.00 | 56 | 17.85 | 2.19 | 0.42 |
| Electronic goods & consumer durables | 2 | 0.27 | 0.87 | 0.12 | 29 | 20.75 | 1.13 | 0.49 |
| Beverages & tobacco | 7 | 3.24 | 3.04 | 1.46 | 37 | 142.05 | 1.44 | 3.33 |
| Engineering goods & metallurgical items | 18 | 8.53 | 7.83 | 3.83 | 84 | 66.24 | 3.28 | 1.55 |
| Fertilizers, pesticides & seeds | 5 | 39.93 | 2.17 | 17.95 | 27 | 326.96 | 1.05 | 7.67 |
| Miscellaneous | 10 | 2.59 | 4.35 | 1.16 | 184 | 183.58 | 7.18 | 4.31 |
| **Manufacturing** | 128 | 145.22 | 55.65 | 65.28 | 1236 | 1678.92 | 48.26 | 39.39 |
| IT, communication & software | 6 | 5.64 | 2.61 | 2.54 | 761 | 1354.49 | 29.71 | 31.78 |
| Hotels, restaurants, tourism | 24 | 24.96 | 10.43 | 11.22 | 53 | 112.45 | 2.07 | 2.64 |
| Civil contracting & engineering services | 6 | 1.8 | 2.61 | 0.81 | 44 | 16.57 | 1.72 | 0.39 |
| Consultancy | 7 | 0.43 | 3.04 | 0.19 | 31 | 8.07 | 1.21 | 0.19 |
| Trading & marketing | 27 | 12.47 | 11.74 | 5.61 | 146 | 96.45 | 5.70 | 2.26 |
| Media broadcasting & publishing | 2 | 0.01 | 0.87 | 0.00 | 61 | 739.64 | 2.38 | 17.35 |
| Financial services & leasing | 17 | 26.32 | 7.39 | 11.83 | 96 | 95.49 | 3.75 | 2.24 |
| Transport services | 3 | 0.55 | 1.30 | 0.25 | 44 | 48.33 | 1.72 | 1.13 |
| Other professional services | 7 | 1.05 | 3.04 | 0.47 | 82 | 50.69 | 3.20 | 1.19 |
| ***(a) Services*** | 99 | 73.2 | 43.04 | 32.91 | 1318 | 2522.17 | 51.46 | 59.17 |
| **Total** | 230 | 222.45 | 100.00 | 100.00 | 2561 | 4262.23 | 100 | 100 |

*Source*: Computation based on RIS Outward FDI dataset.

*Note*: This dataset has been compiled at RIS from the published reports of the Indian Investment Centre and unpublished data from the Ministry of Commerce.

Table 2. The second wave and regional distribution of Indian OFDI, 1975-1990 and 1991-March 2001
(Millions of dollars; number; percentage)

| Region | 1975 - 1990 | | | | 1991-March 2001 | | | |
|---|---|---|---|---|---|---|---|---|
| | **No.** | **Equity** | **No. (% of total)** | **Equity (% of total)** | **No.** | **Equity** | **No. (% of total)** | **Equity (% of total)** |
| South-East and East Asia | 67 | 80.79 | 29.26 | 36.32 | 379 | 399.35 | 14.79 | 9.37 |
| South Asia | 30 | 20.91 | 13.10 | 9.40 | 197 | 157.39 | 7.69 | 3.69 |
| Pacific islands | 3 | 0.22 | 1.31 | 0.10 | 1 | 0.05 | 0.04 | 0.00 |
| Africa | 29 | 37.83 | 12.66 | 17.01 | 254 | 513.94 | 9.91 | 12.06 |
| West Asia | 19 | 21.54 | 8.30 | 9.68 | 185 | 376.5 | 7.22 | 8.83 |
| Central Asia | 4 | 23.2 | 1.75 | 10.43 | 49 | 50.99 | 1.91 | 1.20 |
| Central and Eastern Europe | 11 | 6.46 | 4.80 | 2.90 | 75 | 41.03 | 2.93 | 0.96 |
| Latin America & the Caribbean | 2 | 0.58 | 0.87 | 0.26 | 36 | 180.6 | 1.41 | 4.24 |
| **Developing countries** | 165 | 191.52 | 72.05 | 86.09 | 1176 | 1719.82 | 45.90 | 40.35 |
| Western Europe | 40 | 17.29 | 17.47 | 7.77 | 565 | 1450.2 | 22.05 | 34.02 |
| North America | 23 | 13.51 | 10.04 | 6.07 | 749 | 1029.52 | 29.23 | 24.15 |
| Oceania | 1 | 0.08 | 0.44 | 0.04 | 52 | 15.2 | 2.03 | 0.36 |
| Other developed countries | | | | | 20 | 47.77 | 0.78 | 1.12 |
| **Developed Countries** | 64 | 30.89 | 27.95 | 13.89 | 1386 | 2542.6 | 54.10 | 59.65 |
| **Total** | 229 | 222.46 | 100 | 100 | 2562 | 4262.52 | 100 | 100 |

*Source*:Ibid.

*Note*: This dataset has been compiled at RIS from the published reports of the Indian Investment Centre and unpublished data from the Ministry of Commerce.

## Table 3. Distribution of Indian OFDI, by industry and firm size, as at 31 March 2001 (numbers; percentage)

| *ISIC REV 3* | **Description** | **Number of OFDI approvals** | | | | |
|---|---|---|---|---|---|---|
| | | **Small** | **Medium** | **SMEs** | **Large** | **Grand total** |
| 15/16 | Food products, beverages and tobacco | | 14 (8.1) | 14 (7.2) | 53 (9.6) | 67 (9.0) |
| 17/19 | Textiles, textile products, leather and footwear | 5 (21.7) | 40 (23.3) | 45 (23.1) | 65 (11.8) | 110 (14.7) |
| 20 | Wood and products of wood and cork | | 2 (1.2) | 2 (1.0) | | 2 (0.3) |
| 21/22 | Pulp, paper, paper products, printing and publishing | | 4 (2.3) | 4 (2.1) | 7 (1.3) | 11 (1.5) |
| 23 | ....Coke, refined petroleum products and nuclear fuel | | 1 (0.6) | 1 (0.5) | | 1 (0.1) |
| 24 X | ........Chemicals excluding pharmaceuticals | | 17 (9.9) | 17 (8.7) | 85 (15.4) | 102 (13.7) |
| 2423 | ........Pharmaceuticals | 2 (8.7) | 15 (8.7) | 17 (8.7) | 104 (18.9) | 121 (16.2) |
| 25 | ....Rubber and plastics products | 1 (4.3) | 10 (5.8) | 11 (5.6) | 40 (7.3) | 51 (6.8) |
| 26 | Other nonmetallic mineral products | 1 (4.3) | 4 (2.3) | 5 (2.6) | 16 (2.9) | 21 (2.8) |
| 27 | ....Basic metals | | 9 (5.2) | 9 (4.6) | 24 (4.4) | 33 (4.4) |
| *28* | ....Fabricated metal products, except machinery and equipment | 2 (8.7) | 3 (1.7) | 5 (2.6) | 34 (6.2) | 39 (5.2) |
| 29 | ....Machinery and equipment, n.e.c. | 3 (13.0) | 7 (4.1) | 10 (5.1) | 28 (5.1) | 38 (5.1) |
| 30 | ........Office, accounting and computing machinery | | 4 (2.3) | 4 (2.1) | 3 (0.5) | 7 (0.9) |
| 31 | ........Electrical machinery and apparatus, nec | 2 (8.7) | 9 (5.2) | 11 (5.6) | 17 (3.1) | 28 (3.8) |
| 32 | ........Radio, television and communication equipment | | 3 (1.7) | 3 (1.5) | 14 (2.5) | 17 (2.3) |
| 33 | ........Medical, precision and optical instruments, watches and clocks | 1 (4.3) | 4 (2.3) | 5 (2.6) | 4 (0.7) | 9 (1.2) |
| 34 | ....Motor vehicles, trailers and semitrailers | 5 (21.7) | 11 (6.4) | 16 (8.2) | 16 (2.9) | 32 (4.3) |
| 35 | ....Other transport equipment | | 1 (0.6) | 1 (0.5) | | 1 (0.1) |
| 36-37 | Manufacturing nec | 1 (4.3) | 14 (8.1) | 15 (7.7) | 41 (7.4) | 56 (7.5) |
| Grand total | | 23 (100) | 172 (100) | 195 (100) | 551 (100) | 746 (100) |

*Source*: ibid.

## Table 4. Distribution of Indian OFDI, by industry and firm size, as at 31 March 2001 (Millions of dollars; percentage)

| *ISIC REV 3* | Description | Small | Medium | SMEs | Large | Grand Total |
|---|---|---|---|---|---|---|
| 15/16 | Food products, beverages and tobacco | | 7.68 (7.77) | 7.68 (7.37) | 178.09 (12.28) | 185.77 (11.95) |
| 17/19 | Textiles, textile products, leather and footwear | 1.61 (29.70) | 22.15 (22.42) | 23.77 (22.80) | 98.29 (6.78) | 122.06 (7.85) |
| 20 | Wood and products of wood and cork | | 5.38 (5.44) | 5.38 (5.16) | | 5.38 (0.35) |
| 21/22 | Pulp, paper, paper products, printing and publishing | | 6.66 (6.74) | 6.66 (6.39) | 12.87 (0.89) | 19.53 (1.26) |
| 23 | ....Coke, refined petroleum products and nuclear fuel | | 0.03 (0.03) | 0.03 (0.03) | | 0.03 (0.00) |
| 24 X | ........Chemicals excluding pharmaceuticals | | 5.84 (5.91) | 5.84 (5.60) | 457.11 (31.53) | 462.95 (29.79) |
| 2423 | ........Pharmaceuticals | 0.56 (10.33) | 3.68 (3.72) | 4.23 (4.06) | 232.15 (16.01) | 236.38 (15.21) |
| 25 | ....Rubber and plastics products | 0.51 (9.41) | 1.86 (1.88) | 2.37 (2.27) | 99.96 (6.89) | 102.33 (6.58) |
| 26 | Other nonmetallic mineral products | 0.03 (0.55) | 4.81 (4.87) | 4.83 (4.63) | 52.93 (3.65) | 57.76 (3.72) |
| 27 | ....Basic metals | | 7.26 (7.35) | 7.26 (6.96) | 79.47 (5.48) | 86.73 (5.58) |
| *28* | ....Fabricated metal products, except machinery and equipment | 0.44 (8.12) | 2.34 (2.37) | 2.78 (2.67) | 60.77 (4.19) | 63.55 (4.09) |
| 29 | ....Machinery and equipment, n.e.c. | 0.89 (16.42) | 9.66 (9.78) | 10.54 (10.11) | 29.35 (2.02) | 39.89 (2.57) |
| 30 | ........Office, accounting and computing machinery | | 2.56 (2.59) | 2.56 (2.46) | 1.91 (0.13) | 4.47 (0.29) |
| 31 | ........Electrical machinery and apparatus, nec | 0.33 (6.09) | 5.2 (5.26) | 5.53 (5.31) | 7.9 (0.54) | 13.43 (0.86) |
| 32 | ........Radio, television and communication equipment | | 3.24 (3.28) | 3.24 (3.11) | 55.79 (3.85) | 59.02 (3.80) |
| 33 | ........Medical, precision and optical instruments, watches and clocks | 0.39 (7.20) | 0.22 (0.22) | 0.61 (0.59) | 3.74 (0.26) | 4.35 (0.28) |
| 34 | ....Motor vehicles, trailers and semitrailers | 0.66 (12.18) | 2.76 (2.79) | 3.42 (3.28) | 13.59 (0.94) | 17.01 (1.09) |
| 35 | ....Other transport equipment | | 2 (2.02) | 2 (1.92) | | 2 (0.13) |
| 36-37 | Manufacturing nec | 0.02 (0.37) | 5.49 (5.56) | 5.51 (5.29) | 66.06 (4.56) | 71.57 (4.60) |
| Grand total | | 5.42 (100) | 98.81 (100) | 104.24 (100) | 1449.96 (100) | 1554.19 (100) |

*Source:* ibid.

## Table 5. Distribution of Indian OFDI, by region and firm size, as on 31 March 2001
## (Number; millions of dollars)

| Region | Manufacturing | | | | Software | | | |
|---|---|---|---|---|---|---|---|---|
| | SMEs | | Large | | SMEs | | Large | |
| | No. | Value | No. | Value | No. | Value | No. | Value |
| South-East and East Asia | 34 (17) | 25 (24) | 99 (18) | 161 (11) | 12 (10) | 6 (2) | 16 (9) | 30 (7) |
| South Asia | 16 (8) | 7 (6) | 59 (11) | 96 (7) | | | 2 (1) | 2 (0) |
| Pacific | | | 4 (1) | 0 (0) | | | | |
| Africa | 15 (8) | 8 (8) | 77 (14) | 274 (19) | | | 2 (1) | 6 (1) |
| West Asia | 19 (10) | 6 (5) | 40 (7) | 291 (20) | 1 (1) | 0.03 (0) | 10 (6) | 2 (0) |
| Central Asia | 6 (3) | 6 (6) | 22 (4) | 37 (3) | | | | |
| Latin America and Caribbean | 3 (2) | 2 (2) | 9 (2) | 16 (1) | 1 (1) | 1 (0) | 7 (4) | 11 (2) |
| Developing countries | 93 (48) | 54 (52) | 310 (56) | 875 (60) | 14 (12) | 7 (2) | 37 (21) | 50 (11) |
| Western Europe | 53 (27) | 34 (32) | 133 (24) | 398 (27) | 18 (15) | 2 (1) | 36 (21) | 43 (9) |
| North America | 37 (19) | 9 (9) | 71 (13) | 153 (11) | 89 (74) | 396 (98) | 84 (49) | 352 (78) |
| Other developed countries | 3 (2) | 1 (1) | 11 (2) | 3 (0) | | | 16 (9) | 9 (2) |
| Developed countries | 93 (48) | 44 (42) | 215 (39) | 554 (38) | 107 (88) | 398 (98) | 136 (79) | 404 (89) |
| Central & Eastern Europe | 9 (5) | 6 (6) | 26 (5) | 21 (1) | | | | |
| Grand total | 195 (100) | 104 (100) | 551 (100) | 1450 (100) | 121 (100) | 405 (100) | 173 (100) | 454 (100) |

*Source:* ibid.

*Note*: Percentages are in parentheses.

## Table 6. Top ten destinations of Indian OFDI by SMEs and large-sized enterprises, as at 31 March 2001
## (Millions of dollars; number)

| Manufacturing | | | | | | Software | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OFDI By SMEs | | | OFDI by large sized firms | | | OFDI By SMEs | | | OFDI by large sized firms | | |
| Country | No. | Value | Country/economy | No. | Value | Country/economy | No. | Value | Country/economy | No. | Value |
| USA | 37 | 8.95 | UK | 77 | 214.33 | USA | 89 | 396 | USA | 83 | 352.07 |
| UK | 23 | 6.29 | USA | 67 | 149.5 | UK | 10 | 1.74 | UK | 20 | 27.69 |
| U.A.E. | 16 | 5.31 | Mauritius | 43 | 154.46 | Singapore | 5 | 0.17 | Singapore | 10 | 5.99 |
| Malaysia | 12 | 7.57 | Singapore | 30 | 44.5 | Hong Kong (China) | 4 | 3.00 | Australia | 9 | 2.24 |
| Singapore | 11 | 9.57 | Sri Lanka | 28 | 63.84 | Germany | 4 | 0.31 | Germany | 8 | 9.70 |
| Nepal | 10 | 3.97 | Nepal | 24 | 20.7 | Ireland | 4 | 0.23 | U.A.E. | 7 | 1.11 |
| Mauritius | 9 | 5.76 | Hong Kong (China) | 22 | 22.77 | Malaysia | 3 | 3.32 | Bermuda | 7 | 10.54 |
| Germany | 8 | 3.76 | U.A.E. | 21 | 77.19 | U.A.E. | 1 | 0.03 | Japan | 7 | 6.56 |
| Netherlands | 7 | 11.8 | Malaysia | 14 | 13.3 | Bermuda | 1 | 0.61 | Belgium | 4 | 0.10 |
| Thailand | 5 | 1.1 | Thailand | 14 | 36.91 | | | | Malaysia | 3 | 0.52 |
| **Sub total (above all)** | | | | | | | | | | | |
| Top ten | 138 | 64 | | 340 | 798 | | 121 | 406 | | 158 | 417 |
| **As a per cent of grand total** | | | | | | | | | | | |
| Top ten | 71 | 61 | | 62 | 55 | | 100 | 100 | | 91 | 92 |

*Source:* ibid.

**Table 7. Top ten SMEs and large-sized enterprises from Indian manufacturing and software industry**
**(Millions of dollars; percentage)**

| A. Manufacturing | | | | | | | |
|---|---|---|---|---|---|---|---|
| **SME multinationals** | | | | **Large-sized multinationals** | | | |
| Company | Industry | No. | Value | Company | | No. | Value |
| A C E Laboratories Ltd. | Pharmaceuticals | 5 | 1.246 | Ajanta Pharma Ltd. | Pharmaceuticals | 18 | 13.568 |
| R E P L Engineering Ltd. | Electrical machinery | 5 | 3.835 | Usha Beltron Ltd. | Metal Products | 16 | 35.40652 |
| Liberty Shoes Ltd. | Footwear | 4 | 3.771 | Ranbaxy Laboratories Ltd. | Pharmaceuticals | 14 | 40.136 |
| Roto Pumps Ltd. | Transport equipment | 4 | 0.58 | Asian Paints (India) Ltd. | Paints and varnish | 13 | 8.314 |
| Superhouse Ltd. | Footwear | 4 | 0.35 | Essel Propack Ltd. | Plastic & products | 12 | 88.7061 |
| Allied Nippon Ltd. | Transport equipment | 3 | 0.0061 | Dr. Reddy'S Laboratories Ltd. | Pharmaceuticals | 10 | 9.629 |
| Alsa Marine & Harvests Ltd. | Food products | 3 | 2.243 | Larsen & Toubro Ltd. | Diversified | 9 | 25.127 |
| Sabero Organics Gujarat Ltd. | Fertilizers | 3 | 0.105 | Core Healthcare Ltd. | Pharmaceuticals | 8 | 24.688 |
| Sintex Industries Ltd. | Diversified | 3 | 0.403 | Arvind Mills Ltd. | Cloth | 7 | 17.494 |
| Agri-Marine Exports Ltd. | Food products | 2 | 0.059 | Elgitread (India) Ltd. | Tyres | 7 | 0.609 |

| B. Software | | | | | |
|---|---|---|---|---|---|
| **SME multinationals** | | | **Large-sized multinationals** | | |
| Company | No. | Value | Company | No. | Value |
| Aftek Infosys Ltd. | 4 | 4 | N I I T Ltd. | 15 | 24.3 |
| Archana Software Ltd. | 4 | 2.25 | Aptech Ltd. | 10 | 5.9 |
| B S E L Information Systems Ltd. | 4 | 0.5 | Infosys Technologies Ltd. | 10 | 7.7 |
| C G-V A K Software & Exports Ltd. | 4 | 1.292 | Information Technologies (India) Ltd. | 9 | 7.5 |
| California Software Co. Ltd. | 4 | 0.318 | Mastek Ltd. | 9 | 3.9 |
| Compucom Software Ltd. | 4 | 71 | Ramco Systems Ltd. | 8 | 25.2 |
| Cybermate Infotek Ltd. | 4 | 29 | Hexaware Technologies Ltd. | 7 | 2.7 |
| K L G Systel Ltd. | 4 | 6.3 | Polaris Software Lab Ltd. | 7 | 2.1 |
| N I I T Gis Ltd. | 4 | 0.2336 | S Q L Star International Ltd. | 7 | 0.9 |
| Nucleus Software Exports Ltd. | 4 | 3 | Orient Information Technology Ltd. | 6 | 1.2 |

*Source:* ibid.