Internationalization of Production by an Indian Enterprise: Explaining the Trans-Border Growth of NIIT Ltd.

JAYA PRAKASH PRADHAN* AND VINOJ ABRAHAM**

The present study provides a case study of a developing-country enterprise that has recently emerged as the largest service sector foreign direct investor from its home country. NIIT Ltd is one of India's most aggressive outward investors, directing large portions of its cross-border investment at the developed regions of the world economy like the US and Europe. A host of firm-specific factors, such as a long-standing business experience, large size, strong R&D focus, large-scale advertising activities, and higher profitability are observed to have influenced the existence and growth of the cross-border operation of NIIT Ltd. Home country characteristics like favorable government policy, availability of skilled manpower, and infrastructural development also have contributed towards NIIT's emergence as a global player. The company, along with pursuing the route of direct investment, has been found to aggressively engage in other cross-border expansion strategy like mergers and acquisitions (M&As) and business alliances. The cross-border presence of NIIT through its subsidiaries promotes its global competitiveness through enhanced exports from parent to subsidiaries.

Introduction

The decade of the 1990s saw tremendous transformation in the world economy. The continuing processes of globalization, liberalization, and privatization have led to further acceleration in the industrial restructuring of the global market, as reflected by trans-border shifting of value-added activities and underlying changes in the international division of labor. This structural re-organization of global production also witnessed an increasing tendency of developing country enterprises, including those from India, to engage in trans-border production activities.[1] The Indian economy saw an outflow of direct investment of about US $3994 million in 1991-2000, as compared to a mere US $148 million in 1981-1990 and US $69 million in 1975-1980. During 1991-2000, for each dollar inflow of FDI into the economy there has been an outflow of FDI to the tune of 23 cents. Over the same period, service sector Indian firms emerged as the largest investor, accounting for about 60% of total outward FDI flows from the economy (Table 1). With 761 jointly- and wholly-owned trans-border

* Gujarat Institute of Development Research
** Jawaharlal Nehru University

Table 1: Outward Flows from and Inward FDI Flows into the Indian Economy, Cumulative 1975-2000 (In US $ Million)

Period	FDI Inflows (I-FDI)	FDI Outflows (O-FDI)	O-FDI as a % of I-FDI	Sectoral Composition of O-FDI							
				Extractive		*Manufacturing*		*Services*		*Total*	
				No	Equity	No	Equity	No	Equity	No	Equity
1975-80	92	69.4	75.42	2 (2.63)	4.02 (5.79)	43 (56.58)	46.88 (67.56)	31 (40.79)	18.49 (26.65)	76 (100)	69.39 (100)
1981-90	1204	148.3	12.31	1 (0.65)	0.02 (0.01)	85 (55.19)	93.47 (63.04)	68 (44.16)	54.77 (36.94)	154 (100)	148.26 (100)
1991-2000	17305	3994.1	23.08	7 (0.29)	61.14 (1.53)	1196 (50.08)	1547.86 (38.75)	1185 (49.62)	2385.11 (59.72)	2388 (100)	3994.11 (100)
1975-2000	18601	4211.8	22.64	10 (0.38)	65.18 (1.55)	1324 (50.57)	1688.21 (40.08)	1284 (49.05)	2458.37 (58.37)	2618 (100)	4211.76 (100)

Source: Author's estimation based on WDI (2002) and RIS-DSIR dataset (2002) subsidiaries involving US $1354 million in direct equity from January 1991-March 2001, the software enterprises were the most active among service sector firms in outward FDI activities (see Pradhan 2003 for more details). They are also among the most highly export-oriented enterprises of the Indian economy; their exports grew at an average rate of 40% per annum during 1988-2002 and contributed about 16% of India's total exports in 2000/2001, estimated at US $7.65 billion of software exports (UNCTAD 2002; *Business Line* 2002). Among all outward investors from software segment, NIIT Ltd. has been observed to be the most successful firm involved in both direct production abroad and several other strategic options such as acquisitions, licensing, and strategic marketing and R&D alliances (Pradhan 2003).

The present paper is intended to contribute to the understanding of this dramatic rise of NIIT Ltd. into a major global player as a step toward understanding the outward FDI behavior of a developing country software enterprise. The paper is structured as follows: the second section explores the trends and patterns of the cross-border strategic expansion activities undertaken by NIIT Ltd.; the next section investigates factors behind the firm's O-FDI decisions; and the fourth section discusses the implications of such strategies for global competitiveness. The fifth section will conclude the paper.

Trends and Patterns of Cross-Border Production Activity by NIIT Ltd.

Over the period from January 1975 to March 2001, NIIT Ltd. emerged as the largest service sector outward investor in the Indian economy, with as many as 29 joint and wholly owned subsidiaries abroad (Table 2). The stock of O-FDI undertaken by the firm has been estimated to be about US $51.3 million, nearly 2% of the total service sector O-FDI stock possessed by the economy.

Table 3 provides the list of NIIT subsidiaries and joint ventures across the globe. Its subsidiaries are spread across nineteen countries, with twelve in Asia-Pacific, followed by seven in Europe, four in India, and one each in the USA and Japan. The ownership interest of the company in subsidiaries is majority type, with over 90% ownership.

Most of these subsidiaries were established in the latter half of the 1990s. As a result, in the late nineties the global production has emerged as an important source of growth for NIIT Ltd. The subsidiaries' contribution in the global turnover of the company has risen steadily from 8% in 1994-95 to 46% in 2001-02 (Table 4). During the 1992-93 to 2001-02 period, the turnover of subsidiaries grew at a rate of 60.5% per year, as compared to 27% of the parent's. In the years 2000-01 and 2001-02, the company was hard hit by the slowdown of the US economy and worldwide recession, and had seen absolute drops in its global turnovers from Rs. 12,371 million in 1999-00 to Rs. 11,389 million in 2000-01 and further to Rs. 6541 million in 2001-02. In this period of recession, the revenue of both parent and subsidiaries declined in absolute amount.

Table 2: Ten Largest Indian Service Sector MNEs by Number of Joint Venture Approvals (January 1975-March 2001)

Company Name	No of JVs	Equity ($ Million)	%	Activity
NIIT Ltd	29	51.296	1.98	Software development
Aptech Ltd.,	14	7.919	0.31	Software development
Ramco System Ltd.	12	25.18	0.97	Software development
Infosys Technologies Ltd.,	10	7.659	0.30	Software development
Information technologies Ltd	9	7.482	0.29	Software development
ISC Consultancy Services P. Ltd.,	9	0.554	0.02	Software development
MASTEK LTD	9	2.402	0.09	Software development
Oberoi hotels PVT LTD	9	2.025	0.08	Hotels & restaurant
BFL Software Ltd.,	8	168.543	6.49	Software development
Globsyn Technologies	8	0.575	0.02	Software development
Sub total 10	*117*	*273.64*	*10.54*	
All companies	**1491**	**2595.367**	**100**	

Source: Pradhan (2003)

NIIT's global operation is largely concentrated in the US, with lesser concentrations in Europe and Asia-Pacific. In 2001-02, about 30% of global revenue was contributed by the US market, 16% by the EU, and 16% by the rest of Asia (Table 5). The home country, India, has been the source of about 36% of the global revenue of the company. In terms of the global sales distribution, therefore, the global diversification of the company is oriented more towards the developed regions of the world economy than towards the underdeveloped regions of Africa and Latin America. This may be due to the state of the IT market in underdeveloped regions of the world economy, which is unable to offer any profitable business opportunities for direct production. In terms of total asset distribution, the company located about 53% of its global assets in India, followed by 22% in the US, 14% in the rest of Asia, and 11% in the EU. Using fixed investment as a proxy for the production expansion strategy of the company, the company placed roughly equal importance on expanding its production facility in the home country and those in overseas locations. About 48% of the additions to the fixed global capital stock of the company has been directed at trans-border market and the remaining 52% at the home country market. In the international production expansion, the rest of Asian region has received the most fixed investment, claiming about 36%. The US has been the host to about 12% of fixed investment undertaken by the company in 2001-02.

Table 3: List of NIIT's Subsidiaries as of 30th September 2002

Name of NIIT Subsidiaries	% of ownership interest	Country of Incorporation
1. Indian subsidiaries		
NIIT GIS Limited	88.99%	India
NIIT Online Learning Ltd.	90%	India
Minimally Invasive Education Company Ltd.	88.99%	India
NIIT SmartServe Ltd.	99.99%	India
2. Overseas subsidiaries		
2.1. NIIT (USA) Inc.	*100%*	*USA*
2.2. NIIT Europe Limited, UK and its subsidiary companies		
NIIT Europe Limited	100%	UK
NIIT Europe GMBH, Germany	100%	Germany
NIIT Benelux BV, The Netherlands	100%	Holland
NIIT Belgium NV, Belgium	99.96%	Belgium
NIIT Middle East WLL, Bahrain	99.50%	Bahrain
National Institute of Information Technology Nordiska AB	100%	Sweden
2.3. NIIT Antilles N.V	*100%*	*Netherlands Antilles*
2.4. NIIT Japan Kabushiki Kaisha	*100%*	*Japan*
2.5. NIIT Australasia Pte Limited	*100%*	*Singapore*
2.6. NIIT Asia Pacific Pte Limited and its subsidiaries		
NIIT Asia Pacific Pte Limited	100%	Singapore
NIIT (Malaysia) SDN BHD	100%	Malaysia
NIIT (Thailand) Limited	100%	Thailand
NIIT Asia Pacific Limited	100%	New Zealand
NIIT Asia Pacific Pty Ltd	100%	Australia
2.7. NIIT PT Indonesia	*100%*	*Indonesia*
2.8. NIIT (Mauritius) Limited and its subsidiaries		
NIIT (Mauritius) Limited	100%	Mauritius
NIIT TVE Limited	100%	Mauritius
NIIT China (Hong Kong) Limited	100%	Hong Kong (China)
NIIT China (Shanghai) Limited	100%	China
PCEC NIIT Institute of Information Technology	100%	China
3. Joint-Ventures		
3.1 Aesthetic Technologies Private Ltd.	*36.84%*	
3.2 Mind Sharper Technologies Ltd.	*24.35%*	
3.3 NIIT Tiancai Information Technology Ltd.	*25%*	

Source: NIIT Annual Report, 2001-02

Table 4: Growth in the Global Operation of NIIT Ltd. 1992/93 to 2001/02, (Rs. Million)

Year	Global Turnover (NIIT and subsidiaries)	Revenue from Operations of NIIT Ltd	% Share of subsidiaries	Annual Growth rate (%)		
				Global Turnover	Revenue of NIIT	Revenue of subsidiaries
1992-93	627	627	0			
1993-94	931	931	0	48	48	
1994-95	1670	1524	9	79	64	261.0
1995-96	2832	2305	19	70	51	96.2
1996-97	4307	3273	24	52	42	83.6
1997-98	6484	4586	29	51	40	56.2
1998-99	8800	5836	34	36	27	64.4
1999-00	12371	7499	39	41	29	-7.2
2000-01	11389	6868	40	-8	-8	-33.2
2001-02	6541	3521	46	-43	-49	-37.2
Annual Average	*5595*	*3697*	*24*	*36*	*27*	*60.5*

Source: Author's computation based on NIIT Annual Reports, various years.

Table 5: Geography of NIIT's Global Operation, 2001-02, (Rs. Million)

Country/Region	Revenue	Assets	Fixed Investment
India	2,341 (36)	4,962 (53)	755 (52)
Rest of Asia Pacific (Including Australia)	1,056 (16)	1,284 (14)	527 (36)
Europe (including Middle East)	1,074 (16.4)	988 (10.6)	4.4 (0.3)
America	1,989 (30)	2,072 (22)	168 (12)
Others	80.7 (1.2)	-	-
Total	6,541 (100)	9,306 (100)	1,455 (100)

Source: NIIT Annual Report 2001-02, Consolidated Accounts (NIIT and its subsidiaries)
Note: Figures in bracket are percentage of total.

The global production network of NIIT Ltd. is no longer confined to the strategy of direct investment. Recently the company has been pursuing an aggressive strategy of merger and acquisition and strategic alliances. Table 6 provides a list of overseas mergers and acquisitions (M&As) activities undertaken by the company and of its M&A objectives.

NIIT Ltd acquired the custom development business of the US-based Click2learn for Rs. 51.15 million as a strategic move to enter into the US corporate knowledge solutions market on Dec. 15 2001. As a result of this acquisition, NIIT had acquired the assets of Click2learn's custom development business estimated to be Rs. 37.5 million along with its existing projects. The value of goodwill arising on account of acquisition is estimated to be around Rs. 13.66 million. The development of e-learning and knowledge solutions for the market will be jointly done by NIIT and Click2learn utilizing Click2learn's Aspen Enterprise Learning Platform and NIIT's knowledge centers. NIIT would now also be a reseller of Click2learn's Aspen Enterprise Learning Platform and ToolBook line of products. It was expected that the acquired business would exceed $15 million over the first two years (NIIT Annual Report 2001-02; *Business Line*, January 25 2002).

On March 20, 2002, the company acquired the US-based information technology services firm Osprey Systems, a 53-employee firm based in Charlotte, NC, engaged in SAP implementation and consulting business, for Rs. 119.2 million. This acquisition added net assets worth Rs. 11.6 million and goodwill worth Rs. 107.59 million. The impressive client base of Osprey Systems, which includes a client list of around thirty companies including Coats America, Compass Group, Sulzer, Bruce Mills, and Southern Pump, was the primary reason for the acquisition. With the utilization of the existing physical and human assets, the acquired business was expected to generate around $35 million revenue in the following three years (NIIT Annual Report 2001-02; *Financial Express*, March 28, 2002).

For Rs. 41.9 million, NIIT acquired the US-based Data Executives International (DEI), engaged in providing solutions in the insurance and finance sectors, as a key strategy to acquire high-end domain expertise and access the client base in the insurance domain, on August 19, 2002. In addition to net asset worth of about Rs. 31.3 million and Rs. 10.7 million of goodwill, this acquisition contributed to NIIT a high caliber management and experienced consulting team (NIIT Annual Report 2001-02; Business Line, September 5, 2002).

The German-based privately held AD Solutions (ADS), with subsidiaries in Switzerland and Austria, was acquired by NIIT for $3 million in November 2002. The acquisition of ADS, a respected custom solution provider in the logistics and financial industry, gave NIIT access to the hitherto under-penetrated European market. It has also added a team of software professionals and has enabled NIIT Technologies to effectively address the over $27 billion IT services market in Germany, Switzerland, and Austria (*Financial Express*, November 15, 2002).

In February 2003, NIIT announced the acquisition of US-based CognitiveArts, a customized knowledge solutions company with a reputed client base including 20 Fortune 500 companies in the US. Its clients include Wal-Mart, The Walgreen Co, Harvard Business School Publishing, McKinsey & Co. KeyCorp., Exxon Mobil, and the US Department of Veterans' Affairs. This acquisition has given NIIT the assets of the company, including brand, technology, and manpower. The major objective of this acquisition was to address the US corporate knowledge solutions market in the retail and financial services verticals; an objective that is well aligned with NIIT's vertical focus (*Financial Express*, February 13, 2003).

In sum, all the above acquisitions were motivated by geographical expansions, service lines of offerings like packaged implementation and managed services, as well as by new verticals like insurance, transportation, and retail.

Table 6: Selected Cross-Border M&As by NIIT Ltd. (2002-2003)

Year	Acquired Company	Headquarter	Specialization of the company	Primary Objective
2001 (Dec.)	Click2Learn	USA	Custom development business	Access to the US corporate knowledge solutions market
2002 (March)	Osprey Systems	USA	SAP implementation and consulting business	Access to the client base in the US market
2002 (Aug.)	Data Executive International	USA	Insurance and finance sectors IT solutions	Bringing high-end domain expertise into the practice
2002 (Nov.)	AD Solutions	Germany	Developing custom solutions and providing development outsourcing services	Access to European Market, particularly IT services market in Germany, Switzerland and Austria
2003 (Feb.)	Cognitive Arts	USA	Customized knowledge solutions	Access to the US corporate knowledge solutions market

Source: based on various Indian financial dailies.

Along with the strategy of acquisition, the company has entered into many cross-border strategic alliances with other global players to strengthen its position in the global market. An illustrative list of these alliances is provided in Table 7.

In February 2000, NIIT Ltd formed an alliance with Australian telecommunications company, Telstra, to offer total Internet service solutions to market in India and the Asia-Pacific. NIIT will use Telstra's managed networking infrastructure and hosting capabilities to provide application solutions to business enterprises. This strategic alliance offer covers all aspects of software application development and systems integration, as well as complete facilities management (*Internetnews*, February 4, 2000).

NIIT struck a global alliance with ComputerLogic Inc., a leading provider of technology solutions for the $260 billion automotive aftermarket industry, on December 8, 2000. With this alliance, NIIT became ComputerLogic's exclusive software development and systems integration partner, and it provides new business opportunities for NIIT's IT services and solutions offerings in the automotive parts, materials, and insurance space. For ComputerLogic, this alliance will provide access to NIIT's e-business expertise, large scale development capacity, and global customer base, and NIIT's strong financial profile will improve ComputerLogic's flexibility and ability to access and service larger clients (NIIT, December 8, 2000).

In February 2002, NIIT teamed with SunGard Planning Solutions of the US to offer disaster recovery and business continuity solutions in the Asia-Pacific region and India. This alliance enables NIIT to leverage the expertise of SunGard Planning for delivering total business continuity solutions (*Business Line*, February 16, 2002).

In October 2001, the company formed a strategic alliance with CoKinetic Corporation, a venture conceived within Deutsche Bank. With this alliance, NIIT became CoKinetic's key development outsourcing partner, which enables it to address new market needs (*Business Line*, October 25, 2001). NIIT Ltd also had earlier acquired a small equity stake in OneWeb System of the US in July 2000 to help its customers in getting their new eBusiness projects to market in record time by rapidly building web solutions (*Business Line*, July 15, 2000).

In October 2002, NIIT aligned with Duesseldorf-based Europop to be co-developer of the next version of Robopop, the flagship product of Europop, a middleware tool for the rapidly growing application software and Internet service provider markets in Germany. This alliance with Europop will also enhance NIIT's offerings to other telecom services and product companies in other European markets and around the world (*Business Standard,* March 6, 2002). In the same month NIIT also entered into an outsourcing pact with the US-based Sabre Holding Corporation to outsource software development and maintenance work. As per the agreement, NIIT Technologies, the software services division of NIIT, would execute software development and systems maintenance work for the US company. The alliance will enhance Sabre's offerings in the travel industry by leveraging the delivery capability of NIIT Technologies, and will allow NIIT Technologies to leverage its vast experience and expertise in various domains of the transportation sector such as reservations, cargo, revenue management, and sales and marketing (*Business Standard,* October 11, 2002).

NIIT Ltd. also made strategic alliances with global players like Alcatel, BEA, Compaq, IBM, Microsoft, Oracle, Siebel, and Sun Microsystems in order to address the global opportunities in Internet, e-commerce, and training domains.

Table 7: Selected Strategic Cross-Border Alliances by NIIT Ltd. (Joint Ventures)

Year	Company Name	Headquarters	Primary Objective
1996	California based ESRI Inc.	USA	To offer GIS solutions in the area of Planning, Forestry, Environment, and Agriculture in India.
2000 (June)	Sun Microsystems	USA	To provide premier e-integration and e-business solutions using Sun products including Solaris, Java, Jini and others
2000 (Dec.)	Computer Logic, Inc.	USA	To provide new business opportunities for its IT services and solutions offerings in the automotive parts, materials and insurance space
2001 (May)	Microsoft Corporation	USA	To develop new educational programme for the software developers on the Microsoft C Sharp languages
2001 (Oct.)	CoKinetic Corporation, Deutsche Bank	Germany	To address new market needs for development outsourcing services
2002 (Jan.)	IBM	USA	To conduct advanced training courses in IBM's middleware software technologies and jointly market these technologies
2002 (Feb.)	SunGard Planning Solutions	USA	To offer disaster recovery and business continuity solutions in the Asia-Pacific region and India
2002 (Oct.)	Duesseldorf-based Europop	Germany	To be co-developer of the next version of Robopop, the flagship product of Europop

Source: based on various Indian financial dailies.

Factors behind the O-FDI Decisions of NIIT Ltd.

The dominant theory of foreign investment, industrial organization theory, suggests that potential investors must possess some firm-specific monopolistic advantages which they can profitably exploit abroad by internalizing production, rather than exporting from home country or licensing those advantages to a third party abroad (Hymer 1960, Kindleberger 1969, Caves 1971). The existence of these monopolistic advantages is essential for the investing firms to meet the cost of "foreignness" in the host country and to have an edge over the local and third-country rivals.

Sometimes in the old literature on international production by developing country firms, it is argued that the monopolistic advantages of outward investing developing country firms tend to be different from those possessed by developed country firms (Lecraw 1977, 1993; Kumar and McLeod 1981; Wells 1983; Lall 1983). Developed country MNEs are posited to have monopolistic advantages from frontier innovation, high skill intensity, scale economies, and sophisticated product differentiation, whereas developing country MNEs are postulated to have monopolistic advantages in the production of unsophisticated, uniform-quality, undifferentiated products using labor-intensive technology suitable for small-scale production and low cost management. This ownership-specific advantage distinction between developed country-based MNEs and developing country-based MNEs was appropriate because during the 1970s and early 1980s most of the developing countries' O-FDI was located in neighboring developing countries situated at relatively lower levels of development. However, due to the accelerating process of globalization and liberalization, together with the fact that many developing countries over the years have accumulated significant levels of technological capabilities through large-scale public investment in skill, information, and technological efforts, such distinction between firm-specific advantages of developing versus developed countries lost its significance during the 1990s (Pradhan 2004). Now, a larger proportion of developing country O-FDI is directed at developed regions of the world economy (Kumar 1998) and developing country firms are competing with developed country firms right in their home country. Therefore, the ownership advantages of developing country firms need to be at least as sophisticated as those possessed by developed country firms.

To identify which monopolistic advantages are important in the existence and growth of the cross-border production operation of NIIT Ltd, this study has considered a set of firm-specific characteristics of NIIT in relation to the industry average, as presented in Table 8.

Age

The first important observation that emerges from Table 8 is that NIIT Ltd is one of the oldest firms in the Indian IT industry. It has a long-standing business experience of 20 years as compared to mere six years of average industry experience. With a humble beginning in 1981, NIIT has grown tremendously in the domestic market, providing IT training and then diversifying into global training and software services. A firm with such a long period of production, business, and marketing experience is likely to have some monopolistic advantage over new start-ups in terms of cross-border production operation. This finding is supportive of the earlier studies on third-world MNEs (TWMNEs) (Lall 1983, Chen 1983), which found that developing country firms investing abroad tend to have relatively long-standing business experience, as reflected by the age of the firm.

Size

The literature on TWMNEs also suggests that firm size and O-FDI activity are positively correlated. Chen (1982) on MNEs from Hong Kong, Katz and Kosacoff (1983) on Argentine MNEs, and Lall (1986) on Indian MNEs found that cross-border investing firms are the relatively older and larger firms in their respective industries. In conformity with these earlier findings, NIIT Ltd is a very large firm for the Indian software industry. Using sales as a proxy for firm size, for the year 2000 the size of NIIT was Rs. 7,490 million—nearly 36 times the average size of Indian software firms. As a large firm, NIIT has access to cheap credit and market information and has more ability to withstand the risk involved in outward investment operation.

Technology

Another factor that may have contributed towards NIIT's overseas production initiative lies in its capability to successfully absorb, adapt, and effectively deploy available new technologies and continuously remain innovative to meet new technological challenges. The amount of R&D expenses incurred by the company increased from Rs. 38.3 million in 1999 to Rs. 71 million in 2000. The R&D intensity of the company is estimated to be 0.95%, as compared to a mere 0.37% of industry R&D intensity in 2000. The in-depth R&D focus of the company led to the creation of several innovative products in fields including net-centric computing, e-commerce, cognitive multimedia, human-computer interface, educational multimedia products and NetVarsity. NIIT has created the world's first adaptive software robot on the Internet, India's first live web-caster of open heart surgery, and has conducted Asia's first tutorial workshop on the emerging area of Internet appliances (NIIT Annual Reports 1997-98, 1998-99). In 1998-99 the company set up a Centre for Research in Cognitive Systems (CRCS) at IIT Delhi to carry out in-depth research and understanding of human cognition. The other research center, Centre of Competence, continued to research in emerging technologies and areas related to net-centric computing, machine-user interface, and cognitive sciences. These findings on the technological capability of NIIT partially support the earlier findings that the main technological strength of developing countries MNEs lies in their ability in local adaptations and modifications, and in their at times modest improvements of imported foreign technologies (Kumar and Kim 1984, Euh and Min 1986, Lall 1983, Chen 1983, Villela 1983). It is partial in the sense that developing country firms like NIIT Ltd are no longer technology followers or importers, as argued in the older TWMNE literature; they are now engaged in creating new technologies to enlarge and maintain their global operation.

Advertising

Apart from continuous innovation, the O-FDI operation of NIIT is facilitated by its brand building and advertising activities. Nearly 7% of the sales of the company has been devoted to selling activities, as compared to the industry average of only 3%. Obviously, NIIT is a highly advertising-intensive company for the Indian software industry. After gaining global recognition through its core activity of educational and training business, the company is now engaged in product development under its own brand name.

Profitability

O-FDI activity involves more risk and uncertainty than domestic operation and also huge financial resources. Therefore, the outward investment decisions of a firm can be expected to be favorably affected by its financial strength. The profit margin enjoyed by NIIT Ltd was higher than the industry average profit margin for 1999 and 2000. In 2000, NIIT Ltd reported net profit of Rs. 2,240 million, amounting to 30% of total turnover, 5% higher that the industry profit margin. The large financial resource base of the company, as reflected by higher profit margins, may be an important factor in its decision to go for trans-border production activities.

Along with the above-discussed firm-specific intangibles, government policy with respect to the software industry and O-FDI has played an important role in the emergence of NIIT Ltd as an MNE. After independence, India made significant progress in accumulating human capital and learning capabilities, S&T infrastructure, transportation, and industrialization. This tremendous scientific and technological expertise was exploited by the software industry. India was the first developing country to have a computer policy in 1970, when it created the Department of Electronics. The government computer policy has changed from its early restrictive phase to a relatively liberal phase in 1985 that focused on encouraging software exports and export-oriented foreign investment. Following economic liberalization in 1991, the government policy with respect to the industry has been further liberalized, along with the O-FDI policy. Prior to 1992, the government O-FDI policy promoted only joint ventures with minority Indian ownership of less than 50%, and even that minor equity participation was required to be in the form of exports of Indian-made capital goods, equipment, and know-how. Since October 1992, the O-FDI policy has been considerably liberalized, and more recently the modified Guidelines for Indian Joint Ventures (JVs) and Wholly Owned Subsidiaries Abroad (WOSs) of July 12, 2002, has provided for an automatic route for cases with equity value up to US$100 million in any one financial year. The opening of the economy to trade and investment has led to increased competition in the domestic market and acted as a push factor for Indian firms to look for foreign markets through export and O-FDI channels, and the O-FDI policy liberalization has allowed Indian firms to exploit their monopolistic advantages by investing abroad.

However, the objective of NIIT in the case of O-FDI through overseas M&As is not simply to exploit existing firm-specific advantages originating from the home country, as observed in the case of green-field investment, but is also oriented toward gaining access to the developed country markets and strengthening market position, as well as benefiting from production and technological synergies with the proprietary assets of the acquired entity (Pradhan and Abraham 2005).

Table 8: NIIT's Characteristics, 1999, 2000

Indicator	*1999*		*2000*	
	NIIT	*Industry*	*NIIT*	*Industry*
Age (number of years)	19	5	20	6
Size (Rs. Crore)	578	11.4	749	20.92
R&D intensity (%)	0.66	0.52	0.95	0.37
Selling cost intensity (%)	4.39	2.46	7.09	2.85
Profit margin (%)	24.74	21.98	29.94	25.26

Source: Author's estimation based on PROWESS database, CMIE (2002)

Implications for Export Competitiveness

O-FDI can be a strategic tool in strengthening the international competitiveness of a firm through improved export performance of the parent. This is the predominant conclusion that emerged from the last three decades of research on the relationship between O-FDI and exports (see Lipsey 2002 for a survey). For the U.S. economy, where the relationship has been extensively debated, Lipsey and Weiss (1981, 1984) found that overseas production by U.S. firms has contributed positively to U.S. exports. Lipsey (1994) argued that outward production is the strategy of U.S. firms to maintain their world market share, and, in fact, this had contributed to the increase in their share in global exports of manufactures between 1966 and 1985, when the U.S. was witnessing long-term decline in its export share. The overseas presence of the firm through subsidiaries tends to improve the non-price components of global competitiveness, such as developing trade-supporting infrastructure abroad, acquiring strategic assets, and gaining strategic access to markets in emerging trading blocs (Kumar 1998). It is also suggested that even though foreign production has substituted the exports of final product, it has led to more exports of intermediate inputs from the home country.

To give an insight into how overseas production has affected NIIT's export performance, the statistics on trade flows between NIIT and its overseas subsidiaries have been presented in Table 9. It can be seen that NIIT Ltd has consistently enjoyed trade surpluses with its subsidiaries in 2001 and 2002. Of the estimated trade surplus of Rs. 1370 million in 2002, trade surplus for service transaction is largest, at about Rs. 1408 million, and the trade balance is negative for goods transaction. The present evidence has shows that NIIT subsidiaries are major importers of services from the parent and thus indicate that O-FDI can be a strategic tool for export promotion.

Table 9: NIIT's Trade With Overseas Subsidiaries, 2001-02 (Rs. Million)

Item	2002	2001
Purchase of goods	43.63	Nil
Sale of Goods	4.98	54.15
Trade balance in goods	-38.65	54.15
Receiving of Services	12.90	43.09
Rendering of Services	1421.29	1750.87
Trade balance in services	1408.39	1707.78
Import of goods & services	56.53	43.09
Exports of goods & services	1426.27	1805.02
Total Trade balance	*1369.74*	*1761.93*

Source: NIIT Annual Report 2001-02

Conclusion

The 1990 saw rapid growth of O-FDI activity by Indian enterprises, particularly by service sector firms. Within the service sector, NIIT Ltd has emerged as the largest Indian outward investor. Geographically, the O-FDI activity of the company is more directed at developed regions of the world economy, namely the US and European region, because of the developed and growing market for software products there.

The growth of international production by NIIT Ltd is driven by the desire for market access in the US and European markets, and is backed by monopolistic advantages derived from large size, long years of business experience, high R&D intensity, large scale advertising, and higher profitability. In the case of M&As, apart from the objective of securing established market, the company's O-FDI decision is motivated by the desire to acquire the created assets of the targeted company, such as skilled manpower, brand names, goodwill, and marketing channels. In the emergence of NIIT as a multinational, the home country factors like government policies relating to skill and technology, trade, and accumulated learning in the process of industrialization have also played an important role.

Research also found that the O-FDI operation of NIIT Ltd had favorably affected its global competitiveness. In particular, it has led to more exports from the parent, and as a result the company has consistently a positive trade balance with its subsidiaries. O-FDI thus can be an important tool for improving export performance, and this option should be seriously considered by developing countries like India.

Notes

[1] Out of an estimated $523,854 million of global outward FDI stock in 1980, developing countries accounted for only $16,484 million, a mere 3% of the total stock. By the end of 2000, the share of developing countries quadrupled to 12% of the total stock. They invested around $710,305 million abroad, as compared to $ 5,248,522 million by developed countries. Consequently, the share of outward FDI stock in the GDP of developing countries increased from 1% in 1980 to 10% in 2000 (UNCTAD/DITE online FDI Statistics, 2002).

References

Business Line. 2000. "NIIT for Strategic Overseas Alliances." July 15.

Business Line. 2001. "NIIT Pact with Deutsche Bank Venture." October 25.

Business Line. 2002. "Software Exports to US up 32 pc." Thursday, Jul 04.

Business Line. 2002. "NIIT Acquires Click2learn Assets." January 25.

Business Line. 2002. "NIIT Acquires US Company." September 5

Business Line. 2002. "NIIT, SunGard Tie Up." February 16.

Business Standard. 2002. "NIIT Ties Up with Europop on Middleware." March 06.

Business Standard. 2002. "NIIT in Outsourcing Pact with Sabre Holding of US." October 11.

Caves, R.E. 1971. "International Comparisons: the Industrial Economics of Foreign Investment." *Economica* 38: 1-27.

Chen, E.K.Y. 1983. "Multinationals from Hong Kong." In Lall, ed., *The New Multinationals: The Spread of Third World Enterprises* New York: John Wiley & Sons.

Euh, Y. and S.H. Min. 1986. "Foreign Direct Investment from Developing Countries: The Case of Korean Firms." *The Developing Economies* (XXIV-2): 149-168

Financial Express. 2002. "NIIT Acquires AD Solutions for $3 Million." November 15.

Financial Express. 2002. "NIIT Buys Osprey for $3 Million in All-Cash Deal." March 28.

Financial Express. 2003. "NIIT Acquires CognitiveArts." February 13.

Hymer, S.H. 1976. *The International Operations of National Firms: A Study of Direct Foreign Investment*. Boston: MIT Press.

Internetnews. 2000. "NIIT, Telstra Form Indian Business ISP." February 4.

Katz, J. and B. Kosacoff. 1983. "Multinationals from Argentina." In Lall, ed., *The New Multinationals: The Spread of Third World Enterprises*. New York: John Wiley & Sons.

Kindleberger, C. P. 1969. *American Business Abroad*. New Haven: Yale University Press.

Kumar, K. and K.Y. Kim. 1984. "The Korean Manufacturing Multinationals." *Journal of International Business Studies* Spring/Summer 15: 45-61.

Kumar, K. and M. McLeod, eds. 1981. *Multinationals from Developing Countries*, Lexington: Lexington Books.

Kumar, N. 1998. "Emerging Outward Foreign Direct Investment from Asian Developing Countries: Prospects and Implications." In Kumar, ed., *Globalization, Foreign Direct Investment and Technology Transfers*. London and New York: Routledge.

Lall, R. B. 1986. *Multinationals from the Third World: Indian Firms Investing Abroad*. Delhi: Oxford University Press

Lall, S., ed. 1983. *The New Multinationals: The Spread of Third World Enterprises* New York: John Wiley & Sons.

Lall, S. 1983a. "Multinationals from India." In Lall, ed., *The New Multinationals: The Spread of Third World Enterprises*. New York: John Wiley & Sons.

Lecraw, D. 1977. "Direct Investment by Firms from Less Developed Countries." *Oxford Economic Papers* 29 (3): 442-457.

Lecraw, D. 1993. "Outward Direct Investment by Indonesian Firms: Motivation and Effects." *Journal of International Business Studies*: 589-600.

Lipsey, R. E., and Merle Yahr Weiss. 1981. "Foreign Production and Exports in Manufacturing Industries." *The Review of Economics and Statistics* 63(4): 488-494.

Lipsey, R. E., and Merle Yahr Weiss. 1984. "Foreign Production and Exports of Individual Firms." *The Review of Economics and Statistics* 66 (2): 304-308.

NIIT. 2000. "NIIT Announces Global Strategic Alliance with ComputerLogic of USA." December 8, 2000 at http://www.niit.com/Asean/press89.htm.

NIIT. 2002. Annual Report 2001-02. New Delhi.

Pradhan, J. P.. 2003. "Rise of Service Sector Outward Foreign Direct Investment from Indian Economy: Trends, Patterns, and Implications." *RIS Discussion Paper (RIS-DP) #63/200*. New Delhi.

Pradhan, J. P. (2004) "The Determinants of Outward Foreign Direct Investment: A Firm Level Analysis of Indian Manufacturing." *Oxford Development Studies* 32 (4): 619-639.

Pradhan, J. P. and V. Abraham. 2005. "Overseas Mergers and Acquisitions by Indian Enterprises: Patterns and Motivations." *Indian Journal of Economics* 338 (January).

UNCTAD. 2002. World Investment Report: Transnational Corporations and Export Competitiveness. New York and Geneva.

WDI. 2002. World Development Indicators, World Bank.

Wells, L. T., Jr. 1983. *Third World Multinationals-The Rise of Foreign Investment from Developing Countries*. Cambridge: MIT Press.