

**GLOBALISATION AND ITS EFFECTS ON MIGRATION
OF SKILLED HUMAN RESOURCES FROM INDIA
WITH SPECIAL REFERENCE TO *IT* SECTOR**

**THESIS SUBMITTED FOR PH.D DEGREE IN ECONOMICS AT
THE UNIVERSITY OF NORTH BENGAL**

BY

**DURLAV SARKAR
ASST.PROFESSOR
DSMS-BUSINESS SCHOOL
(UNDER WBUT, AICTE APPROVED)
DURGAPUR-12**

**SUPERVISOR
PROF.ANIL BHUIMALI
PROFESSOR AND HEAD
DEPARTMENT OF ECONOMICS
UNIVERSITY OF NORTH BENGAL**



**DEPARTMENT OF ECONOMICS
UNIVERSITY OF NORTH BENGAL
RAJA RAMMOHUNPUR
DARJEELING-734013
WEST BENGAL, INDIA
SEPTEMBER, 2010**

TH
338-954
S245g

21 FEB 1972

235573



10214 11
9 10/11

ACKNOWLEDGEMENT

My interest in the subject has grown when I came into touch of my supervisor, Prof. Anil Bhumali, Professor and Head, Department of Economics, University of North Bengal. I take the opportunity of expressing my heartfelt gratitude to Prof. Bhumali who guided the study and exercised efforts in getting the thesis completed. His encouraging guidance has always been a source of inspiration to me.

I convey my gratitude to Dr.Ranjan Kr.Gupta, Lecturer, Barasat State University and who was also my colleague at MBA Centre, University of North Bengal for his suggestions.

I accord my heartfelt thanks to Mr.Nilanjan Mitra, Project Head, RS Software, Saltlake, Kolkata and Ms.Debjani Das, Developer, Cognizant Technology Services, Kolkata & USA for the help extended to me in conducting the survey work.

Let me offer my heartiest thanks to all the teaching and non-teaching staffs of the Department of Management, University of North Bengal and my colleagues of DSMS Business School, Durgapur for their constant encouragement.

I express my deep sense of gratitude to all the teachers of the Department of Economics, University of North Bengal for their encouragement.

No formal thanks can compensate the sacrifice made by my wife Suparna and my daughter Sweccha who are deprived of my association. I am thankful to my sister Purabi and my parents also. I am thankful to all of them for their constant striving to keep me away from all disturbances to the extent possible.

Dwilar Sarker

CONTENTS

| | PAGE |
|---|-------------|
| LIST OF TABLES | i-ii |
| LIST OF FIGURES | iii |
| GLOSSARY | iv-v |
| <u>CHAPTER-I</u> | 1-52 |
| 1.1: Introduction | 2 |
| 1.2: Overview of India's IT Industry | 9 |
| 1.3: Top 10 Software Companies in India (2008) | 12 |
| 1.4 :Top 10 BPO Companies in India (2008) | 16 |
| 1.5: The 10 best companies to work for in India –A survey in 2010 | 20 |
| 1.6: Indian IT products exploring new horizons | 23 |
| 1.7: Reasons for Optimism for Indian IT Industries- Before and after Globalisation | 24 |
| 1.8: IT in Indian Domestic Market | 26 |
| 1.9: The key drivers for the growth of IT in the domestic IT market | 30 |
| 1.10: Domestic IT Market: Key Verticals | 30 |
| 1.11: Employment Statistics in IT/ITES Industries in India (1998-2008) | 34 |
| 1.12: Salary structure of the IT Professionals in India (2003 & 2004) | 36 |

| | |
|--|--------|
| 1.13: Reasons for Joining to the Software Sector-A Dataquest Survey | 42 |
| 1.14: Reasons for Leaving the Organization-A Dataquest Survey | 43 |
| 1.15:An overview of Migration | 44 |
| 1.16: Impact of Globalisation on the Migration of Skilled Indian IT Professionals (Brain Drain) | 48 |
| 1.17: Objectives of the study | 49 |
| 1.18: Hypotheses to be Tested | 51 |
| 1.19: Data Sources and Samples | 52 |
| 1.20: Limitations of the Study | 52 |
| <u>CHAPTER-II</u> | 53-90 |
| Review of Literatures | 53-90 |
| <u>CHAPTER-III</u> | 91-131 |
| 3.1: Introduction | 92 |
| 3.2: Globalisation, WTO and Migration of Software Professionals | 93 |
| 3.3: Migration under Conditions of Globalisation | 96 |
| 3.4: Growth of Indian born population in USA after Globalisation of Indian economy | 98 |
| 3.5: India's Software Exports-Before and after Globalisation | 98 |
| 3.6: Migration-Types and Patterns | 102 |

| | |
|---|---------|
| 3.7: Types of Migrants | 104 |
| 3.8: Migration to Industrialised Countries-An overview | 114 |
| 3.9: Some Other Migration Statistics and Impact of Globalisation on Migration | 116 |
| 3.10: Migration of Software Professionals from Indian IT Companies in Globalised Regime | 120 |
| 3.11: A Brief Idea of H-1B & L-1 Visa Statistics for the IT-Professionals for Migration to USA | 123 |
| 3.12: Recent Threats for the IT Professionals in USA | 126 |
| 3.13: Indian IT Professionals versus Foreign IT Professionals | 126 |
| 3.14: Global Human Resource Mobility | 128 |
| 3.15: 'IT' Industry in India and Skilled Human Resource Mobility | 129 |
| 3.16: Contribution of 'IT' Industries to the Indian Economy after Globalisation | 130 |
| <u>CHAPTER-IV</u> | 132-155 |
| 4.1: Introduction | 133 |
| 4.2: Women in IT Sector | 133 |
| 4.3: Globalisation and Its Impacts on 'Women IT Migration' | 135 |

| | |
|---|---------|
| 4.4: Gender Separation In The IT Sector | 137 |
| 4.5: Emerging Trend of Women in Information Technology | 138 |
| 4.6: Government Policies for Women Contribution in IT Sector | 141 |
| 4.7: Status of Women in the IT Sector in India | 142 |
| 4.8: Job Opportunities for Indian Women in the IT Sector | 142 |
| 4.9: Position of Women in the Various Segments of the Software Activities | 143 |
| 4.10: Reasons for Low Participation of Women in the IT Sector | 143 |
| 4.11: Challenges for Career Development of Women in the IT Sector | 144 |
| 4.12: Women Migration from Indian IT Sector | 146 |
| 4.13: Scenario of Indian women IT professionals migrated to USA | 150 |
| 4.14: Migration of women IT professionals-some other issues | 152 |
| <u>CHAPTER-V</u> | 156-168 |
| 5.1: Introduction | 157 |
| 5.2: Disability in India-An Overview | 158 |
| 5.3: Employment opportunities for the Differently Abled Persons in India | 161 |
| 5.4: Employment opportunities for the Differently Abled Persons in IT sector | 162 |

| | |
|--|---------|
| 5.5: IT/ITES Industries start to hire Physically Challenged Persons as their strategy | 163 |
| 5.6: No Differential Treatment for the Disabled IT professionals at work | 166 |
| 5.7: Online Migration Opportunities for the Disabled IT Professionals | 167 |
| <u>CHAPTER-VI</u> | 169-190 |
| 6.1: Introduction | 170 |
| 6.2: Scenario of Indian IT Professionals in USA | 173 |
| 6.3: H-1B and L-1 visa for migration of Indian IT professionals | 174 |
| 6.4: Uses of H-1B and L-1 visas by Indian IT firms | 175 |
| 6.5: Causes of USA being an attractive destination to Indian IT professionals | 176 |
| 6.6: Data Analysis | 177 |
| 6.7: Major Reasons for Migration of Indian IT Professionals | 178 |
| 6.8: Preferences of migrated IT professionals | 179 |
| 6.9: Factors Influencing Migration Decision | 180 |
| 6.10: Skills of migrated IT professionals, their Job Satisfaction and related matters | 181 |
| 6.11: The relationship between job satisfaction and mental satisfaction | 183 |
| 6.12: Hypotheses Testing & Findings | 184 |

| | |
|---------------------------------|---------|
| <u>CHAPTER-VII</u> | 191-201 |
| 7.1: Short Summary | 192 |
| 7.2: Overall Conclusions | 194 |
| 7.3: Recommendations | 198 |
| APPENDIX A | 202-208 |
| APPENDIX B | 209-218 |
| BIBLIOGRAPHY | 219-232 |
| INDEX | 233-234 |

LIST OF TABLES

| TABLE | TITLE | PAGE |
|--------------|--|-------------|
| 1.1 | Progress of IT Industry in India | 12 |
| 1.2 | Composition of the Domestic IT Market | 26 |
| 1.3 | IT/ITES revenues estimated by NASSCOM in 2008 and comparison with 1998. | 28 |
| 1.4 | Examples of overseas acquisitions by Indian IT/ITES companies in recent times (2008) | 33 |
| 1.5 | Number of Employees in some ITES companies in Recent times(2008-09) | 36 |
| 1.6 | Experience wise salary structure of IT Professionals | 37 |
| 1.7 | A Data Quest-IDC Salary versus Satisfaction Survey Results on IT Professionals in India (2004) | 39 |
| 1.8 | A survey on employees of the ITES Company on their preferred employers (2006) | 40 |
| 1.9 | Dream Companies where IT Professionals would like to work | 41 |
| 3.1 | Percentage of shares of the different sectors of the economy in GDP | 94 |
| 3.2 | Top 10 States for Growth of the Indian-Born Population in USA, 2000 to 2006 | 98 |
| 3.3 | Software Exports from India before Globalisation | 99 |
| 3.4 | Software Exports from India after Globalisation | 100 |
| 3.5 | Top 10 Software Export Destinations (2001-02) | 100 |
| 3.6 | Stock of India-born Population (2001) in Different Countries | 115 |
| 3.7 | H1B visa scenario in USA (2001-2009) | 125 |
| 3.8 | Foreign Nationals working in Indian IT Companies (2009) | 127 |
| 3.9 | Brain drain profile in India | 129 |
| 4.1 | Segregation of women among the various subsets of IT | 137 |
| 4.2 | Position of Men and Women in the Various Organisational Hierarchy of the IT Sector in India | 138 |
| 4.3 | Women employment ratio in Indian IT multinationals in 2008-09 | 138 |
| 4.4 | Distribution of Women in the Various Segments of the Software Activities | 143 |

| | | |
|-------------|--|------------|
| 4.5 | Barriers for Women's Progression in IT Carrier-A Survey report | 146 |
| 4.6 | The Occupational Characteristics of Indian emigrants in USA based on gender (2000) | 150 |
| 4.7 | The Male Female percentage of Indian skilled emigrants to USA (2000) | 151 |
| 4.8 | Economic Characteristics of Indian emigrants | 151 |
| 4.9 | Occupations of Indian born Employed Workers in USA by Gender and Origin, 2006 | 154 |
| 5.1 | Disability Data for India | 158 |
| 5.2 | State/ Union Territory Wise Population of Persons with Disabilities as Per the Census 2001 | 159 |
| 5.3 | Disability Wise State-Wise Number Of Persons With Disabilities In The Country As Per The Census, 2001. | 160 |
| 6.1 | Top 5 H-1B occupations shift between 1995 and 1998 | 174 |
| 6.2 | Top H-1B petitioners, Oct.1999-Feb.2000 | 174 |
| 6.3 | LCA requested by leading IT firms in 2001 | 176 |
| 6.4 | Major reasons for migration of Indian <i>IT</i> professionals | 178 |
| 6.5 | Preferences of migrated <i>IT</i> professionals | 179 |
| 6.6 | Importance of role played by some decision makers in compelling the migrants to take migration decision | 180 |
| 6.7 | Skills of migrated <i>IT</i> professionals | 181 |
| 6.8 | Remittances sent by the migrants to their homes in India | 181 |
| 6.9 | Job satisfaction of the migrants | 182 |
| 6.10 | Age distribution of the migrants | 182 |
| 6.11 | Academic background of the migrants | 182 |
| 6.12 | Work experience of the migrants | 183 |
| 6.13 | SPSS output 1 | 187 |
| 6.14 | Table of coefficients | 187 |

LIST OF FIGURES

| FIGURE | TITLE | PAGE |
|---------------|--|-------------|
| 1.1 | Migration from India to Other Countries | 8 |
| 1.2 | The Growth of Domestic Software & Service Market | 27 |
| 1.3 | The Growth of Domestic ITES & BPO Market | 27 |
| 1.4 | The Growth of Domestic Hardware Market | 28 |
| 1.5 | Domestic IT market | 30 |
| 1.6 | Employment Statistics in IT/ITES Industries in India | 34 |
| 1.7 | A comparison of Growing Perks of IT professionals in 2003-2004 | 38 |
| 1.8 | Reasons for the IT professionals Joining to the Software Sector | 42 |
| 1.9 | Reasons for the IT professionals Leaving Organization | 43 |
| 3.1 | India's Software Exports before Globalisation | 99 |
| 3.2 | India's Software Export after Globalisation | 101 |
| 3.3 | Number of Indian Born Who Received Lawful Permanent Residence in the United States, 1990 to 2007 | 116 |
| 3.4 | Profile of respondent cos. in terms of turnover Range (in numbers) in 2007-08 | 130 |
| 4.1 | Percentage of women employees in the IT/ITES industries. | 134 |
| 4.2 | Female Literacy growth as per 1991 & 2001 Census. | 136 |
| 4.3 | Increase in enrollment of girls in higher education. | 136 |
| 5.1 | Percentage of differently abled employees absorbed by IT/ITES companies (2008) | 163 |
| 6.1 | Age distribution of the migrants | 182 |
| 6.2 | Academic background of the migrants | 182 |
| 6.3 | Work experience of the migrants | 183 |

GLOSSARY

B

BCIS- Bureau of Citizenship and Immigration Services

BFSI- Banking and Financial Services Industries

BPO-Business Process Outsourcing

C

CEEIC- Centre for Economic Empowerment of Intellectually Challenged

CSIR- Council for Scientific and Industrial Research

CSR- Corporate Social Responsibility

D

DOL-Department of Labour

E

EU- European Union

G

GATS- General Agreement of Trade in Services

GDP-Gross Domestic Products

I

ICT-Information Communication Technology

IIT-Indian Institute of Technology

ILO-International Labour Organisation

IT- Information Technology

ITES-Information Technology Enabled Services

K

KPO-Knowledge Process Outsourcing

L

LPR- Lawful Permanent Residence

M

MIT- Massachusetts Institute of Technology

MNC-Multi National Companies

N

NASDAQ- National Association of Securities Dealers Automated Quotations

NASSCOM- National Association of Software and Service Companies

O

OECD- Organisation for Economic Cooperation & Development

OIS- Office of Immigration Statistics

OIW- Overseas Indian workers

OLS- Ordinary Least Squares

Q

QWL- Quality of Work Life

T

TCS-Tata Consultancy Services

U

USCIS- US Citizenship and Immigration Services

W

WTO-World Trade Organisation

CHAPTER-I

THE PROBLEM

- **INTRODUCTION**
- **OVERVIEW OF INDIAN *IT* BUSINESS**
- **AN OVERVIEW OF MIGRATION AND BRAIN DRAIN**
- **IMPACT OF GLOBALISATION ON THE MIGRATION OF SKILLED INDIAN IT PROFESSIONALS**
- **OBJECTIVES OF THE STUDY**
- **RESEARCH METHODOLOGY**
- **LIMITATIONS OF THE STUDY**

1.1: Introduction

Globalisation in its literal sense is the process of transformation of local or regional things or phenomena into global ones. It can also be used to describe a process by which the people of the world are unified into a single society and function together. This process is a combination of economic, technological, sociocultural and political forces. Globalisation is often used to refer to economic globalisation, that is, integration of national economies into the international economy through trade, foreign direct investment, capital flows, migration, and the spread of technology.

In a world of globalised labour market, there has been an increase in mobility of qualified and educated human resources among developing and developed countries. The outflow or “brain drain” of highly skilled human resources from different sectors is the matter of concern for the developing countries. Sectors such as health, IT, education and agriculture are the areas where migration of labour is the highest. But for some countries the brain drain has become a brain gain through migrant investments. Migration is the consequence of a lack of development in a country. The development policies, economic growth, developed rule of law and good governance can have an impact on a migrant’s decision to migrate. However, a number of policies and initiatives are already in place in countries of origin and destination to specifically help to train, retain and regain skilled personnel for development.

The role of migration in the era of globalisation is regarded to be very important to the developing countries. With the concept of globalisation sweeping across the globe, the migration of labour has been a contributing factor to the economic improvement of developing countries. With the free movement of labour across the nations immigration has become one of the major problems to the developing countries of the world. People from the neighbouring poor countries often move to more developed countries in order to improve their economic conditions. This may create a huge pressure on the host country for the unskilled labour because the per capita income comes down in spite of a well performing economy. In case of the skilled labours the situation is better as their income contributes to the gross domestic product of the host country.

The impact of globalisation has created an international demand for labour. The free mobility of both the skilled and unskilled labour has become important with the transfer of technology between different countries. The labour demands in the developed economies are increasing due to the problems of the decreasing rate of fertility, the opening up of new opportunities, the transformation of the industries with the technological advancements, etc. The developing countries with their huge skilled labour force are catering to the demand for skilled labour.

This study actually is focused on the human resource migration of the skilled IT professionals from India which is also termed as 'Brain-Drain'. The IT professionals are the cream of our society. Their contribution may have a huge impact in Indian economy if they stay back in India and work for the Indian companies. But a huge number of these cream students are leaving India every year. Now a question arises here why they are leaving the country? How globalisation has an impact on the migration of skilled human resources from India? What is the mind frame of the IT professionals regarding migration? What are the psychological factors influencing their migration decisions? These along with a number of questions peep into our mind while discussing migration of skilled labour force particularly the IT professionals from India. It is now understood that migration is a simple individual action in which a person decides to move in search of better life-chances, pulls up their roots in the place of origin and quickly becomes habituated in a new country. Migration and settlement tend to be long-drawn-out processes. Over time, three major sets of migration theories have emerged to try and explain migration and resettlement: The neo-classical equilibrium perspective emphasizes tendencies of people to move from densely to sparsely populated areas or from low to high-income areas, or link migrations to fluctuations in business cycles. These approaches are often known as 'push-pull' theories. The historical-structural approach has its roots in Marxist political economy, and stresses the unequal distribution of economic and political power in the world economy. Migration is seen here mainly as a way of mobilising cheap labour for capital. The migration approach sets out to provide a conceptual framework that includes both ends of the flow and studies all dimensions of the relations between emigration and immigration countries (Khadria, 2006). It recognises the close links between flows of capital, commodities, ideas and people, and that such flows rise out of historical linkages (such as colonisation, military presence,

political influence, trade or cultural penetration). The links can be categorised as state-to-state relations and comparisons, mass culture connections and family and social networks.

From different studies it is seen that migration from India to different industrialized countries grew steadily during 1950 to 2000. Nearly 1.25 million Indians immigrated to the US, Canada, UK and Australia during this period. An estimated 5.7 million migrated Indian workers abroad sent remittances to their homes near about \$27 billion in 2007 to make India the world's top receiver of migrant remittances, according to a World Bank Report (Times of India, 19th Feb., 2009). Migration to the Middle East countries increased rapidly between the late 1970s and early 1980s. In the mid to late 1980s the number of Indian workers migrating to the Middle East fell sharply due to gulf problems. Labour migration increased substantially again during the 1990s. Today, near about 4.5 million Indian migrants live in Gulf countries and 1.6 million Indian migrants live in USA (2006). Most migrants come from Kerala, Tamil Nadu, Andhra Pradesh and Punjab. A report published in 2009 that nearly 8.5 lakhs Keralites live and work in Dubai, making them the largest community of experts from India. Nearly 3.5 lakh people from Andhra Pradesh work in Dubai in construction and other sectors. Approximately 3 lakh Tamils have made Dubai their second home and work in the construction sector, which has been driving Dubai's economy. Total 1.5 million Indians live and work in the UAE and 4.5 million Indians live and work in the entire Gulf region (Times of India, 19th Feb., 2009). The current number of Indian migrants overseas accounts for less than 1 percent of the total workforce in India, which has a little direct impact on the national labour market. But when the question of skilled, intelligent migration (Brain Drain) comes the impact is huge on the national labour market. But for overall migration (skilled and unskilled) there are some benefits. In Kerala, for example, emigration has recently led to a considerable reduction in unemployment. Remittances are the main benefit of external migration, providing limited foreign exchange and scope for higher levels of savings and investments. Remittances over the past 30 years have financed much of India's balance of trade deficit and have thus reduced the current account deficit.

Now in Information Technology field India has become a dominant supplier of IT professionals to various countries like USA, Germany, Australia, Gulf, New Zealand, UK etc. The German Green Card, the American H1-B visa, the British work permit, the Canadian investment visa, the Australian student visa, the New Zealand citizenship, all are encouraging to acquire Indian talents including skilled professionals. The Indian IT professionals who go to the different parts of the world, 90 percent of them go to the USA only. Out of these IT professionals a good number of professionals are women IT professionals and few of them are physically handicapped.

According to the agreement between USA Govt and WTO and the 'Agreement of Uruguay', the US Govt. is bound to issue minimum 65000 H-1B visas to foreign skilled professionals every year. The H-1B and L-1 visas are the temporary visas given to the skilled professionals from foreign countries for temporary immigration to USA. Due to the demands of skilled professionals in US companies the Govt. of USA had issued approximately 3,00,000 H-1B visas during 2007-2008 (Bureau of Citizenship and Immigration Services, USA Govt.). Basically the demands of H-1B & L-1 visas come from the IT industries. The IT companies of USA have always demanded that the number of H-1B visas should be increased for the Indian IT professionals. This is because of the fact that Indian IT professionals are skilled, bright, good English speakers and above all cheaper than their US counterparts. The cost to company (CTC) of an Indian IT professionals in USA is \$60000-70000 per annum, whereas for an American the CTC is about \$100000. Most of the H-1B visas and L-1 visas are availed by Indian IT professionals. Approximately 50 percent or more of those visas are availed by Indian IT professionals (Bibek Debray, Anandabazar Patrika, 28th May, 2009). Indian IT professionals are in great demand in US companies. Approximately, 10 lacks Indian have stayed in USA. Those who have got 'Green Card' have become the permanent residents of USA but those who have got only H-1B visas and L-1 visas are facing some problems in 2009 due to the new immigration policies of the Obama Govt. regarding H-1B visas due to recent economic recession. Approximately, 90,000 Indian students who are doing higher studies will also face same problems due to this. Usually most of them get their jobs in USA after completion of their studies. Indian IT professionals are the pioneers in the development of software Industries in USA. The Indian IT professionals have great contributions in setting up of establishments like Google, Intel, e-Bay, Yahoo etc. in

USA. Approximately, 1, 63, 00 H1B visas were offered to IT specialists from India during the tenure 2007-2008 (Bureau of Citizenship and Immigration Services, USA Govt.). The demands of H-1B and L-1 visas are very high for the multinational software houses which have their offices in India and USA both the countries. In the year of 2008 there were demands of 85000 H-1B visas by the Indian IT professionals. In 2001, India was the largest source of H-1B petitions. Out of the 331,206 H-1B petitions approved by BCIS (Bureau of Citizenship and Immigration Services, USA Govt.) in 2001, 161,561 or 49 percent went to Indian nationals. The next closest country was China, with 27,331, or 8 percent, approved petitions. Almost all, precisely 92 percent, of the petitions for Indian workers were for computer-related or engineering occupations. It is clear that employers of Indian nationals with *IT* skills are the heaviest users of the H-1B visa. In the year of 2009 during the recession the US Govt. has passed a bill to provide limited number of H-1B visas to software professionals. In 2009 the number has been gone down to around 45,000. According to data, released by the US Citizenship and Immigration Services (USCIS) in 2009, Infosys tops the list with as many as 4,559 visas(Jhunjhunwala, The Statesman,16th September,2010), followed by Wipro with 2,678, Satyam 1,917, TCS 1,539, Cognizant 467, L&T 403 and IBM India got 381 H1B visas. Microsoft, the US Company with 1,037 H1B visas issued, ranked fifth in the list. Among other US companies, Google got 248 visas, while Lehman Brothers received 130 visas. The H1B visa has been designed for US corporations to remain competitive in the world market. In the times when the US is experiencing recession, there has been a general animosity against the H1B visas in America. Recently a statistics is published by USCIS (Rediffmail.com, May 20, 2009) that nearly 20,000 slots were open for seven weeks after the US Citizenship and Immigration Services (USCIS) started receiving applications for the financial year 2010 beginning October 2009.The USCIS said it has so far received approximately 45,500 H-1B petitions out of 65,000 sanctioned number. USCIS has received approximately 20,000 petitions for the advanced degrees category. However, it would continue to accept advanced degree petitions since experience has shown that not all petitions received are approvable, the USCIS said in a statement. The Congress mandated that the first 20,000 of these types of petitions are exempted from any fiscal year cap on available H-1B visas. For the fiscal 2010, the USCIS started receiving H-1B petitions from April 1. In the first five working days, it received 42,000 H-1B petitions.

In the month and half since then, USCIS has received just 3,500 more H-1B petitions, indicating the slump in demand for H-1B work visas.

Remittances have had a considerable impact on regional economies. The most striking case is that of Kerala, where remittances made up 21 percent of state income in the 1990s. In the year of 2009, 56 percent of remittances to Kerala originated from the Gulf, 27.71 percent of total bank deposits in Kerala in September 2008 came from abroad (Times Of India, 19th Feb., 2009). This flow appears to have increased wealth: although the average per capita consumption in Kerala was below the national average until 1978–79, but in between 1999–2000 consumer expenditure in Kerala exceeded the national average by around 41 percent. International migration has also had considerable impacts on demographic structures, expenditure patterns, social structures and poverty levels. Impacts include reducing population growth; enhancing the dependency burden within households; increasing consumption expenditures and reducing poverty levels. External migration flows are regulated by the government. The main instrument of regulation is the Emigration Act 1983 which deals with the departure of Indian workers for overseas contractual employment and seeks to safeguard their interests. However efforts to direct manpower export have been minimal. The policy intervention of Government should be to improve synergy between migration and development. Internal migration is a consequence of unequal regional development.

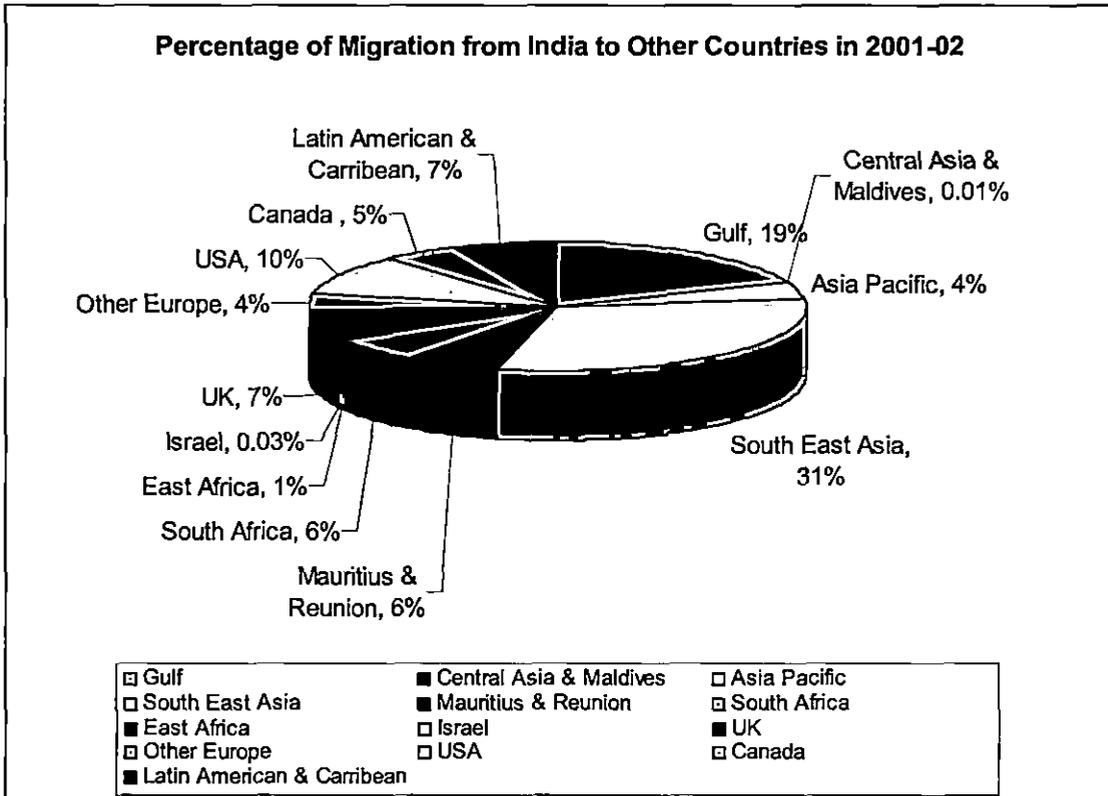
In some regions of India, three out of four households include a migrant. The effects of migration on individuals, households and regions add up to a significant impact on the national economy and society. This study reviews some key issues relating to external labour migration with special reference to Indian IT professionals. It analyses the patterns, trends and nature of skilled migration, the effect of Globalisation and the influencing factors on migration.

Due to globalisation lots of companies are coming to India for businesses. FDIs are coming relentlessly to Indian Market. Indian multinationals have started their businesses worldwide after 1991. The skilled human resources of India are always in demand in some foreign countries like USA, Canada, Gulf countries etc. There is always a fascination of Indian skilled labour to work outside of the country. This is because of wages, QWL, cost of living etc. After globalization the movement of the skilled labour

has also increased. Migration of skilled labour ultimately affects the industries, affect the country's economy. So what are the factors behind it? Are these psychological factors? If these are psychological factors then how globalization is affecting those psychological factors of the IT professionals?

The flow of labour from India to the other countries is shown below in Fig 1.1-

Fig 1.1: Migration from India to Other Countries



(Source: ICWA Report, Govt. of India, 2001)

From this figure 1.1 we can clearly get the view that maximum percentage of migration from India occurred to Southeast Asia i.e. 31percent in the year of 2001. The next two major regions where the migrations occurred are Gulf (19 percent) and US (10 percent). Every year up to 80 per cent of Indian skilled migration occurred to all developed countries including USA. It was in the 1970s that the US has become the prime destination of the migration of Indian IT professional than UK and Canada. Large numbers of Indians have migrated to USA every year. The U.S received 42,046 Indians in the year 2000. The number of Indians in the U.S. that became nationalised in 2000 was 26, 232. In the year of 2006 the Indian immigrants became 1.5 million in USA. Indian

immigration in the US, which constituted a microscopic of less than 1 percent of global immigration from all countries during the 1950s and 1960s, crossed a mark of 7 percent in 2004 (7.4 percent). Even in 2003, when security concerns in the post 9/11 phase had brought in a restrictive immigration regime in this country, Indian share amongst global immigrants thus continued to increase (from 6.7 percent in 2002 to 7.1 percent in 2003). In the two top categories of skilled immigrants in 2001, viz., professional and technical, and executive, administrative and managerial occupations, Indians occupied very high proportions of 24 per cent and 11 per cent respectively.

It is useful to distinguish between 'permanent', 'semi-permanent' and 'temporary' migrants, based on how long they are away from their place of origin, the links they maintain, and the likelihood that they will return home. Temporary migrants are unlikely to stay away from their places of origin for more than a few months in a year. But IT professionals generally do not want to come back to India again. After this economic recession the scenario is changed little bit. But most of them want to stay back in developed countries.

1.2: Overview of India's *IT* Industry

Over the years, Indian IT companies have established themselves firmly on the global stage. More than two-thirds of Fortune 500 firms turn to Indian IT multinationals for part of their IT and business process outsourcing needs. The IT industry is poised to grow at 36 per cent growth in the fiscal year 2008 and it has become as a US\$87 billion sector (Domestic and Exports) in 2008 (NASSCOM-McKinsey Study,2008). Software & Services contribute over 7.5 percent of the overall GDP growth of India. Presently there are more than 500 software firms in the country. Some, such as Tata Consultancy Services (TCS), Infosys Technologies and Wipro Technologies, have become global brands, competing head-to-head with multinational IT service providers. Majority of the IT firms have their offices in foreign countries. According to Business Asia, India has approximately 4,00,000 software workers(2008) out of which approximately 35 percent are women which makes about 30 percent of the world total IT workforce and in the past ten years, they have been involved in developing half of the world software programs through export contracts.

The Indian IT-BPO industry is estimated to achieve revenues of USD 71.7 billion in FY2009, with the IT software and services industry accounting for USD 60 billion of revenues. During this period, direct employment is expected to reach nearly 2.23 million, an addition of 226,000 employees, while indirect job creation is estimated to touch 8 million. As a proportion of national GDP, the sector revenues have grown from 1.2 per cent in FY1998 to an estimated 5.8 per cent in FY2009. Net value-added by this sector, to the economy, is estimated at 3.5-4.1 per cent for FY2009. The sector's share of total Indian exports (merchandise plus services) has increased from less than 4 per cent in 1998 to almost 16 per cent in 2008 (Aneesh, A. , 2000).

Indian IT companies are now listed on the NASDAQ. And most of the Indian IT companies earn their revenues from USA only. Near about 40-60 percent revenues of Indian IT firms are coming from USA. Worldwide India is a dominant supplier of IT professionals and about 70,000 H1B visas were offered to IT specialists from India during the tenure 1995-2008. In the year of 2009 during the recession the US Govt has passed a bill to provide limited number of H-1B visas to software professionals. In 2009 the number of IT professionals migrated to USA have decreased to around 45,000. According to data, released by the US Citizenship and Immigration Services (USCIS), Infosys tops the list with as many as 4,559 visas, followed by Wipro with 2,678, Satyam 1,917, TCS 1,539, Cognizant 467, L&T 403 and IBM India got 381 H1B visas. Microsoft, the US company with 1,037 H1B visas issued, ranked fifth in the list. Among other US companies, Google got 248 visas, while Lehman Brothers received 130 visas. The H1B visa has been designed for US corporations to remain competitive in the world market. In the times when the US is experiencing recession, there has been a general animosity against the H1B visas in America (NASSCOM Annual Report, 2007-2008).

The software products story, however, is different. Many global companies, including SAP, Microsoft and Oracle, leverage India for product development either through their subsidiaries or by outsourcing to Indian technology service providers. And a few Indian firms have developed their own products and are commercializing them through the licensing model.

But home grown successes are limited when it comes to full-fledged software product companies - those that develop and own software, and sell it themselves or through partners.

The National Association of Software and Service Companies (NASSCOM,2008) estimates that of India's total software and services revenue raised to US\$87 billion in fiscal 2008, the software product segment accounted for a mere US\$1.4 billion, with the top 10 companies taking in more than 80 percent. According to a recent study by NASSCOM and Bangalore-based management consulting firm Zinnov Management Consulting, sales of software products are expected to increase from US\$294 billion at present to US\$537 billion by 2015. NASSCOM also estimates that by 2015 the addressable market for Indian software products could be US\$290 billion to US\$315 billion.

NASSCOM (National Association of Software and Service Companies): NASSCOM is India's National Association of Software and Service Companies, the premier trade body and the chamber of commerce of the IT software and services industry in India. NASSCOM is a truly global trade body with around 900 members, of which nearly 150 are global companies from the US, UK, EU, Japan and China. NASSCOM's member companies are in the business of software development, software services, and IT-enabled/BPO services.

Table: 1.1 Progress of IT Industry in India
(In terms of US \$ billion)

| Year | 2003-04 | 2004-05 | 2005-06 | 2007-08 |
|--|---------|---------|---------|---------|
| IT software and service exports | 9.2 | 12.0 | 15.2 | 40 |
| ITES-BPO exports | 3.6 | 5.2 | 7.3 | 21 |
| Domestic market | 3.9 | 4.8 | 12.4 | 27.5 |
| Total | 16.7 | 22.0 | 28.5 | 87.5 |

(Source: NASSCOM Annual Report 2008-09)

However, despite this encouraging trend, the domestic software market size continues to grow at a marginally lower rate, as compared with software services exports, due to a higher level of piracy, pressure on software prices and lower level of sophistication in IT spending for most Indian companies. Some of the top Indian IT & ITES companies are given below.

1.3: Top 10 Software Companies in India (2008)

The Indian software industry is set to keep up its growth rate despite the slowdown in the economy. The National Association of Software and Services Companies (NASSCOM) forecasted a strong outlook for FY08-09 strong with software and services revenue seen growing by 21-24 percent. The software and services exports are set to hit the \$50 billion-mark in 2010-11 (Source: rediff.com, 2010).

The software and services exports segment grew by 29 percent (in USD) to register revenues of \$40.4 billion in FY07-08, up from \$31.4 billion in FY06-07. The domestic segment grew by 26 percent (in INR) to register revenues of \$ 11.6 billion in FY07-08. According to the latest NASSCOM rankings, Tata Consultancy Services Ltd., Infosys Technologies Ltd. and Wipro Technologies Ltd are the top three revenue generators in India. Check out the top ten players in the Indian IT industry.

1. Tata Consultancy Services (TCS)

The company posted a consolidated net profit of Rs 1,290.61 crore (Rs 12.90 billion) for the first quarter ended June 30, 2008, an increase of 7.3 per cent compared to the year-ago period. Its annual sales worldwide stands at \$5.7 billion for the fiscal year ending March 2008. During the year 2007-08, TCS' consolidated revenues grew by 22 per cent

to Rs 22,863 crore (\$5.7 billion). TCS is IDC-Dataquest IT best employer in IT services in 2007. TCS also topped Data Quest (DQ) top 20 list of IT service providers in 2007.

2. Wipro

The company has over 72,000 employees. Wipro's revenues grew by 33 percent to Rs 19,957 crore (Rs 200 billion) for the year ended March 31, 2008. The net profit grew by 12 percent to Rs. 3,283 crore (Rs. 32.83 billion). Wipro was the only Indian company to be ranked among the top 10 global outsourcing providers in IAOP's 2006 Global Outsourcing 100 listing. Wipro has also won the International Institute for Software Testing's Software Testing Best Practice Award.

3. Infosys

Infosys Technologies Ltd was started in 1981 by seven people with \$250. Today, the company boasts of revenues of over \$ 4 billion and approximately 1, 04,000 employees. Out of 1, 04,000 employees 14000 employees are US based. Under the leadership of N R Narayana Murthy, the company has become a global brand. The company is now headed by Kris Gopalakrishnan. The income for the quarter ended June 30 2008 was Rs 4,854 crore (Rs 48.54 billion). The net profit stood at Rs 1,302 crore (Rs 13.02 billion). Forbes magazine named Infosys in its list of Global High Performers. Waters magazine rated Infosys as the Best Outsourcing Partner. The Banker magazine conferred two Banker Technology Awards on Infosys to acclaim its work in wholesale and capital markets in two categories - Payments and Treasury Services, and Offshoring and Outsourcing. The International Association of Outsourcing Professionals (IAOP) ranked Infosys at No. 3 in its '2008 Global Outsourcing 100'.

4. Satyam Computer Services (Now Mahindra Satyam)

Established in 1987 by Ramalinga Raju, Satyam has staff strength of 51,000 employees. In 2008, the company's revenues crossed the \$ 2-billion mark. A simple, yet extensive management model to create value, which promotes entrepreneurship, a focus on the customer, and the constant pursuit of excellence,' is the company's mantra for success. In FY2008, its revenues saw a growth of 30.7 per cent to Rs 8,473.49 crore (Rs 84.73 billion) compared to fiscal 2007. The net profit stood at Rs 1,687.89 crore (Rs 16.87

billion), a growth of 20.2 per cent over fiscal 2007. Satyam is among the youngest IT service companies to reach \$1 billion in annual revenues. It is ranked No. 1 in the ASTD (American Society for Training and Development) BEST Award, 2007. But the recent scam in Satyam totally ruined this firm and the company is now ready to sell its 51 percent share to the foreign companies. After the scam Mahindra & Mahindra has taken over Satyam Computer Services in 2009.

5. HCL Technologies

HCL is a leading global technology player with annual revenues of \$4.9 billion. The HCL Enterprise comprises two companies listed in India, HCL Technologies and HCL Infosystems. Founded in 1976, HCL is one of 'India's original IT garage start ups'. The HCL team comprises 53,000 professionals of diverse nationalities, operating across 18 countries. At a time when India had a total of 250 computers, Shiv Nadar led a young team which passionately believed in the growth of the IT industry. Three decades later, he succeeded in creating a \$ 4.9 billion global enterprise. The company has reported consolidated revenue of Rs 3017.5 crore (Rs 30.17 billion) during the quarter ended March 31, 2008. The profit after tax stood at Rs. 81.5 crore (Rs 815 million).

6. Tech Mahindra

Tech Mahindra was incorporated as a joint venture between Mahindra & Mahindra and BT plc in 1986 under the name of 'Mahindra-British Telecom'. Later, the name was changed to 'Tech Mahindra', in order to reflect the diversification and growth of the client base and service offerings. The company was incorporated in 1986. Tech Mahindra is a global systems integrator and business transformation consulting firm focused on the communications industry. At the helm of the fast expanding organisation is Vineet Nayyar. In a career spanning over 40 years, he has worked with the government, international multilateral agencies and the corporate sector. Tech Mahindra's net profit rose 8.57 per cent to Rs 196.4 crore (Rs 1.96 billion) on 6.09 per cent growth in net sale to Rs 911.6 crore (Rs 9.11 billion) in Q3 December 2007 over Q2 September 2007.

7. Patni Computer Systems

Patni Computer Systems Ltd one of the leading global providers of information technology services and business solutions. The company has clients across the Americas, Europe and Asia-Pacific locations. The company has serviced more than 400 Fortune 1000 companies, for over two decades. Patni Computer Systems Limited was incorporated on 10 February 1978 under the Companies Act, 1956. On 18 September 2003, the Company converted itself from a private limited company into a public limited company. The company headed founded by Narendra K Patni by has a staff strength of over 14,000 professionals. The revenues for the quarter ended March 2008 stood at \$ 176.4 million (Rs. 7,061.2 million) up 13.1% YoY from \$ 156.0 million (Rs. 6,724.1 million). The net income for the quarter at US\$ 18.1 million (Rs. 724.6 million) down 35.0 per cent YoY from \$ 27.8 million (Rs. 1,200.3 million).Frost & Sullivan ranked Patni 1st among 'Top 5 Engineering Service Providers'.

8. i-flex Solutions

iflex started as a division of Citicorp (now Citigroup), wholly owned subsidiary called Citicorp Overseas Software Ltd. (COSL) in 1991. Later, a separate company Citicorp Information Technologies Industries Ltd. (CITIL) was formed and Rajesh Hukku was appointed as its head. CITIL started off with the universal banking product, MicroBanker which became very successful. In the mid-90s, CITIL developed Flexcube at its Bangalore development centre. After the launch of Flexcube, all of CITIL's transactional banking products were brought under a common brand umbrella. CITIL changed its name to i-flex solutions to reflect its growing independence from Citicorp and to strengthen its Flexcube brand. In 2006, i-flex became a majority-owned subsidiary of Oracle Corporation i-flex posted a top line growth of 8 per cent QoQ with revenue for the quarter ended March 31, 2008 at Rs 672 crore (Rs 6.72 billion) as compared to Rs 601 crore (Rs 6.01 billion) for the corresponding quarter during the previous year representing a 12 per cent YoY growth. The net income for quarter stood at Rs 185 crore (Rs 1.85 billion) representing 73 per cent growth QoQ. The revenue for the full year ended March 31, 2008 stood at Rs 2,380 crore (Rs 23.80 billion), up 15 per cent as compared to the previous year.

9. Mphasis

Mphasis Limited was formed in June 2000 after the merger of the US-based IT consulting company Mphasis Corporation (founded in 1998) and the Indian IT services company BFL Software Limited (founded in 1993). Jeya Kumar is CEO of Mphasis, which has a staff strength of 27,000 people. For the year ended 31 March 2008, the Mphasis Group recorded revenues of Rs 2,423 crore (Rs 24.23 billion), a growth of Rs 662 crore, which is 38 per cent over the previous year. The net profit increased by 42 per cent from Rs 180 crore (Rs 1.8 billion) to Rs 255 crore (Rs 2.55 billion) during the year ended 31 March 2008. Mphasis was named among amongst the Top 100 Companies in Global Outsourcing.

10. L&T Infotech

L&T Infotech is a global IT services and solutions provider. It is a subsidiary company of Larsen & Toubro Ltd. (L&T), an engineering, manufacturing and construction conglomerate, with global operations. A M Naik is the chairman of the company. Originally founded as L&T Information Technology Ltd (LTITL), a wholly-owned subsidiary of Larsen & Toubro Ltd (L&T), the company changed its name to L&T Infotech on 1st April, 1997. In 2004, it tied up with Fidelity Information Services, a division of Fidelity National Financial to provide banking solutions for the Indian banking industry. In 2007-08, L&T had recorded revenues of Rs 29,600 crore (Rs 296 billion).

1.4: Top 10 BPO Companies in India [ITES] (2008)

India's BPO story continues to bring cheer despite the economic slowdown. And Genpact is the leader of the pack in the Indian BPO space. According to Nasscom, the Indian IT-BPO industry (including domestic market) recorded an overall growth of 28 per cent clocking revenues of \$52 billion in FY07-08 up from \$39.6 billion in FY06-07. The BPO exports are up by 30 per cent (in US dollars), registering revenues of \$10.9 billion (Source: rediff.com, 2010)

1. Genpact

Genpact was born in 1997 as the India-based business process operations for GE Capital. In 2005, with equity investments from General Atlantic and Oak Hill Capital Partners, it became an independent company and was rebranded Genpact. It is India's No. 1 BPO firm. Genpact manages business for companies around the world with a network of more than 30 operations centres in nine countries. Genpact offers services in finance and accounting, collections and customer service, insurance, supply chain and procurement, analytics, enterprise application and IT infrastructure. Headed by Pramod Bhasin, the company had staff strength of over 34,300 employees as on March 31, 2008. Its revenues for the year 2007 stood at \$822.7 million.

2. WNS Global

WNS Global serves several industries, including travel, insurance, financial services, healthcare, professional services, manufacturing, distribution and retail. Warburg Pincus is the majority shareholder in WNS Global Services. The Nasdaq-listed company with more than 9,000 professionals was set up in 1996. Neeraj Bhargava is a co-founder of WNS (Holdings) Ltd and group chief executive officer. It posted quarterly revenue of \$116.1 million for the fourth quarter ended March 31, 2008, up 4.9 per cent from the corresponding quarter last year. Its revenues stand at \$459.9 million, up 30.5 per cent from fiscal 2007.

3. IBM Daksh

The five-year old IBM Daksh was created by four professionals -- Sanjiv Agarwal, Pawan Vaish, MJ Aravind and Venkat Tedanki -- who saw a great opportunity in the business process outsourcing space. With no business model to follow, it was a big challenge to set up the company. IBM Daksh is known for a good leadership, a focused vision and an undying passion. In April 2004, IBM Corporation acquired Daksh e-Services to serve as a global hub to manage business processes for clients from across the world. With 14 service delivery centres in India, IBM Daksh has more than 36 centers around the world. Today IBM Daksh employs more than 20,000 people. Pawan Vaish is the chief executive

28 FEB 2012

17
235573



officer of IBM Daksh Business Process Services. A co-founder of Daksh eServices, he has been with the organisation since January 2000.

4. Aditya Birla Minacs Worldwide

Aditya Birla Minacs is part of the \$24 billion global conglomerate, the Aditya Birla Group. Aditya Birla Minacs was formed when Minacs, Canada's leading BPO company, and TransWorks, the BPO arm of Aditya Birla Group, joined hands to become a leading global business process outsourcing player. Aditya Birla Minacs clocked revenues to the tune of \$392 million (or about Rs 1,575 crore) till March 2008, a 17 per cent rise over the previous year's \$335 million. With over 26 years of experience, Aditya Birla Minacs offers BPO solutions for Fortune 500 clients. Minacs has more than 12,000 employees at locations in North America, Europe and Asia. It serves clients in automotive, banking, financial services, insurance, telecommunications and technology verticals. Dev Bhattacharya is the managing director for Aditya Birla Minacs Worldwide Ltd, a subsidiary of Aditya Birla Nuvo.

5. TCS BPO

TCS BPO is one of the leader players in the outsourcing industry. It offers services in areas such as finance and accounting, banking, HR outsourcing, KPO, insurance, payroll, healthcare, telecom, media, travel and entertainment. TCS operates from more than 41 countries and has more than 155 offices across the globe. Its head office in India is located in Bangalore. It has branches in Mumbai, Gurgaon, Goa, Hyderabad, Pune, Lucknow and many other places in India. While Tata Consultancy Services is India's top software company, TCS BPO established a stronghold in the BPO space. The TCS group posted a consolidated net profit of Rs 1,290.61 crore (Rs 12.90 billion) for the first quarter ended June 30, 2008, an increase of 7.3 per cent compared to the year-ago period.

6. Wipro BPO

Wipro BPO has carved a unique position in the outsourcing industry. In 2002, Wipro took a quantum jump in the BPO services by acquiring the then Spectramind. Wipro BPO Solutions complements the services offered by Wipro Technologies, making it one of the

largest BPO service players. The company with over 19,000 people, operating out of 9 different locations (India and Eastern Europe) serves clients across the globe. Wipro BPO clientele spans across banking and capital markets, insurance, travel and hospitality, hi-tech manufacturing, telecom and healthcare sectors. T K Kurien heads Wipro's BPO operations. The IT services revenue for Wipro Technologies stood at Rs 4,405 crore (Rs. 44.05 billion), a YoY growth of 39 per cent.

7. First Source

Firstsource (formerly ICICI Onesource) is a leading global business process management company. Founded in 2001, the company is ranked third in *Business Week's* 'Hot player' list of offshore outsourcing companies. The company has 17,000 employees in centres across India, the United States, the United Kingdom, Argentina and the Philippines. Its revenues for the year ended March 31 2008 stood at Rs 12,988 million, up 53.3 percent compared to the previous year.

8. Infosys BPO

Infosys BPO Ltd, the business process outsourcing subsidiary of Infosys Technologies, was set up in April 2002. Today, it is ranked among the leading BPO companies in India by NASSCOM, Dataquest, the International Association of Outsourcing Professionals, Red Herring, FAO Today and NelsonHall. Infosys BPO focuses on integrated end-to-end outsourcing through lesser costs. Infosys BPO operates in India, the Czech Republic, China, Philippines, Poland, Bangkok, Mexico and employs about 16,295 people. It closed FY2007-08 with revenues of \$250.3 million.

9. HCL BPO

HCL BPO, a division of HCL Technologies Limited was established in 2001. With over 13,200 professionals operating out of India and Northern Ireland, HCL BPO runs fourteen delivery centres across India, UK and Malaysia. The company has reported revenues to the tune of \$220.9 million. HCL BPO also offers multilingual support in eight European languages and eight Asia, Pacific and Africa Collections (APAC) languages. HCL BPO's focuses on sectors like telecom, retail, banking and financial

services, insurance, hi-tech & manufacturing, and media, publishing and entertainment. Shiv Nadar is the founder, chairman and chief strategy officer of HCL Technologies.

10. EXL Service Holdings

EXL Service Holdings came into existence in April 1999 in Delaware, US. It was founded by a group of professionals including Vikram Talwar (now executive chairman) and Rohit Kapoor, who is now the CEO. Vikram was then the CEO and managing director of Ernst & Young, and Rohit managed international investments for clients at Deutsche Bank. In August 2001, Consec acquired EXL and operated as its wholly owned subsidiary. Later, in November 2002, Oak Hill Capital Partners L.P. and FTV entered along with members of the senior management team bought EXL from Consec making it a third party pure-play business process outsourcing service provider. The company has seen a fast-paced growth with 50 clients and staff strength of 8,200 employees. Revenues for the quarter ended March 31, 2008 were \$50.9 million compared to \$39.9 million in the quarter ended March 31, 2007, an increase of 27.8 per cent.

1.5: The 10 best companies to work for in India –A survey in 2010

The 9th Annual survey was conducted by BT-Indicus-People Strong to search for India's Best Employers in 2010. Out of first 10 companies 7 are of them are IT companies. Even as the Indian IT major shone, many other biggies missed getting into the list of the 10 best companies to work for in India. These include L&T (11th), Hindustan Unilever (12th), ONGC (13th), Tata Motors (14th), ITC (15th), ICICI Bank (19th), and Tata Steel (20th). About 9,000 employees from across 1,000 organisations across 800 cities participated in the survey. They were asked to rate companies on six key parameters, namely, career and personal growth, prestige/company reputation, training/coaching/mentoring, financial compensation and benefits, job content, and merit-based performance evaluation. While creative people in advertising and media gave little importance to the company's brand value, the administrative staff gave more value to the brand. The Banking, Financial Services and Insurance and Services accounted for over 10 per cent of the respondents each, software over 14 per cent, manufacturing over 17 per cent, and ITeS accounted for 9 per cent. Education/training, core sector, telecom and health accounted for 6.7 per cent, 5.7 per cent, 4.4 per cent, and 4.2 per cent, respectively.

The rankings are based on what employees think of their present, past and future employers.

1. Infosys Technologies

Infosys is in the No.1 position for the fifth time, out of the 9 surveys (the company did not participate in two surveys), carried out by BT-Indicus. Infosys Technologies was selected as the best employer to work for in 2001, 2002, 2005 and 2006. Infosys and its subsidiaries have 105,453 employees as on September 30, 2009. Infosys, which hired 18,000 people in 2009-10, scores 100 on all parameters. Infosys is one of the most sought after companies in campuses. The rate of attrition at Infosys is 11.6 per cent, according to *Business Today*.

2. Google India

Google India, which boasts of giving freedom to its employees, has been chosen as the second best employer in India. Google employees believe that 'work is fun'. On a worldwide basis, Google employed 19,835 full-time employees as of December 31, 2009, up from 19,665 full-time employees as of September 30, 2009. In India, Google has 2000 employees. The rate of attrition is less than 5 per cent. The company scores the highest on job content and financial compensation.

3. Tata Consultancy Services

India's largest employer TCS is ranked 3rd in the survey of best employers. TCS has over 143,000 IT professionals in 42 countries. The company scores high on job content and financial compensation. According to the survey, TCS is also the most preferred company among IT professionals. TCS hired 8,000 people in 2009-10 and the rate of attrition is 11.4 per cent.

4. IBM

IT seems to be the hot choice for employees with IBM also in the top league. IBM offers freedom and flexibility, according to the survey. Ranked 4th, IBM figures among the top five for the first time. IBM scores high on job content and financial compensation. The company also has the highest retention rates. IBM re-entered the Indian market through a joint venture in 1992. It has 398,455 employees worldwide. IBM India employs 74,000

professionals. Internet was the media for the survey. Social Media (Twitter, Facebook, LinkedIn etc) was employed too.

5. Microsoft India

Microsoft India, which was at the top of the employee charts in 2007 and 2008, has been pushed to the fifth position. Microsoft has over 5,000 employees in India. It scores high on job content and financial compensation.

6. Wipro

IT giant Wipro is 6th among India's top employers. The company has 102,746 employees as of December 31, 2009, an increase of 4,855 people. According to the survey, Wipro is considered a secure and flexible company.

7. State Bank of India

Breaking the monopoly of IT companies in the list of the best employers is public sector bank, SBI. India's largest PSU bank, SBI is the 7th best employer in India. SBI, the largest recruiter after IT firm TCS has over two lakh employees .About 28 per cent of the employees surveyed were above 33 years and 48 per cent were above 28 years.

8. Bharti Airtel

Along with the steady progress in its business, Bharti Airtel has won the hearts of the employees as well. It is ranked 8th among the best employers. The company has 18,201 employees. The rate of attrition is 10.5 to 11 per cent. It scores high on career and personal growth and company reputation. The company believes that people are its biggest assets.

9. HP India

HP India was established in 1988. Ranked 9th among the top 10 employers in India, HP has about 321,000 employees worldwide and 31,000 employees in India. It scores high on job content and financial compensation. One of the best aspects about HP India is that it allows employees to move across jobs internally, says the survey.

10. HDFC Bank

HDFC Bank has been chosen as the tenth best company to work for in India. The company has over 47,000 employees. The bank hired 4,500 employees as of December 2009 and its attrition rate is 15 per cent. Employees find the company transparent and friendly. It scores high on job content and company reputation.

1.6 Indian IT products exploring new horizons

Indian IT companies have a high reputation in the world. The high profile multinational giants are making partnership with Indian IT firms and using the reputations of these IT firms worldwide.

- Tata Consultancy Services has entered into an agreement with Scuderia Ferrari to provide the entire software to the Italian automaker's Formula One cars. TCS will work with the Ferrari F1 team to provide IT-based solutions before, during and between races.
- Satyam is the first Indian company to sign up as a FIFA World Cup Sponsor. This agreement awards Satyam global rights for the 2010 FIFA World Cup in South Africa, the 2014 FIFA World Cup in Brazil and the two FIFA Confederations Cups which fall within the 2007-2014 period as the sponsor and official information technology (IT) services provider.
- *i-Flex's* homegrown flagship banking product 'Flexcube' has been powering over 280 banks across 100 countries including big names like the IMF, DBS and Union Bank of Switzerland. Flexcube has been ranked the Number One selling banking package in the world for the year 2002 by International Banking Systems of the United Kingdom.

The IT industry's contribution to the Indian GDP has increased from approximately 1.4 percent in 1998-99 to more than 3 percent in 2003-04 and more than 7.5 percent in 2007-08. Even from an industry perspective, the attention on the domestic front is quite limited with the domestic IT software and services market constituting around US\$ 3.9 billion in 2003-04 compared to the US\$ 12.8 billion software and service exports market. In fact, revenues from the domestic market account for only 10-30 percent of revenues for players in all segments. However, the domestic market will become significantly more important, particularly for smaller players who will need to tap the domestic market to build scale. Comparisons with other markets, like China, which have similar

demographic and economic profiles, show that the Indian domestic IT market remains constrained largely because of three barriers: Product market barriers, Inadequate focus on the domestic market by industry players, Low government IT imperative.

While most of the early players in the Indian software product space focused primarily on the financial and accounting segments, the newer companies are looking at areas such as business intelligence, security and content.

The total venture capital investment in India grew at a compound annual rate of 42 percent, reaching US\$543 million in 2007. Funds invested in the software product segment grew slightly faster by 43 percent to US\$156 million. IDG Ventures India is a US\$150 million venture fund that has made eight investments in the last 18 months, five of them in the software product space. Soon it will fund another software product firm.

1.7: Reasons for Optimism for Indian IT Industries-Before and after Globalisation

India's software products business started to the early 1980s, when companies such as HCL, Softek, Wipro and TCS launched Unix-based compilers and office applications in the domestic market. According to the NASSCOM-Zinnov study, from 1985 to 1990, India was home to some 350 software product companies.

These companies faced the inherent challenges of the software product business before globalization. Lack of domestic market and a scarcity of skilled professionals with relevant experience enhanced their anxiety. Over time, some of these companies were shut down. Most others transformed into services firms. After 1991 the services business had started to grow and it was a much easier alternative for the IT firms.

While many of the challenges continue, a confluence of factors including a strong and growing domestic market, disruptions in technology and business models, a growing talent base, a well-established "India" brand, and increased venture capital funding boosted the segment after 1991. After globalisation of Indian economy Indian IT players were compelled to build software products for other markets, such as the United States. Before globalisation the capturing of the degree of customer requirements was tough, and marketing the product was expensive. But in recent years, a thriving economy has fueled

the growth of domestic technology demand. NASSCOM estimates that the total domestic IT market (comprising hardware, software, services, business process outsourcing, etc.) has jumped from US\$8 billion in 2004 to US\$23.1 billion in 2008. Over the next few years, India is expected to be the world's fastest-growing IT market, according to the NASSCOM-Zinnov study despite recession. The NASSCOM-Zinnov study anticipates that, in line with Indian companies' increased technology spending, revenue from the domestic market will grow to US\$4 billion to US\$5 billion by 2015. Sharad Sharma, co-chair of the NASSCOM Product Forum and chief executive officer of Yahoo! R&D India, notes that software products are typically formed in the shadow of early adopters and friendly, sophisticated companies. Until now it had been hard to find these in India. Now the possibility exists in both the corporate and consumer sides. Much of the growth in the domestic market, however, will be fueled by demand from the small and medium business (SMB) segment. There are two key reasons for this. First, the NASSCOM-Zinnov study estimates, the SMB share of domestic IT spending will increase from 38 percent at present to 50 percent by 2015. Second, SMBs' requirements and buying patterns open a door for domestic providers. The current growth trend in the IT industry contributes 8 per cent of the country's gross domestic product in 2008. The current growth rate is good enough to push the industry to achieve the 50 billion dollar target on software and services exports by 2008 and this would account for 8 per cent of India's GDP growth and 30 per cent of the export revenues. Currently, the IT sector accounts for 2 per cent of the country's GDP, he said, adding the industry is growing at a CAGR of 50 per cent over the last five years, and last year the industry posted a growth of 30 per cent despite slowdown. The current export figure stood at \$10 billion this year and the time has come that the industry should move up towards intellectual property rights in the areas of products. The important contributions of IT industry to Indian economy are: Software & Services contribute over 7.5 percent of the overall GDP growth of India. IT Exports account for 35 percent of the total exports from India. IT sectors create 2.2 million jobs in 2008. IT industries attract Foreign Direct Investment (FDI) of U.S. \$ 4-5 billion in recent years. Market capitalization of IT shares is around U.S. \$ 225 billion.

1.8: IT in Indian Domestic Market

Indian IT vendors are increasingly turning attention to domestic market. The Indian user industries are outsourcing parts or entire IT infrastructure to specialised vendors. Software & Services includes IT services and Products & ITES-BPO recognizing the growing importance of the domestic market, NASSCOM has put the domestic software and services segment at US\$ 3.9 billion during 2003-04, up from US\$ 3.0 billion in 2002-03.

Table 1.2: Composition of the Domestic IT Market

| (US \$ bn) | 2002-03 | 2003-04 | 2004-05 | 2007-08 |
|-----------------------------------|------------|------------|-------------|-------------|
| IT Services & Products | 3 | 3.9 | 4.9 | 18 |
| ITES-BPO | 0.2 | 0.3 | 0.6 | 2 |
| Hardware | 3.3 | 4.3 | 5.3 | 7.5 |
| Total Domestic IT Market | 6.5 | 8.5 | 10.8 | 27.5 |

(Source: Ministry of Communications and IT, Govt. of India 2008)

In 2003-04, the hardware segment accounted for approx 50 percent of the domestic Indian IT market. The software and services segment accounted for 44 percent of the market in 2003-04.

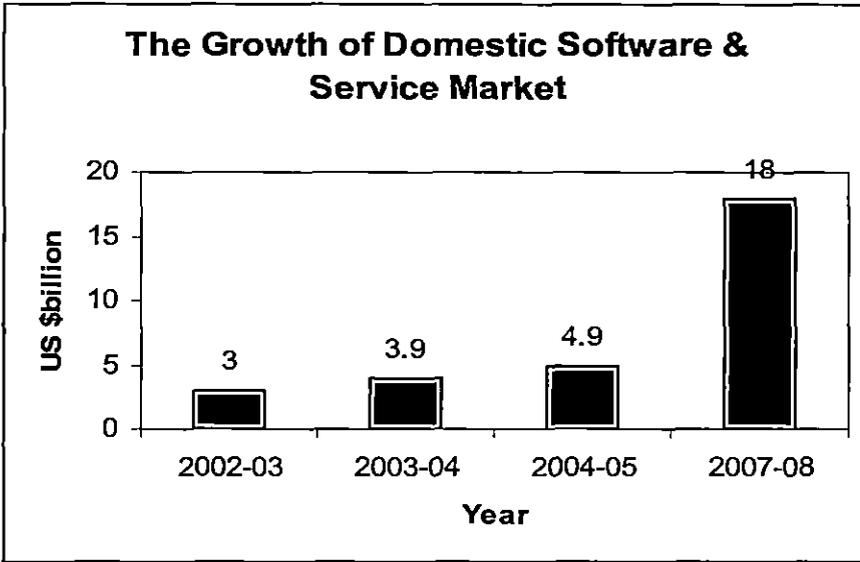


Fig 1.2: The Growth of Domestic Software & Service Market

(Source: Based on Table 1.2)

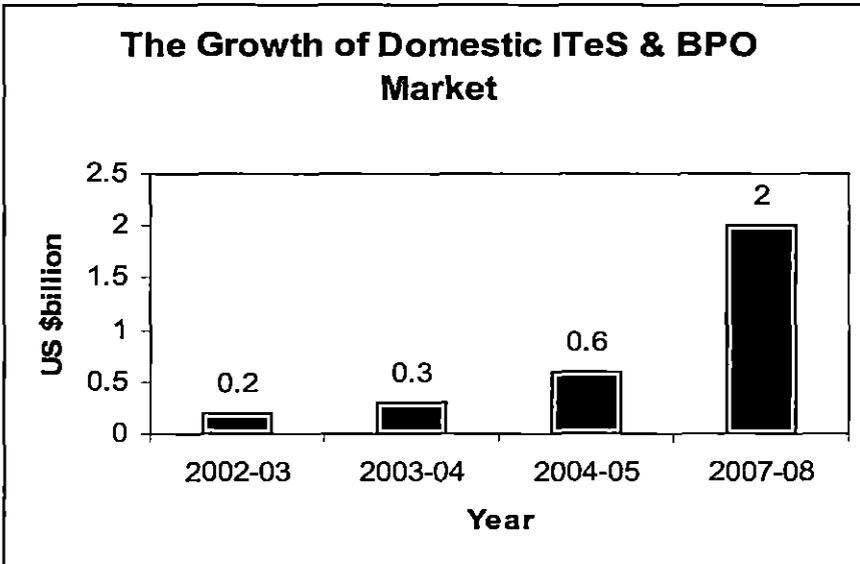


Fig 1.3: The Growth of Domestic ITES & BPO Market

(Source: Based on Table 1.2)

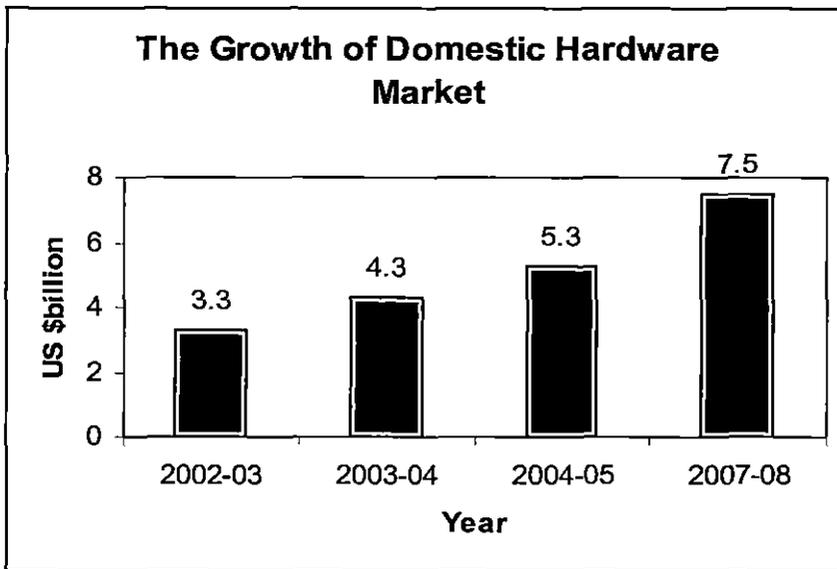


Fig 1.4: The Growth of Domestic Hardware Market
(Source: Based on Table 1.2)

Table 1.3:IT/ITES revenues estimated by NASSCOM in 2008 and comparison with 1998.

(\$ US billion)

| | India Based | India Centric | Sub total (International) | Domestic | Total (2008) | 1998 |
|--------------------|-------------|---------------|---------------------------|-----------|--------------|------------|
| IT Services | 23 | 7 | 30 | 8.5 | 38.5 | 2.1 |
| Software Products | 8 | 2 | 10 | 9.5 | 19.5 | 0.6 |
| IT-enabled Service | 15 | 2 | 17 | 2 | 19 | 0.4 |
| E-business | 4 | 1 | 5 | 5 | 10 | 0.2 |
| Total | 50 | 12 | 62 | 25 | 87 | 3.3 |

(Source: NASSCOM Annual Report, 2008)

It is clearly seen from this table 1.3 that the comparison between the revenues of IT Services, Software Products, IT-enabled Services, E-Business in between 2008 and 1998. In every aspect there is a drastic growth in 2008 comparing 1998. This is due to the effect of Globalisation of Indian economy.

IDC (India) Limited, reported that the domestic IT/ITES market revenue has touched Rs. 1,10,000 crore in 2008 while sustaining the growth of 27 percent recorded in 2007. This would result in the market growing at 24 percent in 2008 over 2007.

The year 2008 is set to mark the beginning of Growth Phase 2.0 to be characterised by opportunities arising out of the leveraging of the IT infrastructure built up so far. This was revealed by IDC India, as part of its annual predictions for the domestic IT market for 2008 that serve as a comprehensive reference guide for the industry. The Indian domestic IT market is transforming significantly with the existing IT infrastructure evolving both in technology terms and depth of penetration. Higher demand for sophisticated enterprise and consumer services will drive this trend as the India domestic IT market up-to-date and modern. Indian customers have already started living the digital experience. Convergence is playing an important role in bringing different media together to offer multiple services to customers over the same platform. The Indian telecommunication products market can also be categorised into distinct and rapidly evolving segments. According to IDC fixed-line broadband will emerge as a favoured choice in 2008, though mobile Internet will continue to grow as an alternative Internet access medium. Now virtualisation has become mainstream in 2008 as it gains wide-scale adoption. Enterprises like IT/ITES in India have been the early adopters of consolidation and virtualization. IDC India estimates the share of virtualised servers will be doubled from the present 22 percent to 45 percent by 2010 end. In addition to benefits like ease of management and better resource utilization, enterprises are increasingly becoming aware of additional benefits like design densities, power and cooling. The success stories of virtualisation that have gained momentum are expected to have a positive impact on other segments like Manufacturing, BFSI (Banking and Financial Services Industries) and Aviation during 2008.

IT Solutions (hardware + software + services) delivery witnessed a change in 2010 despite recession with pockets of success and growing awareness setting the stage for wider market adoption. The Small and Medium Business (SMB) segment is going to be a key driver.

The domestic IT spending in India is at an inflexion point and there are numerous opportunities in the domestic sector, which can help catalyze growth in the next 2-3 years.

1.9: The key drivers for the growth of IT in the domestic IT market

- Opportunities in verticals such as Energy, BFSI (Banking and Financial Services Industries), Manufacturing, Education, Telecom and Government.
- Increased penetration of computers in the household and SOHO segments
- Increased investments in IT by the central and state governments in e-governance initiatives
- Rapid adoption of broadband
- Increased usage of non-PC devices especially cellphones
- Increased focus of Small and Medium sized software companies on domestic market

1.10: Domestic IT Market: Key Verticals

1.10.1: Banking and Financial Services:

The BFSI segment accounts for the largest share of the domestic IT market. The major areas in which banks have undertaken IT related investments include computerization of branches,

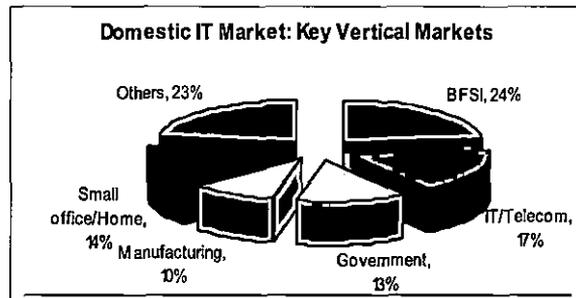


Fig 1.5: Domestic IT Market
(Source: NASSCOM Annual Report, 2009)

VSAT based networking among branches, installation of ATM networks, systems related to handling of credit/debit cards and facilities for Internet banking. An interesting trend, which we are beginning to witness, is the implementation of technology for improved customer service and thereby greater customer satisfaction apart from other significant benefits in terms of increased productivity. Another sector that has seen high IT related

investments has been insurance. The increase has been driven primarily by the increase in the number of players as a result of opening up of the sector.

1.10.2: Manufacturing: IT spending in the manufacturing sector increased by 40 percent in 2003-04 across both process and discrete manufacturing segments, contributing to 10 percent of the total domestic IT spending. Some of the drivers for increase in IT spending in the manufacturing sector were: Adhering to the WTO norms Indian manufacturing companies which were Tier 1 or Tier 2 suppliers to OEMs in India or abroad, to reduce time-to-market and product life cycles, put pressure on manufacturers to integrate with OEMs (both Indian and MNCs), Tier I suppliers, sub-contractors and distributors during product development and process manufacturing need to increase operational efficiency and capital productivity while reducing fixed and variable costs. Need for transactional systems that could integrate with core processes-sales, manufacturing, financial, procurement, inventory and supply chain.

1.10.3: Telecom: Deregulation, mergers and acquisitions, and intense competition have thrown up multi-faceted challenges for the Telecom & Internet Service Provider communities. To sustain themselves in the highly competitive market, the players need to invest in infrastructure, improve quality of service, network efficiency and billing solutions.

1.10.4: Healthcare: Healthcare is one of the fastest-growing verticals in India. The Indian healthcare sector has started focusing on serving customers better, keeping in mind the need to balance a robust and profitable business operation and meeting broader social objectives. The main focus areas have been to improve service to the end-customer, the patient and to increase patient safety. IT has played an important role in providing better systems, thereby streamlining information processes of an organisation, ironing out inefficiencies that grow due to lack of information, increase the quality of healthcare delivery to patients and reduce costs.

1.10.5: Retail: The significant increase in activity in the retail sector has resulted in a growth in IT investments in this sector. Indian retailers have been spending more and more on setting up IT systems and, importantly, plan to hike up their investments in this area in the future. Retailers are also looking beyond basic expenses to higher levels of IT

functionalities. Applications that are very commonly used by retailers include SCM, CRM and e-business solutions.

1.10.6: Government: Government spending on IT is expected to witness a significant increase, owing to initiatives by both the Central and State governments. The government will use web-enabling services, consulting for planning and implementation, apart from the hardware and software needed to build the e-governance platform.

1.10.7: Domestic Outsourcing-The BPO sectors

Domestic business process outsourcing (BPO) industry is emerging to be very important. The ability to transform business and add value is likely to project this pre-nascent industry to success. While IT outsourcing is a starting point in the domestic BPO segment, there is large potential in other areas like finance and accounting as well as many other activities. Bharti's deal with IBM and the more recent managed networks deal with Nokia, the Bank of India-HP deal, the Dabur-Accenture deal etc, point that the Indian market has matured and domestic outsourcing provides a huge opportunity for vendors.

According to the National Association of Software and Services Companies (NASSCOM) out of the total exports, outsourcing services such as software programs, billing, customer management and accounting, grew 44.5 per cent to \$US5.2 billion or 44 per cent of the worldwide total .The outsourcing industry also crossed a milestone in employment. The industry scaled record levels of employment during the last year (2008) with the employee base crossing the one-million mark. Despite the anti-outsourcing laws planned in the US and other regions India was able to attract foreign companies. The strong growth validates the economics of offshore outsourcing. India's offshore value proposition remains the strongest.Positive market indications and strong records strongly support the optimism of the industry in achieving its aspired target of \$60 billion in software and services exports and \$73-75 billion in overall software and services revenue by fiscal 2010. Direct employment is expected to reach two million people in 2010.The 2010 target would mean an increasing contribution of the sector to the socio economic development of the country. According to NASSCOM ,IT-BPO will employ about 2.5 to three million professionals directly in the sector, account for direct

investment of about \$10 to 15 billion and contribute seven to eight per cent of the national GDP by 2010. The Software Industry, which is a main component of the Information technology, has brought tremendous success for the emerging economy. India's young aged manpower is the key behind this success story.

Table 1.4: Examples of overseas acquisitions by Indian IT/ITES companies in recent times (2008)

| Indian Company | Acquired Company |
|---------------------------------------|---|
| Wipro | <ul style="list-style-type: none"> IT infrastructure management company Info crossing Inc. (USA) in 07. Chip design firm New Logic Technologies (Austria) in Dec 05. Semiconductor design firm Oki Techno Centre Singapore Pte Ltd in Sept 07. |
| Mind Tree Consulting Ltd | <ul style="list-style-type: none"> Purple Vision Technologies Pvt. Ltd, a fully owned subsidiary of global electronic design company TES Electronic Solutions SA,(France)in 07. |
| Satyam | <ul style="list-style-type: none"> Nitor Global Solutions Limited of UK,a niche consulting firm providing Infrastructure Management Services (IMS) in October 2007. Citisoft, an UK based investment management consulting firm in 2005. |
| TCS | <ul style="list-style-type: none"> TCS Management (formerly called Total Communication Solutions), a privately owned consulting company in Australia in November 2006. FNS a Sydney based software solutions company in 2005. |
| Infosys | <ul style="list-style-type: none"> In 2007, Infosys bagged a \$ 250 million contract from Royal Philips Electronics NV which will include Infosys taking over Philips finance and administration business process outsourcing (BPO) centers spread across three countries-India, Poland and Thailand |
| Sasken Communication Technologies Ltd | <ul style="list-style-type: none"> Leading Provider of wireless R & D and testing services Botnia High-tech Oy (Finland) in July 2006. |
| Mastek | US based software solutions company Entegram LLC in October 2005. |
| Subex Systems | <ul style="list-style-type: none"> Telecoms revenue assurance company UK-based Azure Solutions in 2006 |

(Source: NASSCOM Annual Report 2009)

According to statistics, country's software exports reached total revenues of Rs 46100 crores. The share of total Indian exports from 4.9 per cent in 1997 to 20.4 percent in 2002-03. It is expected that the industry will generate a total employment of around four millions peoples, which accounts for 7 per cent of India's total GDP as in the year 2010. The year 1995-96 was a boom for the industry. The performance of the industry over the years is as follows:

1.11: Employment Statistics in IT/ITES Industries in India (1998-2008)

Employment in IT/ITES Industries after globalization is shown below.

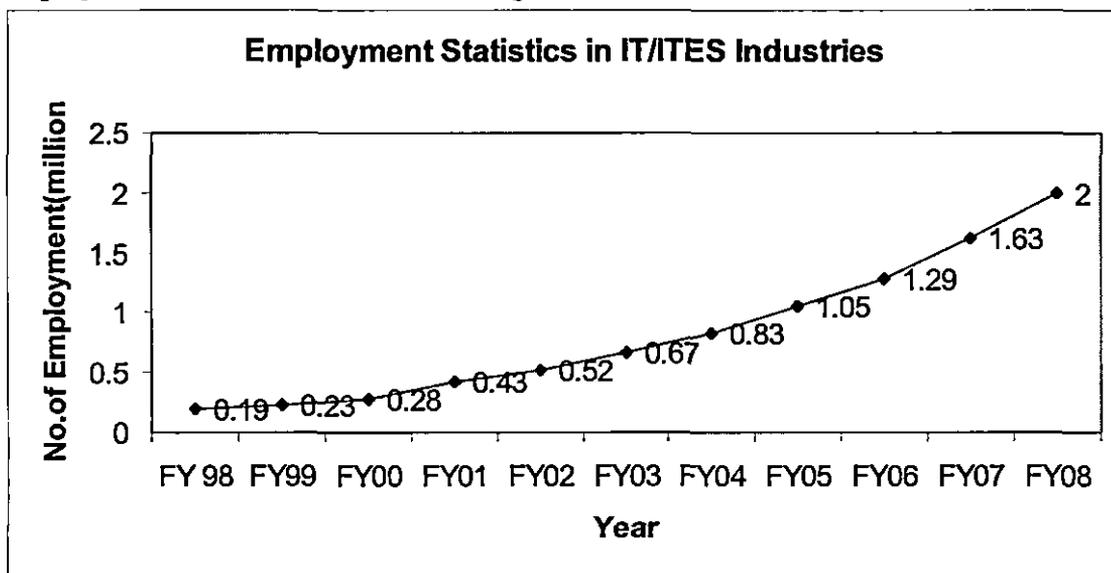


Fig 1.6: Employment Statistics in IT/ITES Industries in India
(Source: NASSCOM Report 2009)

Direct employment in the sector is approximately 2.0 million by the end of FY08. The indirect employment is at the rate of 4 additional jobs created in the economy for the creation of 1 job in the sector. Supply of IT professionals, which was higher than demand till 2004, now has a shortfall of 62,697. Demand for IT professionals is expected to reach 430,000 by 2011-12 with the corresponding figures on indirect employment being 1,720,000.

1.11.1: Diversity in Employment

Besides being the largest employer in the organized private sector, the IT/ITES industry also consciously follows a diverse employment practice and encourages diversity in the work place in terms of qualification, abilities, gender, skill sets.

- **Creating employment opportunities in smaller towns/cities:** By recruiting talent from non-metro towns and rural background, the industry has reached out to the educated resource pool in these places.
- **Large IT/ITES companies often have 33 to 50 percent of their employees coming from non-metro/rural areas.**
- **Encouraging employment of differently-abled:** Through their policy and practice of employing differently abled people, training them and creating a conducive working environment, IT/ITES companies are initiating a trend which could have a significant impact on employment opportunities for the differently abled in India.
- **64 percent of the companies surveyed by Deloitte employ people with disabilities**
- **Opening opportunities for non-technical personnel:** The growing employment opportunities in this sector (both direct and indirect) are not restricted to the better educated or technically educated people alone.

While 75 percent of the employment generated through the indirect route are filled in by candidates who are SSC/HSC or less educated, companies also help under qualified candidates to reach a desired skill level by investing in their training and skill upgradation.

- **Promoting women empowerment:** The growing trend in the number of women employed in this sector indicates that not only does the industry offer equal opportunity to women but also has in place proactive and sensitive mechanisms which counter the common causes that discourage women from pursuing employment in the corporate sector.
- **Women employment in the industry is set to rise to 45 percent by 2010 from the current 30 percent.**
- **Providing high growth opportunities for the youth:** The industry has created excellent employment and fast track growth opportunities for the younger section of the population and is likely to become one of the largest employers of a growing 'young population' of India.
- **The overall median age group of the sector is 28.9 years with 70 percent of the workforce being in the age-group 26-35 years.**

- Creating opportunities for the 'out-of-the-mainstream' candidates: The IT industry through its innovative recruitment practices has also hired persons who would not typically be considered employable such as retired persons and housewives.
- Opening opportunities for the physically disabled persons.

The credit goes to technical young peoples and English-speaking scientific professionals for the success in India's software industry. Presently for further strengthening the industry, the Government has stepped forward with more qualitative institutes. But despite of all these good number of IT professionals leaving India every year to the other developed countries.

Table 1.5: Number of Employees in some ITES companies in Recent times (2008-09)

| Company | Employees |
|-------------------------|------------------|
| Daksh | 5,000 |
| EXL Services | 4,087 |
| EFunds | 3,936 |
| ICICI One Source | 3,902 |
| 24/7 Customer | 2,800 |
| HCL Tech-BPO | 2,565 |
| Transworks | 1,800 |
| HTMT | 1,610 |
| ISeva | 700 |
| Sykes | 617 |
| NIIT Smart | 612 |
| Ajuba | 490 |
| Motif | 341 |

(Source: A survey report in Rediff.com, 2009)

1.12: Salary structure of the IT Professionals in India (2003 & 2004)

The DQ-IDC India Salary Survey'04 reveals that with heavy hiring, salaries went up (and satisfaction, down)-but IT companies compensated by hiring more freshers, and paying them less .The spring in the step is back. A year ago, the average hike stood at a mere 7 percent. It's a different story now. The figure for average salary this year stood at Rs 5.7 lakh per annum, up from Rs 4.8 lakh in 2003. That's a growth of 19 percent. The elite DQ Top 20 club upped headcount by 35 percent in 2004, as compared to 28 percent in 2003. A large part of this recruitment happened for entry-level positions. The result: the average salary of employees with less than two years of work experience saw a dip of 12 percent,

and, incidentally, this was the only bracket to see a decline in salaries. For senior employees-those with ten or more years of experience-the jump in salary stood at a whopping 26 percent.

Table 1.6: Experience wise salary structure of IT Professionals-An overview in 2004

| Salaries: | | | | | | | | |
|-----------------------------------|--------------------------|-------------|-----------------------|-------------|-----------------------|-------------|-----------------------|-------------|
| Experience | Less than 2 Years | | 2-5 Years | | 5-10 Years | | Over 10 Years | |
| Salary | % of employees | | % of employees | | % of employees | | % of employees | |
| | 2004 | 2003 | 2004 | 2003 | 2004 | 2003 | 2004 | 2003 |
| Less than Rs 2 lakh | 36.5 | 15.3 | 9.8 | 7.5 | 6 | 2.9 | — | 2.3 |
| Rs 2 to 3 lakh | 34 | 48.6 | 20.7 | 24.3 | 10.5 | 12.3 | 3.5 | 3.3 |
| Rs 3.1 to 4.5 lakh | 24.5 | 28 | 34.1 | 45.9 | 15 | 22.9 | 9.7 | 11 |
| Rs 4.6 to 6 lakh | 2.5 | 5.6 | 22.3 | 17.6 | 21.6 | 30 | 12.4 | 20.4 |
| Rs 6.1 to 8 lakh | 1.3 | 0.8 | 8.4 | 4.2 | 20.7 | 19 | 7.1 | 6.7 |
| Rs 8.1 to 10 lakh | 1.3 | 0.5 | 2.7 | 0.1 | 12 | 9.1 | 13.3 | 14.6 |
| Rs 10.1 to 15 lakh | — | 1.2 | 2 | 0.2 | 11.7 | 3.3 | 28.3 | 27.4 |
| Rs 15.1 to 25 lakh | — | — | — | 0.1 | 2.1 | 0.4 | 17.7 | 12.5 |
| Rs 25.1 to 35 lakh | — | — | — | — | — | — | 6.2 | 1.5 |
| Over Rs 35 lakh | — | — | — | 0.2 | 0.6 | — | 1.8 | 0.3 |
| Average salary (Rs lakh) | 2.6 | 3 | 4.2 | 3.8 | 6.7 | 5.4 | 12.4 | 9.9 |
| % change in average salary | -12% | | 11% | | 24% | | 26% | |

(Source: Data Quest Survey, 2004)

Growing Perks of IT Professionals-An overview in 2004

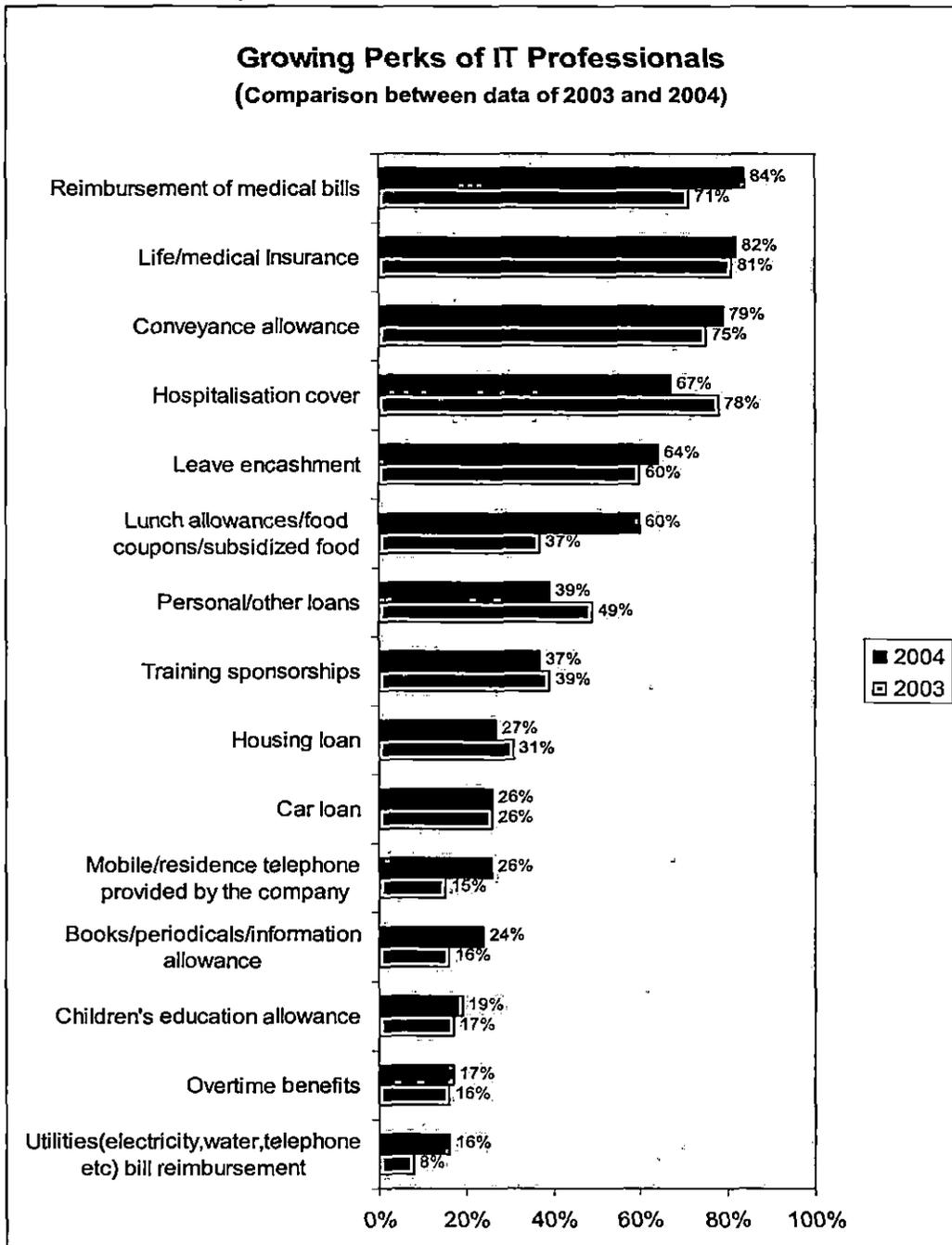


Fig 1.7: A comparison of Growing Perks of IT professionals in 2003-2004
(Source: Data Quest IDC survey 2004)

Table 1.7: A Data Quest-IDC Salary versus Satisfaction Survey Results on IT Professionals in India (2004)

| | Top Salaries | Satisfaction |
|--------------------|---------------------|---------------------|
| | Rank | Rank |
| HP | 1 | 8 |
| Cadence | 2 | 1 |
| Philips | 3 | 2 |
| Sasken | 4 | 6 |
| Siemens | 5 | 18 |
| Datacraft | 6 | 20 |
| Infosys | 7 | 14 |
| HCL Tech | 8 | 9 |
| Zensar | 9 | 16 |
| Sun Micro | 10 | 12 |
| Indus Logic | 11 | 17 |
| Ness | 12 | 10 |
| Wipro | 13 | 4 |
| CSC | 14 | 15 |
| Oracle | 15 | 3 |
| Satyam | 16 | 19 |
| Infinite | 17 | 11 |
| Keane | 18 | 13 |
| Mindtree | 19 | 5 |
| TCS | 20 | 7 |

(Source: Data Quest IDC survey 2004)

Table 1.7 above shows a Data Quest-IDC Salary versus Satisfaction Survey results which was done on 1010 employees from different IT industries in 2004 and it was found that high salary doesn't always mean a high satisfaction with salary. Nor does a rise in salary necessarily translate into a corresponding rise in satisfaction. HP, the best paymaster in the industry, has quite a lot of employees who look dissatisfied with their salary levels. The employees at Siemens also tend to echo the HP employees' views. On the other hand Mindtree, which is near the bottom of the table in terms of size of the packet, has relatively satisfied employees. So does TCS. And Oracle employees are quite satisfied with their salaries despite Oracle featuring quite low on actual salaries. It is results like these that make Maslow's hierarchy of needs look like the absolute truth. For, real satisfaction is an outcome of more variables than just the salary one. For instance, a boring, monotonous work profile could lead to lower satisfaction scores even on the

salary parameter. Overall employee satisfaction is up 9 percent and BPO employees are more satisfied than their IT counterparts.

According to this Data-Quest survey the reasons for joining of the IT professionals to the companies are good work environment, high growth opportunity, and good salary.

Table 1.8: A survey on employees of the ITES Company on their preferred employers (2006)

| Companies | % of own employees |
|------------------------|---------------------------|
| EFunds | 69 |
| ICICI OneSource | 49 |
| Motif | 41 |
| ISeva | 33 |
| EXL Services | 31 |
| HCL Tech-BPO | 25 |
| NIIT Smart | 24 |
| Ajuba | 22 |
| HTMT | 21 |
| Daksh | 21 |
| 24/7 Customer | 14 |
| Sykes | 6 |
| Transworks | 6 |

(Source: Data Quest IDC survey, 2006)

Table 1.8 states a Data Quest Survey which shows the preference of the employees on their own organizations. Like 69 percent of the employees of eFunds prefer their own organisation. Ranked by employee size, EXL Services emerges at number two, but fails to make it to the top five. ICICI OneSource, the other biggie in the pack, has seen the E-Sat (Employee Satisfaction) score of its employees rise by a good 18 percent from 75.1 last year to 88.6 this year. eFunds, with over 3,936 employees, has also outperformed the industry by upping the E-Sat scores of its employees by 20 percent. The average E-Sat level of the top five companies (in terms of number of employees) stands at 84.6, clearly outperforming the industry average.

Table 1.9: Dream Companies where IT Professionals would like to work-A survey in 2006

| Rank | Companies | Percent |
|-------------|-------------------------|----------------|
| 1 | EFunds | 9 |
| 2 | American Express | 9 |
| 3 | ICICI OneSource | 7 |
| 4 | Infosys | 6 |
| 5 | IBM | 5 |
| 6 | Exl Service | 4 |
| 7 | Daksh | 4 |
| 8 | Microsoft | 4 |
| 9 | HCL Tech-BPO | 2 |
| 10 | Convergys | 2 |
| 11 | GE | 2 |
| 12 | 24/7 Customer | 2 |
| 13 | Others | 25* |
| 14 | Not specified | 17 |

*Includes Wipro, Hewlett-Packard, Hinduja TMT, Accenture and Bank of America
(Source: Data Quest Survey, 2006)

Table 1.9 gives us an idea about how the IT professionals rank their dream companies. Respondents were asked, by means of an open-ended question put to them, to name the one "dream" company they would like to work for. Interestingly the top three happen to be BPO companies, unlike last year when the company at the top was Infosys. At number four in 2006-07, Infosys has IBM and Microsoft, which are not from the BPO space. These companies are in fact the dream companies of a great number of IT industry employees themselves. eFunds' top placement surprises, while Amex jumps eight notches from ninth place last year to the second this year.

1.13: Reasons for Joining to the Software Sector-A Dataquest Survey

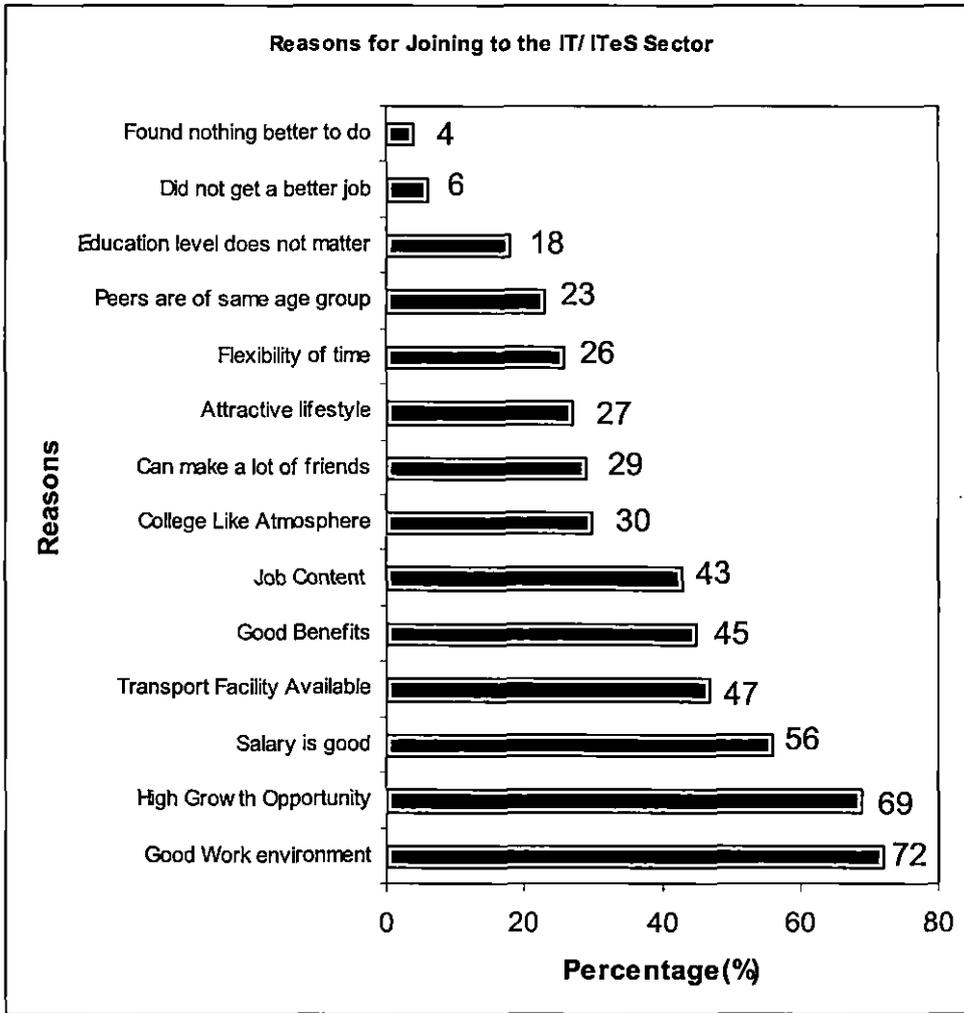


Fig 1.8: Reasons for Joining to the Software Sector (Source: Data Quest Survey, 2006)

Fig 1.8 shows a Dataquest Survey in 2006 results on the reasons for joining to a software sector by the professionals. Near about 72 percent of professionals answered that they have joined IT sector for the 'Good Work Environment'. About 56 percent of the respondents have put a tick mark on Salary option. These factors are very important for the professionals who are migrating to other countries.

1.14: Reasons for Leaving the Organization-A Dataquest Survey

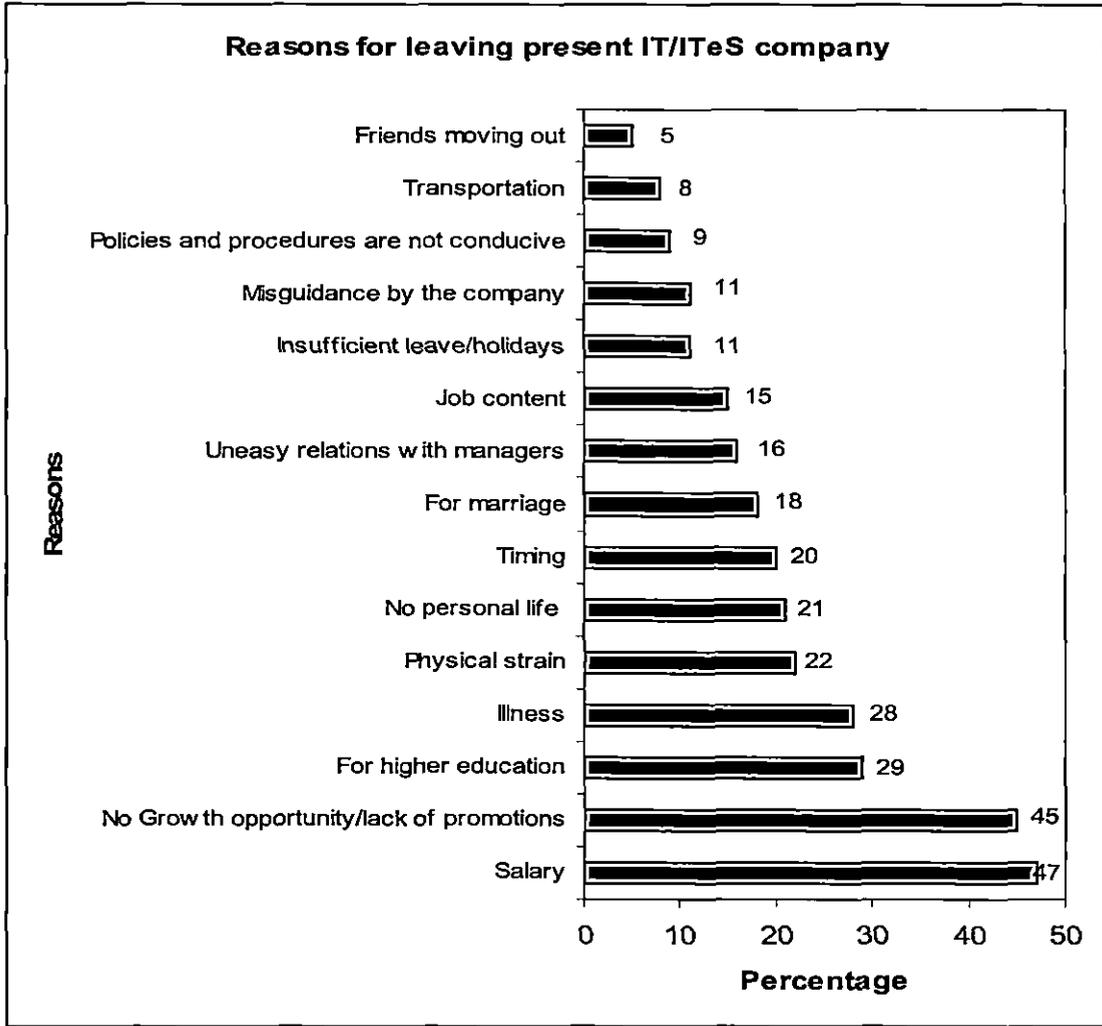


Fig 1.9: Reasons for Leaving Organisation

(Source: Data Quest Survey, 2006)

Fig 1.9 shows the Data Quest Survey Results in 2006 which states that the reasons why the IT professionals leave their organizations. Approximately, 47 percent of the IT professionals feel that salary is the main reason for change. Approximately 45 percent of the professionals feel that the Growth Opportunity is another important reason for change.

1.15: An overview of Migration

Human migration is movement (physical or psychological) by humans from one place to another, sometimes over long distances or in large groups. The movement of populations in *modern* times has continued under the form of both voluntary migration within one's region, country, or beyond, and involuntary migration (which includes the slave trade, trafficking in human beings and ethnic cleansing). People who migrate are called migrants, or, more specifically, emigrants, immigrants, or settlers, depending on historical setting, circumstances and perspective.

1.15.1: Who Counts as a Migrant

The term migrant worker has different official meanings and connotations in different parts of the world. The United Nations' definition is very broad, essentially including anyone working outside of their home country. In some countries, specially the United States, the term has a specific connotation that the work will be low paid. The term can also be used to describe someone who migrates within a country, possibly their own, in order to pursue work such as seasonal work.

The "United Nations Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families" defines migrant worker as follows:

“The term "migrant worker" refers to a person who is engaged or has been engaged in a remunerated activity in a State of which he or she is not a national.”

1.15.2: Industrialisation and Migration

Actually the pace of migration had accelerated since the 18th century and it had increased in 19th century. Manning distinguished three major types of migration: labour migration, refugee migrations, and, lastly, urbanization. Millions of agricultural workers left the countryside and moved to the cities causing unprecedented levels of urbanization. This phenomenon began in Britain in the late 18th century and spread around the world and continues to this day in many areas.

Industrialisation encouraged migration wherever it appeared. The increasingly global economy globalised the labour market. Transnational labour migration reached a peak of three million migrants per year in the early twentieth century. Italy, Norway, Ireland and the Quongdong region of China were regions with especially high emigration rates during these years. This large migration flow influenced the govt. of the host as well as destination countries in many ways. Immigration restrictions have been developed, as well as diaspora cultures and myths that reflect the importance of migration to the foundation of certain nations, like USA. The United States experienced considerable internal migration related to industrialization, including its African American population. From 1910–1970, approximately 7 million African Americans migrated from the rural Southern United States, where blacks faced both poor economic opportunities and considerable political and social prejudice, to the industrial cities of the Northeast, Midwest and West where relatively well paid jobs were available. This phenomenon came to be known in the United States as its own Great Migration.

The twentieth century experienced also an increase in migratory flows caused by war and politics. Muslims moved from the Balkan to Turkey, while Christians moved the other way, during the collapse of the Ottoman Empire. 400,000 Jews moved to Palestine in the early twentieth century. The Russian Civil War caused some 3 million Russians, Poles and Germans to migrate out of the Soviet Union. World War II and decolonization also caused migrations. A theory was developed by Ravenstein which has a great contribution in migration.

1.15.3: Ravenstein's 'laws of migration'

Certain laws of social science have been proposed to describe human migration. The following was a standard list after Ravenstein's proposals during the time frame of 1834 to 1913. The laws are as follows:

1. Every migration flow generates a return or counter migration.
2. The majority of migrants move a short distance.
3. Migrants who move longer distances tend to choose big-city destinations
4. Urban residents are less migratory than inhabitants of rural areas.
5. Families are less likely to make international moves than young adults.

1.15.4: Causes of migrations

Causes of migrations have modified over hundreds of years. Some cases are constant, some of them do not carry the same importance as years ago (for example: in 18th and 19th centuries labour migration did not have the same character like today).

In general it is seen that the factors causing migrations can be categorized into two groups of factors i.e. Push and Pull factors.

- Push Factors are economic, political, cultural, and environmentally based.
- Pull Factors are economic, political, cultural, and environmentally based.

On the macro level, the causes of migration can be categorise into two main categories: security dimension of migration (natural disasters, conflicts, threats to individual safety, poor political prospects) and economic dimension of migration (poor economic situation, poor situation of national market). Push and pull factors are those factors which either forcefully push people into migration or attract them. A push factor is forceful, and a factor which relates to the country from which a person migrates. Different types of push factors can be seen further below. A push factor is a flaw or distress that drives a person away from a certain place. A pull factor is something concerning the country to which a person migrates. It is generally a benefit that attracts people to a certain place. Push and pull factors are usually considered as north and south poles on a magnet.

1.15.5: Push Factors

- Not enough jobs
- Few opportunities
- "Primitive" conditions
- Desertification
- Famine/drought
- Political fear/persecution
- Poor medical care
- Loss of wealth
- Natural Disasters

- Death threats
- Slavery
- Pollution
- Poor housing
- Landlords
- Bullying
- Poor chances of finding courtship

1.15.6: Pull Factors

- Job opportunities
- Better living conditions
- Political and/or religious freedom
- Enjoyment
- Education
- Better medical care
- Security
- Family links
- Industry
- Better chances of finding courtship

The role of migration in the era of globalisation is regarded to be very important to the developing countries. The migration is in terms of the labour mobility between the different countries. With the concept of globalisation sweeping across the globe, the migration of labour has been a contributing factor to the economic improvement of developing countries. With the free movement of labour across the nations immigration has become one of the major problems to the developing countries of the world. People from the neighboring poor countries often move to more developed countries in order to improve their economic conditions and most of the time with out proper papers and documents. This creates a huge pressure on the host country as the population of the unskilled labour increases and the per capita income come down in spite of a well performing economy. In case of the skilled labours the situation is better as their income contributes to the gross domestic product of the host country.

1.16: Impact of Globalisation on the Migration of Skilled Indian IT Professionals (Brain Drain)

The impact of globalisation has created an international demand for labour. The free mobility of both the skilled and unskilled labour has become important with the transfer of technology between different countries. The labour demands in the developed economies are increasing due to the problems of the decreasing rate of fertility, the opening up of new opportunities, the transformation of the industries with the technological advancements, etc. The developing countries with their huge skilled labour force are catering to the demand for skilled labour in the developed countries. This is called as brain drain. The emergence of India as information superpower is a truth. As a major part of the young Indian professionals are working in several information technology based companies, information technology enabled service companies, software based companies, which has their headquarters in other countries outside India. The future demand for the work force suggests that countries like India and China would supply to the requirement of skilled labour pertaining to the information technology sector, industrial sector, telecom sector, electronic sector, etc. The role of migration in the new globalised world suggests that India is going to be among the next economic superpowers in the forthcoming decades. With the increase in the economic globalisation and the reconstruction of the political and economic machineries, the need for the information and knowledge has increased. The different prerequisites for the skilled labour force have become important aspects in shaping the economy of the country. The role of migration is important as skilled labour migrating to other countries carries the knowledge and the skill sets with them. The vast improvements in the IT sector are the updating the system of training of the skilled human resource, such as technical knowledge, scientific knowledge, ideas and innovations, which have become highly mobile and moving freely across the whole world.

Some questions are aroused in this study here that what are the influencing factors of migration? What are the exact reasons of 'Brain Drain' of IT industries? What is the exact scenario of migration of Indian IT professionals worldwide? What are the demands of skilled Indian IT professionals in countries like USA, Canada, Australia etc? How globalisation affect the migration of skilled IT professionals? This study is an attempt to reveal all these questions.

1.17: Objectives of the Study

The broad objective of the study is to assess the reasons for skilled human resource migration from Indian IT sector as well as the effect of globalisation on their migration. The study will find how the factors of globalisation will influence the IT professionals regarding their migration decisions. The study is an attempt to assess the causes in brain drain in IT sector and the potential demands for trained Indian IT professionals all over the world. The role of women and that of differently abled persons in the IT sector has been thoroughly investigated with the supportive data.

The objectives of the study with special reference to Indian IT sector can be addressed as follows:

1. To study whether the migration of IT professionals is influenced by the combination of the variables like *salary, achievement, cost of living in India, better opportunity of utilizing skill, better working environment, political turmoil etc. or not;*
2. To study whether the migration of IT professionals is influenced by Salary in the foreign countries or not;
3. To study whether the migration of IT professionals is influenced by *Achievement of work* in the foreign countries or not;
4. To study whether the migration of IT professionals is influenced by *Cost of Living in India* or not;
5. To study whether the migration of IT professionals is influenced by *Better Opportunity of Utilizing Skill* in the foreign countries or not;
6. To study whether the migration of IT professionals is influenced by *Better Working Environment* in the foreign countries or not;

7. To study whether the migration of IT professionals is influenced by *Political Turmoil in India or not*;

8. To find is there any significant difference in the *Present job satisfaction* of the IT professionals and their *Job satisfaction before leaving India or not*;

9. To study what roles do women play as IT professionals in India and what migration opportunities they can avail;

10. To study what roles do physically challenged IT professionals in India play and what migration opportunities they can avail;

1.18: Hypotheses to be Tested

After considering the different influencing factors, which are influencing the migration of Indian IT professionals to other countries, the null hypothesis is taken as

H₀₁: The migration of IT professionals is not correlated with the combination of these variables I.e. *salary, achievement, cost of living in India, better opportunity of utilizing skill, better working environment, political turmoil.*

The justification of this hypothesis was to check out the influence of these above factors on migration of highly skilled IT professionals.

The individual impact of these variables (*salary, achievement, cost of living in India, better opportunity of utilizing skill, better working environment, political turmoil*) are also to be tested. So some other hypotheses are also to be drawn.

H₀₂: The migration of IT professionals is not correlated with salary in foreign countries.

H₀₃ : The migration of IT professionals is not correlated with achievement of work.

H₀₄ : The migration of IT professionals is not correlated with cost of living in India.

H₀₅ : The migration of IT professionals is not correlated with better opportunity of utilizing Skill.

H₀₆ : The migration of IT professionals is not correlated with better working environment in foreign countries.

H₀₇ : The migration of IT professionals is not correlated with political turmoil in India.

H₀₈ : There is no significant difference in the present job satisfaction and job satisfaction before leaving India.

1.19: Data Sources and Samples

To address the questions just mentioned we rely on both secondary as well as primary data sources. A questionnaire consisting of 20 questions was prepared and sent through e-mail to the *IT* professionals who are working in different organizations in different countries. The questionnaire comprises some questions seeking responses in a scale of 10(ten). Totally 200 such questionnaires were sent through snowball sampling technique to various *IT* professionals of different organizations like CTS, TCS, Motorola, RS Software, PWC etc. and ultimately 147 were filled up and received back through e-mail. The responses from the respondents were very much enthusiastic and carry ample scope for analysis. A part of the analysis was done by the statistical tool SPSS. This study is basically an empirical study.

1.20: Limitations of the Study

There are several limitations of this study:

1. It was very difficult to collect data from the IT professionals who are working abroad.
2. The sample size was too small because the migrated IT professionals are working all over the world and getting access to them was very difficult.
3. Questions like 'remittances' were not answered by everyone. So the analysis on the IT professional's remittances was a very difficult task.
4. Study had been done among few software organizations through snow ball sampling. It was very difficult to access foreign software companies and their IT professionals.

CHAPTER-II

REVIEW OF LITERATURES

LITERATURE SURVEY

Tarang Bhargava (2010) has depicted in his article that Indian education system is counted amongst the best in the world. India has given many intelligent minds to the world. The Indian system of education follows a smooth hierarchy from fundamentals to excellence. The school drop outs in India are very less as compared to other parts of the world. After completing their education in India, people often leave for foreign countries in search of better working environment and pay package on account of unemployment. This concept of taking education in a country but earning for another is known as brain drain. Asian countries have been a victim of such concept since the western countries have opened up job opportunities for eastern countries. They get cheap and hardworking labour in this manner. Unemployment in India has been an overused excuse by the one's who are responsible for such brain drain and also by the ones who are desperately trying to contribute to the same. The opportunities inside the country suddenly seem small and worthless in front of the bright image of the west. More than anything else, better lifestyle and a developed country name to display, has lead people into migrating their working areas from their native place to a western country. But the question remains is it really so starry as it seems? Are there seriously no "good" job opportunities in India? Well, had this question come a decade earlier the answer would have been a tragic 'yes', but today when many multi national companies are desperately trying to establish a branch in India, the truth differs. Going to foreign countries to earn can be beneficial for the country only in case the immigrants are sending back money in foreign currency and adding to the countries funds and also going with an intention of returning.

Shishir Srivastava (2008) has depicted in his article titled "Is brain drain still affecting India?" that India has become the outsourcing hub of the world, where all international companies are also setting shop. But this outsourcing has also meant that the talented bunch of students, who cannot find good job opportunities in India have to travel abroad in search of better job profiles. More than 25 percent of the medical staff in America and the Britain consists of doctors, who attended medical school elsewhere. These are the

same students who got trained in India, Pakistan or China and have now moved abroad for better opportunities. In the year 2008, maximum students going to the United States of America in order to study were from India. Most of these students, after finishing their education, get recruited and settle abroad. But still brain drain continues to be a cause of concern for India, for we are getting used to thousands of students going abroad every year for education. Former Indian President APJ Abdul Kalam had said that reverse brain drain will have to begin if India is to become a developed nation in the future. But the percentage of students coming back after studying overseas is not very high and hence efforts will have to be made to reduce the number of students going out in the first place. For this, India must revamp its education system and also include more higher education institutions in the country so that students do not have to look for alternatives elsewhere. The migration of students might have helped in 'brand India' becoming more powerful, but the image of India needs to change in the future. India shouldn't just be a country that produces great talent, but also the one that nurtures and builds on it. Every Indian is proud of the fact that he is an Indian, but they have to wait for the day till they are proud of being in India.

Kamal Sinha (2009) depicted in his article about Brain Drain and IIT that one third of IIT-ians every year leave India and most of them are IT and computer professionals. Most of them are not going to come back. They will talk about it but as they get married and have children and become settled in their careers, it becomes more and more unlikely. Politicians talk about making India developed by 2020, which is not realistic. IIT-ians, in the rare cases where they go back to India, will most likely work for some non-Indian firm. Many IIT-trained Indians in the USA, have achieved business success and are determined to help India to open more technical and management schools so that more Indians can come to the USA and achieve success as they did.

Actually the labour migration concept came from in early 1950s when two Swedish economists, Gösta Rehn and Rudolf Meidner, with a strong tie to the labour movement developed a comprehensive model on migration which emphasised the crucial role of labour market policy which was including activation for growth and full employment. Firstly, Rehn and Meidner insisted upon the need for a balanced economy with low inflation related to labour movement. They said excess demand in the market must be

combated through fiscal policy while admitting quite high structural or frictional unemployment. Secondly, the trade unions should implement solidaristic wage policies between sectors to restrict the labour movement. So the labour migration from one sector to other sector would be minimized (Rehn & Meidner, 1950)

From Harris-Todaro Model (1970) we came to know some of the issues concerning rural-urban migration. The main result of the model is that the migration decision is based on expected income differentials between rural and urban areas, not wage differentials. The Harris-Todaro Model is an economic model used in development economics and welfare economics to explain some of the issues concerning rural-urban migration. The main result of the model is that the migration decision is based on expected income differentials between rural and urban areas, not wage differentials. This implies that rural-urban migration in a context of high urban unemployment can be economically rational if expected urban income exceeds expected rural income.

The formal statement of the equilibrium condition of the Harris-Todaro model is as follows:

- Let w_r be the wage rate (marginal productivity of labour) in the rural agricultural sector.
- Let l_e be the total number of jobs available in the urban sector, which should be equal to the number of employed urban workers.
- Let l_{us} be the total number of job seekers, employed and unemployed, in the urban sector.
- Let w_u be the wage rate in the urban sector, which could possibly be set by government with a minimum wage law.

Then according to Harris –Todaro Model

$$w_r = \frac{l_e}{l_{us}}w_u \quad \text{and} \quad w_r = \frac{l_e}{l_{us}}w_u$$

Rural to urban migration will take place if: $w_r < \frac{l_e}{l_{us}}w_u$

Conversely, urban to rural migration will occur if: $w_r > \frac{l_e}{l_{us}}w_u$

John Harris and Michael Todaro (HT) formulated a model to explain the urban to rural and rural to urban migration. At the core of the HT model there were the following features. First, real wages (adjusted for cost-of-living differences) were higher in urban formal sector jobs than in rural traditional sector jobs. Second, in order to be hired for a formal sector job, it was necessary to be physically present in the urban areas. Third, in order to maintain equality between the expected wage associated with searching for an urban job and the expected wage associated with taking up a lower-paying rural job, the equilibrium arising in such a setting would be characterized by urban unemployment. And fourth, any temporary difference in the expected wages between one sector and another would be eroded as workers migrate from the low expected wage labour market to the high expected wage one.

Bhagwati (1979) emphasized the equity aspects of a brain-drain tax. The basic idea is that skilled migrants typically earn economic rents, given the stiff immigration restrictions in developed countries, coupled with the relatively high returns to skill available there. The rationale for taxing these rents then follows from the usual equity arguments behind progressive taxation – arguments that are consistent with the welfare calculus of modern welfare economics. Of course, there remains the issue of why it should be the country of origin that subjects emigrants to its progressive tax? Bhagwati (1979) emphasises the

increased mobility of highly-skilled individuals, coupled with their tendency to retain their national status and associated rights, often including the right to vote.

K Lakishmaiah Naidu (1991) had stated the scenario of Indian Labour Migration to Gulf countries. Migration of workers to other countries is not new in India. The pattern and implication vary from time to time. Over the past one hundred years, or a little more there have been a few major waves of emigration. Migration from India on a significant scale began within the colonial era and continued after independence. In retrospect, it is possible to discern two waves of international labour migration within each of these periods. A yearwise analysis of migration of Indians to Gulf countries shows that the figure though small-42,000-in 1976 increased quite rapidly through the late 1970s and reached a peak level of more than 2, 72,000 in 1981 after which, it declined slowly until 1986. The annual outflow would have been therefore, on the average around 1, 07,000 during 1976-80, 2, 14,600 during 1980-85 and 1, 15,500 during 1985-87. According to Nair the average annual outflow was 28,500 during 1971-75, 67,500 during 1975-81 and 2, 20,000 during 1981-83. But it might be an underestimate as the annual outflows were calculated from the stock figures of workers for different years. More than 90 percent of the migrant population from India had gone to Gulf countries alone. It would appear that unskilled workers constituted 40 percent of the total labour outflows from India, skilled workers accounted for somewhat less than 50 percent while white collar workers and high skill workers made up a little less than 5 percent each. Saudi Arabia, Oman and the United Arab Emirates in that order of significance, were the main recipient countries for Indian migrants. The annual flow of Indian migrants to these three countries taken together, accounted for 61.2 percent in 1982, 72.4 percent in 1983, 78.3 percent in 1984, 79.8 percent in 1985 and 80.3 percent in 1986. The destinations for the rest of the migrants were Bahrain, Kuwait, Iraq, Qatar and Libya. It appears that the growth rate of Indian population in Gulf countries would have been therefore 18.46 percent per annum during 1975-79, 25.5 percent per annum between 1979-83 and 1.12 percent per annum during 1983-87. On the whole, the size of the Indian population in Gulf countries increased at a growth rate of 14.67 percent per annum on an average over the period 1975-87.

Amitabh Kundu & Shalini Gupta (1996) have done a study on migration, urbanisation and regional inequality where they have stated that the process of globalisation is increasingly breaking the economic barriers to trade and investment in the direction of making the national production systems a part of the global economy. Capital can move to any country and commodities can be produced anywhere seems to be the guiding principle. Natural resources can also be transported over long distances for being processed without prohibitive cost. Indeed, several multinational companies and individual entrepreneurs are producing commodities in the less developed countries at a low cost using their cheap labour and other natural resources. The process, it is hoped, would, through its multiplier effects usher in industrial development in these countries. However, for the process to work, the governments are expected to provide transparent and stable administration, maintain law and order and create a congenial and competitive economic environment. The state, it is argued, should thus facilitate entrepreneurs in taking their own decisions regarding output and employment mix, location, export, import, appropriation of profits, etc. Of course, some of the small entrepreneurs expect governments to provide certain infrastructural facilities and basic amenities. The big companies are, however, often willing to undertake this responsibility themselves, in exchange of long-term agreements or for certain special fiscal and administrative concessions. The emphasis is, thus, on production activities being allowed to move to the areas where the labour and natural resources are unutilised or underutilised. The underlying assumption seems to be that it is far more difficult and costly to move labour to centres of production and make appropriate provision for them rather than shifting the production base. Economic liberalisation is, thus, expected to reduce economic inequality at the global level through acceleration of growth in less developed countries which, in turn, would reduce their outmigration of labour.

A. Aneesh (2000) had done a study on high-skilled labour flows from India to the United States since the 1980s. The information technologies have triggered extensive transformations in production and work. These changes not only influence how work is organized within national boundaries; they also have global ramifications. On-line virtual labour across national spaces provides a new angle to explore this global shift and informs debates that transcend the site and nature of this specific work practice. With no ready grasp of the practice, online labour is too easily inserted into old schema and codes

of understanding. It is ascribed either to the trade schema of “export/import” or to the organizational schema of “sub-contracting” and “outsourcing,” missing the complex interconnections of new practices with a multiplicity of processes, such as labour migration and mechanisms of national bureaucracies. The metamorphosis of work into something that can be performed at a distance and delivered on-line is structurally dependent on distinctive features of information technologies. Using this understanding of the new technologies, this paper has sought to free the discussions of labour migration from the confines of the body. This enables us to see how the globalizing forces themselves can potentially produce localizing effects by helping confine labouring populations in their national territory. With newly gained flexibility in labour supply, contemporary capitalism seems to have resolved two major problems: First, corporations can avoid to a degree confrontation with the nation-state on the issue of alien immigration, for they can harness foreign labour online without a visa, bypassing the always opposed nationalist politics of culture. In contrast to physical migration, where humans also come with the labour, demanding tolerance for cultural difference, education for their children, a possible long-term settlement, and general social security from the affluent society, virtual labour flows do not require alien humans to join the new nation. Second, the invisibility of virtual labour help U.S. corporations avoid to an extent the possible charge of preferring immigrants to citizens in terms of employment and job creation for the society in general.

Lately, a large demand and influx of IT (information technology) workers has forced the debate to enter the high-skilled domains of employment, as reflected in various media discussions. While the corporate world has continuously pressed the national government to relax the quota on labour immigration, arguing from the viewpoint of the shortage of IT labour, upward wage pressure, and competitive advantage (e.g., Gleckman 1998; Moschella 1998), others fear that such immigration will take the high-tech jobs away from native born Americans and lower their wages (e.g., Archey and Matloff 1998; Matloff 1995 & 1996). To illustrate the practical consequences of such debates, US Congress imposed a quota in 1991 to allow only 65,000 temporary workers on H1-B visa to enter the country annually. The cap was part of a larger scheme to stem the flow of immigrants. In 1997, when the limit of 65,000 was reached before the end of the year, it triggered a divisive debate in 1998—under the pressure of an increased demand for high-skilled IT labour in a booming information economy—about whether the limit should be

raised. The intensity of the debate is reflected in various bills that were introduced, defeated, revived, passed, and rewritten between the House of Representatives, the Senate, and the White House. The final bill that was enacted allowed 115,000 foreign workers to be granted visas for fiscal years 1999 and 2000; the number of visas would first drop slightly in 2001 and then revert to 65,000 in 2002. This American Competitiveness and Workforce Improvement Act of 1998 also required employers to pay a new H-1B worker fee of \$500 in order to fund training and educational programs for U.S. workers. The 115,000 visas allotted for the fiscal year 2000 were exhausted in March 2000. The pressure on the government is so intense that there are a number of bills pending or stalled in Congress that propose to raise the cap further and more significantly. These debates on the future of immigrant IT labour will need to be reformulated, as this study makes visible the redundancy of border patrol against IT labour flows even as it confirms its strength against the flow of the bodies, i.e., physical migration. Using high speed datacom links, programmers based in their national territories can work on-line and in real time, on computers situated anywhere in the world, thus obviating the need for either labour or corporations to undergo the tedious process of physical migration. With an inquiry into the above practice, this study integrates the macro questions of transnational capitalism, migration, and the nation-state to the micro practices of software work conducted at a firm level. This study views emerging on-line labour as part of the common move in contemporary capitalism to tap globally dispersed labour in a more flexible manner, it departs from general literature in some important ways. First, on-line labour has very limited direct, physical, face-to-face contact with corporations in the United States. Second, on-line work cannot be understood as merely transnational in character, as it takes place within the bounds of nations. For instance, programmers in India, while indirectly working for U.S. corporations, still carry a single, unambiguous national identity unlike immigrant programmers who physically work in the United States. Third, programmers based in India are also governed by local practices of employment, taxation, and labour regulations. They do break national barriers by directly occupying some employment space in concerned sectors of the U.S., like other immigrant workers. In short, they migrate without migration, called "virtual migration." The concept of virtual migration recognizes that the programmer sitting in India can actually access a computer in the United States, work on it and implement changes. Such invisible and disembodied

processes of labour supply may add a new dimension to literature on labour migration. This study results from 50 formal interviews (35 in India and 15 in the U.S.) and an almost similar number of informal conversations with software professionals and executives in India and the U.S. For long interviews, programmers were selected through snowball sampling while higher-level executives were selected by contacting all the firms located in Delhi, Noida, and Gurgaon, listed by Nasscom in its directory of software firms. The response rate of higher-level executives was about 25 percent. Interviews were mainly conducted in two languages: Hindi and English. This field research opens up an avenue of analysis whereby both physical and virtual migration of labour may be treated as parts of the same labour regime.

Nicole Haggerty & Scott Schneberger (2000) have done a study on an analysis of the Canadian Information Technology labour market. In this study in spite of information technology labour market shortages over the past 15 years, some Canadian government reports give no evidence of an IT labour shortage now or in the near future. This paper examines these conflicting reports by discussing them in the context of labour economic theory. The results support the notion of a national IT labour shortage relative to the general Canadian labour market and they highlight deficiencies in IT labour market information. Policy implications of the findings are discussed.

Piyasiri Wickramasekara (2002) stated that with globalisation trends, the emigration of highly skilled persons from developing countries has significantly increased. The implication of this movement of skilled labour (termed as “the brain drain”) has emerged as an important issue of international debate in recent years. The objective of the paper is to look at different possible policy responses which can minimise its adverse effects, and which can promote the sharing of gains between source and host countries. The paper focuses on three policy approaches: retention, return and circulation of skills. It argues that the best strategy to deal with the problem of loss of skilled labour is one based on the concept of circulation of skills, which yields mutual benefits for both sending and host countries. The paper highlights several measures that can facilitate the process of circulation, including greater cooperation between countries of origin and host countries than observed at present. International migration suddenly became a key issue in international politics at the beginning of the 1990s, when the breakdown of the bi-polar

power constellation of the Cold War seemed to have opened the floodgates for vast new population flows. Right-wing politicians and sensationalist media conjured up images of welfare states being 'swamped' and national identities being undermined by mass movements of impoverished people from East to West and South to North. Governments responded with tight border restrictions and international control measures such as the Schengen Agreement. In the meantime, exaggerated fears have died down, but issues of migration regulation and the effects of migration on both sending and receiving societies remain prominent in political and academic discourse.

This study Wickramasekara (2002) stated the causes of migration where migration research has focused on the causes of migration. These debates cannot be summarized here, but clearly are central to any assessment of likely future. However, it seems to me that, despite major conceptual differences, all the major theories lead to the conclusion that migration is likely to grow. Demographic explanations point to the structural disparities between areas with stagnant economies but high rates of fertility, and areas with fast-growing economies but declining fertility (Hugo, 1998). The most dramatic case is Western and Southern Europe, where total fertility rates have fallen as low as 1.2 children per woman - far below the number needed to reproduce the population. The result is a rapidly aging population and a lack of people of working age, leading to severe labour shortages, particularly in low-skilled jobs. Just south across the Mediterranean are the countries of North Africa with their high fertility, rapid rates of labour force growth, and lack of jobs for the new entrants. The result is strong pull and push factors, encouraging young workers to migrate northwards, despite the legal barriers put up by 'fortress Europe.' Japan is a similar case: the collapse of fertility and the aging of the population make restrictions on overseas labour recruitment hard to sustain: who will do the '3-D jobs' (dirty, demanding and dangerous) if foreign workers are not allowed in? Recent debate on the need for foreign women workers for aged care indicate that restrictions may soon be revised (Hirano et al., 2000). Neo-classical economics - which has had a dominant influence on migration policy in many Western countries - focuses on individual expectations.

Sodeinde Olakunle Olufemi (2002) in a famous study on Globalisation, Migration and Brain Drain: The Experience of Olabisi Onabanjo University, Nigeria stated that globalisation was considered as a modern instrument of easy flow of labour and capital without restriction across the globe. Its impacts on intellectual transferred from Olabisi Onabanjo University, Nigeria. Olabisi Onabanjo has been experiencing depletion and degradation of academic growth in alarming rate due to academic staff outflow within or outside the country. Globalisation simply reflects a growing interdependency of the world society. Globalisation could be viewed from two different perspectives. The first view of globalisation was used to refer to 'timespace compression'. The idea is that, there is a close link with the development of new communication technologies. The invention of modern satellite television and information technology is the major intriguing factor that initiated recent information society. The perspective of globalisation in this first context explains the interrelationship between local space and global space.

The second usage of the concept globalisation refers to incorporation of different people, culture, nation and society into one identifiable system. That is, integration of different parts of the world into a global system and each part being affected by what is happening elsewhere. Most professionals travel between rich countries or from poor countries to rich, and as with unskilled workers, the main motivation for professional migrants will be to increase their income (Ong, Chang and Evans, 1992:557). For instance, in a developing country like Manilla, in 1991, a staff nurse would get only \$146 per month, while she could earn around \$500 in the Persian Gulf and \$3,000 in the United States (Asia week 1991). Migration of professionals, however, is not only induced by salary disparities but also by the opportunities to develop their careers and keep abreast of their chosen field of knowledge.

E. Xideas (2003) formulated a theory which is represented in brief.

- Within this theory migration is viewed in a cost – and – returns framework, such that for an individual to migrate his expectations must be that the costs of migration are equal or less than the difference in the present discount values of the streams of benefits in the source and receiving areas.
- Within this theory migration is seen as a function of:

$$m_{ij}(t) = F \left[\frac{V_j(t) - V_i(t)}{V_i(t)} \right], F' > 0$$

where:

$m_{ij}(t)$ labour migration from area (i) to area (j) in period (t).

$V_j(t)$ discounted present value of the expected real income stream over a worker's planning horizon in area (j).

$V_i(t)$ discounted present value of the expected real income stream over worker's planning horizon in area (i).

Many previous studies of migration have used multiple regression techniques as a means of summarizing patterns and evaluating hypotheses.

These are appropriate in situations where the values of one variable are considered to be dependent on those of two or more others and allow the researcher to assess the effect on the dependent variable of changes in each independent one whilst holding the others constant.

The type of regression most commonly used in studies of migration is that known as Ordinary Least Squares (hereafter referred to as OLS). In this the predicted value of the dependent variable is given by the equation:

$$\hat{y}_i = \beta_0 + \sum_{j=1}^k \beta_j x_{ij}$$

where \hat{y}_i is the predicted value of y in case i ,

k is the number of independent variables;

x_{ij} is the value of the i 'th observation on the j 'th independent variable;

β_0 is the intercept, the value of y when each independent variable equals zero;

β_j is the amount by which y changes when the value of the j 'th independent variable increases by one unit and those of the others are held constant.

Shinu Singh (2003) examined the role of return migration of highly skilled I.T. workers from the U.S. to India and their economic impact on India. Currently, the globalisation debate is largely overlooking the massive impact that international migration has on the sending country from the loss of intellectual capital to the gain of remittances, social capital, and transfer of knowledge. This paper focuses on one aspect of international migration return and circular migration- to highlight one group of return migrants to India from the U.S., who bring more than just remittances. We assume that this subset of migrants brings back social capital, savings, managerial skills, and market knowledge, which can have developmental consequences for India. This study also stated that the economic, political, and social impacts of international migration on the receiving country have been widely studied, yet the effect on the sending countries is just beginning to emerge in the globalisation debate. In 2000, India received almost 12 billion U.S. dollars from its diaspora abroad. However, nationals abroad send more than just remittances back home, they create social networks that transfer information and knowledge to their countries of origin, which can increase productivity and growth. Therefore, the governments of sending countries have incentives for gaining a better understanding of the actual affect of the out migration of its most educated citizens and design immigration policies informed by a better understanding of costs and benefits of current and future migration trends. This study explores the economic impacts of one specific flow of migration, namely return migration, on the sending country. In particular,

return migration of highly skilled workers in the information technology (IT) sector is studied because their emigration represents large losses to the sending country. Jagdish Bagwati proposed a model of “brain drain” the migration of the most educated persons from developing countries to advanced industrialized countries. He demonstrated how this hurts the sending countries’ economies since scarce national resources are spent to educate these individuals, who in their most productive years work abroad. Developing countries are losing their most educated and those with high innate human capital, since they are the ones most likely to take the risk of moving abroad. India has been producing high numbers of educated and skilled workers. This, in conjunction with the high quality and cost-effective services, has produced a vibrant environment for the high-tech industry to flourish through domestic entrepreneurship and multinational corporation (MNC) foreign direct investment and outsourcing (NASSCOM, 2002). This environment of growth and opportunity has attracted many NRIs back to India especially after the economic downturn in 2001.

The journal of United Nations Department of Economic and Social Affairs Population Division (2003) stated that the *2003 Revision of the Total Migrant Stock* indicates that the number of international migrants in the world increased from an estimated 75 million in 1960 to almost 175 million in 2000. In 1991, the break-up of the former Union of Soviet Socialist Republics (USSR) gave rise to a discontinuity in the growth of the migrant stock as persons living in the newly independent successor States but born in another of those States became international migrants at the time of independence without having actually migrated then. This change resulted in the addition of some 27 million persons to the international migrant stock, an addition that was backdated to 1990 so as to make the 1990 figures comparable with those for 2000 in terms of the number of countries covered.

Dr. Stephen Bach (2003) had done a study which provides an overview of existing information on the migration of health workers, with an emphasis on related social and labour issues. It considers trends in migration, the working conditions of migrants, migration policies and recruitment practices, the impact of international standards and trade agreements on conditions of migrant health workers. The study also outlines policies and practices associated with more socially acceptable forms of managed

migration. It focuses on nurses and doctors, who have been in the forefront of current debate about health worker migration. The paper demonstrates that governments and employers have a key role in the migration of health workers. In all countries a higher profile for human resource management in the health sector would not only improve some of the “push” factors that encourage migration, but also reduce the shortage of health professionals that underpins increased international recruitment. It is an indictment of governments and employers that they prefer to rely on the relatively straightforward panacea of international recruitment rather than focusing on underlying problems of pay and working conditions. Improvements in these areas would ensure increased recruitment and retention amongst the existing health sector workforce.

Governments and employers should do more to safeguard and improve the working conditions of migrant health workers by ensuring the ratification and enforcement of ILO Conventions. When state authorities use policies of international recruitment, the detrimental impact on source countries should be minimized by focusing on regulated, managed migration. Professional associations and trade unions also have an important role in making migrant workers aware of their legal rights, monitoring and documenting abuses, and ensuring that the welfare of migrant workers is seen as a priority by employers and Govt. agencies.

C.P.Chandrasekhar (2003) stated that the growth of India's Information and Communication Technology (ICT) sectors, especially the IT sector. He elucidated the picture of Indian IT industries and its business. The wake of liberalisation significantly changes the structure of the IT industries. Liberalisation has resulted in the gradual conversion of some premium producers into domestic sales agents for international firms. In IT-related services it is the 3 export market that provides the real opportunity. As revenues from IT services in the domestic market are currently close to a fifth of that from the export market, and the ratio of domestic revenues to export revenues fell from 42 percent to 22 percent between 1998-99 and 2001-02.

Bandana Purkayastha (2003) has done a study on skilled migration and cumulative disadvantage: the case of highly qualified Asian Indian immigrant women in the US. A very little work has been done on female migrants, especially those who migrated as dependents of highly skilled males. This paper presents some data on Asian Indian

women in the US, and argues that these women suffer from cumulative disadvantage. The paper emphasises that it is necessary to adopt a complex model involving the interaction of gendered/racialised immigration laws, workplace and household experiences in order to understand the experiences of these women. From this study it is known that women migrate both as workers and as wives under family reunification clauses. However little attention has been paid to what migrating as wives mean for women, especially for women with high human capital. This group remains relatively invisible within the literature on skilled migration; little attention is paid to whether these women change their status from dependent wives to workers, whether or not their jobs actually remain secondary to their primary roles as wives, and under what structural conditions such changes take place. In short, the gender sensitive literature emphasises the need to look beyond the existing theoretical gap between “skilled migrants” (who are assumed to have the education and training necessary in modern white-collar work places) and wives (who are assumed to be primarily a part of the domestic sphere). This paper focuses on one such group of ‘wives’. It examines the experiences of a group of highly educated women from India who migrated to the US after 1965 under family reunification clauses. It traces their attempts to re-establish their careers and illustrates how these women, who migrate with at least a bachelor’s degree, are affected by cumulative disadvantage. Gender/race hierarchies at the national level (e.g. within immigration laws) intersect with barriers within workplaces and households and affect these women negatively as they attempt to rebuild their careers. The experiences of these women also draw attention to the need to examine current conceptualization of skilled migration.

Ron Hira (2004) in his study on U.S. immigration regulations and India’s information technology industry stated that United States employs a variety of visa categories to admit foreigners for business, pleasure, study, work, or immigration. A basic introduction to work visa categories is presented first. Next, an analysis of longitudinal data for key visas shows that workers of Indian origin have been the primary beneficiaries of temporary worker visas. Foreigners entering the United States must apply for and be granted a visa by the Bureau of Citizenship and Immigration Services (BCIS), formerly the Immigration and Naturalization Service. The BCIS is an agency in the newly created Department of Homeland Security. The purpose of a foreigner’s visit dictates the type of

visa issued. Foreigners must also meet certain criteria to qualify for the visa. EB is an employment-based visa for permanent immigration to the United States and has an annual cap of 140,000. Employers that wish to sponsor an employee must ensure that qualified Americans are not available to fill these positions and that immigrant admissions will not adversely affect the wages and working conditions of U.S. workers. The Department of Labour (DoL), US Govt. reviews the applications for compliance. O is an extraordinary ability visa reserved for foreigners who demonstrate extraordinary accomplishments. The BCIS generally consults with employee organizations or peer groups in the United States to verify the petitioner's claims. There is no significant advantage for the IT industry to use the O visa instead of others described below. TN is the North American Free Trade Agreement (NAFTA) Professional visa that allows Canadian and Mexican professionals to work temporarily in America. IT employers recruiting Canadian and Mexican technical talent may find the TN visas more flexible to use than other categories. H-1B is a temporary worker visa issued to employers to hire specialty occupation workers. A specialty occupation is a position that requires the theoretical and practical application of highly specialised knowledge and skills and, at least, a bachelor's degree. The H-1B visa has been the category most closely linked to the IT industry. From this study we get some other aspect of Indian IT professionals like why would an Indian H-1B worker accept a lower salary than that of a comparably skilled American? Salaries for IT workers from India are significantly lower than in the United States, thus, salary expectations are lower. Moreover, many Indian H-1B workers prefer to live in the United States, a nonmonetary benefit that compensates for a lower salary, and some companies promise the possibility of permanent immigration. While the cost of living in the United States is higher than in India, the H-1B's perception of his or her net pay is influenced by the substantial differences in purchasing power parity (PPP), an international cost of living index, between the United States and India. The World Bank has calculated a PPP of approximately 0.2 between India and the United States, which means that US\$10,000 in India has the same purchasing power as US\$50,000 in the United States. This PPP differential amplifies any savings by the Indian H-1B workers by a factor of five

Parvati Raghuram (2004) has stated that skilled migration is rapidly becoming one of the major components of migration streams in many parts of the world. Canada , Australia , New Zealand and the UK have all opened up immigration for the highly skilled and are increasingly selecting migrants on the basis of their skills .Towards the end of the 1990s and particularly between 1999 and 2001, one of the biggest reasons for the liberalization of migration of the skilled arose from pressures generated in the information technology (IT) sector and the recognition of the importance of attracting knowledge workers in order for states to remain economically competitive . Through the end of the 1990s, there were large increases in the number of work permits issued to this sector and facilitating migration to the technology sector came to be seen as one way in which the state is responding to global processes. Despite this, there have so far been very few studies (outside the US) that have focused on the specific issues facing IT migrants .Moreover, the little research that addresses the role of IT migrants in the global economy has either been gender neutral or has focused on the experiences of male migrants despite recognition that women now form an increasing part of international skilled migrants. This is a reflection of two intersecting problems, the focus on male skilled migration streams and the dominance of men in information technology sector both in domestic labour markets and in skilled migration streams. As a result, there is little research so far on the experiences of migrant women in the information technology sector.

Globally, India has become a prevailing supplier of IT professionals and about 70,000 H1B visas were offered to IT specialists from India during 1995-2008 every year. In 2001, India overtook the US as the recipient of the largest number of UK work permits (Work Permits, UK). In 2000, 19.7 percent of work permits granted by the UK went to the computer industry recording a six fold increase in numbers between 1995 and 2000 .Moreover, a number of the IT professionals from other sending countries such as the US and South Africa are also of Indian origin .

In this article she explored some issues facing Indian women migrants in the IT sector in the UK. The paper is located at the intersection of two debates: that on skilled migrants to the IT sector, and that on gender and IT. While the former has largely ignored gender issues, the latter has concentrated on gender but failed to adequately place it within the complexities of the migrant labour market. For instance, one factor that has been little considered in discussions around the under-representation of women in the IT sector is the extent to which the IT industry is structured towards career flexibility and job

mobility and the implications this has for women who seek work in this sector. This article aims to highlight the ways in which mobility conditions some parts of the IT sector, and the ways in which women negotiate this hyper mobile landscape of work. The insights presented here are informed by research undertaken as part of two projects, one in the summer of 2001 and the other in summer 2003. It is increasingly recognized that qualitative methods have much to offer migration research. This project aimed to specifically explore the intersection of labour market structures, immigration regulations and household formations, the wider social structures in which IT migrants were embedded, alongside the decisions that the migrants made so the study primarily utilized qualitative methods.

A study done by Eileen Trauth (2002) in analysis of women in IT industry, in Australia and New Zealand where she stated some individual factors which were influencing women in the IT sector. The individualistic approach that she adopts offers three advantages at this stage in the discussion on gender selectivity in the IT industry. First, it helps to bring to light new factors that have been little considered so far. Secondly, focusing on individual cases offers this study a better understanding of the interplay of different factors affecting women's participation. Finally, the individualistic analysis can enable us to understand women's agency in negotiating the structures offered by the labour market. Our approach draws too on a small number of individual case studies for these reasons. The first project in 2001 focused on the labour market conditions influencing IT migrants to the UK and towards this six key persons involved in the recruitment of such professionals were interviewed. An interview was conducted on the migration and labour market condition. The interviewees were the following: two managers of a major international recruitment firm (Mr. TW and Mr. LS), the skills editor of the principal computing magazine (Ms. RF), the manager of an Indian recruitment firm (Mr. BT), the director of the trade association representing this sector (Mr. TC), and the regional director (Mr. PP) of a key Indian computing consultancy firm. The last firm has wide operations across the globe, and has membership in the skills panel that advises the UK government on recruitment issues within this sector. These in-depth interviews offered a way of understanding the labour market conditions into which migrants were entering and the ways in which IT labour markets achieve flexibility through the use of migrant labour. Issues facing IT migrants, particularly those from

India and those effecting women were also addressed. The second project in 2003 involved 2 hour interviews with four migrant women and four migrant men working in the IT sector in a Midlands city in the UK. These interviews enabled how women and men operate within the flexible labour market and how they negotiate the migration process. There are some debates on gender issues as they pertain to technology have excited considerable interest amongst academics and policy makers. Broadly, writing on this topic may be divided into that which explores women's use of IT and that which examines their contribution to the IT labour force. The first has focused on enabling women to access IT, both to improve their daily life and in order to address gender inequities in the public and private spheres. However, attempts have also been made to prevent women from simply being cast as users of technology but rather to enable them to engage constructively as producers in the IT industry. Some researchers have attempted to combine these perspectives to see whether participation in the IT labour force can qualitatively enrich work for women, thereby undermining traditional gender based disparities within the workplace. Finally, attempts have also been made to think about how a gender sensitive agenda might influence IT .The shortage of skilled IT workers along with the recognition that IT skills play a major part in economic growth sparked governments of some European and North American governments to encourage wider participation of women in this sector. The problem of the small and shrinking numbers of women in IT was particularly noted and led to the commissioning of a number of studies. Gender disparities were found to be significant in a number of countries. For instance, in 2000 in the UK women formed only 8 percent of software engineers and 21 percent of computer analysts and programmers. The number of women in IT jobs was also declining, with a 3 percent drop in the number of women employed in the sector between 1995 and 2002 (from 25 percent to 22 percent). In software engineering women only accounted for 8 percent of the workforce in 2002 while European women only account for 6 percent of networking professionals. In the US too there has been a masculinisation of the labour force in this industry over the past decade so that now only 27 percent of computer/mathematical scientists and 26.39 percent of computer/information scientists are women. Gender disaggregated data by sub-sectors also highlights the relatively small proportions of women in certain parts of the IT sector. For instance, in India there were 522,000 software and service professionals at the end of 2001–2002 but here too the industry is male dominated although the numbers of women

employed as software professionals vary across different regions, different urban centers and from company to company. NASSCOM's manpower resource survey of 2001–2002 suggests that 79 percent of software professionals are men and only 21 percent are women. In India software engineering has proved to be more open to women than any other field of science and engineering with many companies actually preferring to recruit women as the attrition rate is lower than that among men. As a result, NASSCOM predicts that the proportion of men in the workforce is likely to reduce to 65 percent by 2005 (NASSCOM, 2003). However, Indian women in the IT industry too face a number of issues that need addressing as shown by their under-representation in the field. identify a number of reasons for the gender gap in IT employment including gender differences in attitudes to computing, the pressures of work family balance, and the lack of a female friendly environment.

Brenda S.A. Yeoh (2004) had done a study on transnational Labour Migration Flows Entering Singapore which states that the two main flows of transnational foreigners attracted to Singapore are one, skilled professional and managerial workers in high-end positions, and two, low-skilled contract labour.

The unskilled/low skilled foreign worker population – numbering about half a million, mainly Filipinos, Thais, Sri Lankans, Malaysians, Indians, PRC Chinese and Indonesians – are concentrated in the construction industry (about 200,000), domestic maid services (about 140,000) and the remainder in service, manufacturing and marine industries. The high demand for these categories of workers reflects not only the low wages (well below the national norm) accepted by these workers, but also the reluctance of Singaporeans – even during times of economic recession – to fill jobs that require manual labour or shift work .Brenda found out the causes why the people from different countries are coming to Singapore? What are the reasons behind it?

Christopher R Parsons et al., (2005), has done a study which presents five versions of an international bilateral migration stock database by 226 countries. The first four versions each consist of two matrices, the first containing migrants defined by country of birth i.e. the foreign born population, the second, by nationality i.e. the foreign population. Wherever possible, the information is collected from the latest round of censuses (generally 2000/01), though older data are included where this information was

unavailable. The first version of the matrices contains as much data as could be collated at the time of writing but also contains gaps. The later versions progressively employ a variety of techniques to estimate the missing data. The final matrix, comprising only the foreign born attempts to reconcile all of the available information to provide the researcher with a single and complete matrix of international bilateral migrant stocks.

Ron Skeldon, 2005 stated that the debate on the 'brain drain', or the emigration of skilled workers, is not new but it has taken on greater urgency in the context of a globalizing economy and ageing societies. Today, the developed world is perceived as poaching the best and the brightest from the developing world, thus prejudicing those countries of their chance of development. This paper starts with two guarded caveats: first, that any brain drain is as much internal within any country as it is among countries and, second, that the skilled migration system should not be seen in isolation from other types of migration. The paper reviews the data available for the analysis of skilled migration and identifies the main global trends. It goes on to examine the globalisation of education and of health as reflected in the movement of students and health personnel. Large numbers of people from developing countries are being trained overseas and, of those trained at home, many cannot be absorbed productively into their economies of origin. The paper examines the case for a two-tiered health training system, one for global markets and the other for local markets. Retention and return of the skilled are examined through the potential for outsourcing in both education and health care. However, the association between the presence or absence of health personnel and the health status of a population is seen as simplistic. The paper concludes with an examination of policy contradictions within the global system towards skilled migration and offers pointers towards a more integrated approach.

Ron Skeldon (2005) has done the study on Globalisation, Skilled Migration and Poverty Alleviation: Brain Drains in the context of the debate on the 'brain drain', or the emigration of skilled workers. This concept is not new but it has taken on greater urgency in the context of a globalising economy and ageing societies. Today, the developed world is perceived as poaching the best and the brightest from the developing world, thus prejudicing those countries of their chance of development. This paper starts with two guarded caveats: first, that any brain drain is as much internal within any country as it is among countries and, second, that the skilled migration system should not be seen in isolation from other types of migration. The paper reviews the data available for the

analysis of skilled migration and identifies the main global trends. It goes on to examine the globalisation of education and of health as reflected in the movement of students and health personnel. Large numbers of people from developing countries are being trained overseas and, of those trained at home, many cannot be absorbed productively into their economies of origin. The paper examines the case for a two-tiered health training system, one for global markets and the other for local markets. Retention and return of the skilled are examined through the potential for outsourcing in both education and health care. However, the association between the presence or absence of health personnel and the health status of a population is seen as simplistic. The paper concludes with an examination of policy contradictions within the global system towards skilled migration and offers pointers towards a more integrated approach.

Graeme J. Byrne and Lorraine J. Staehr (2005) had done a study and the purpose of this paper is to assess the status of women in the IT industry in 2001 relative to their position in 1996 and in comparison to their status in other industry sectors. To achieve this a special tabulation of 2001 and 1996 Australian census data relating to women's position within the Australian IT industry was analysed. The issues of participation, pay equity and representation at senior management levels were examined. This reveals a fairly negative picture and indicates the need for an intensified effort to rectify the situation. It is shown that women participate in the IT industry at much lower rates than women in many other industries and that they have not achieved pay equity with men. Also, women are not well represented in senior management roles.

The Australian government has legislated in an attempt to secure equal opportunity for women in the workplace. The Federal Equal Opportunity for Women in the Workplace Agency was established in 1986 (EOWA). This agency administers the Equal Opportunity for Women in the Workplace Act 1999. The Act requires companies with 100 or more employees to establish a workplace program to remove the barriers to women entering and advancing in the workplace and to report regularly to government. The sanctions for noncompliance are that the company will be named in parliament and the company will be ineligible to tender for government contracts and industry assistance. Companies with particularly good policies are eligible to win awards and have their

names publicized in the media, providing incentives for companies to have woman-friendly workplace policies. Currently the requirement is only to have policies in place but there is no compulsion for companies to ensure that the policies are actually achieving benefits for women. The main purpose of this paper is to report on the status of women in the Australian IT industry. A special tabulation of Australian census data for 1996 and 2001 is examined, focusing on women's participation and remuneration in the IT industry. Much of the evidence in the literature for the low participation rates of women comes from sample data. Although there will be some inaccuracies (~1 percent), census data is far superior to sample data where errors are often much larger (5 to 10 percent). In addition the data used in this paper are disaggregated to the individual occupation level. Although some data are available for 1991, it is not possible to match occupation groups from this census to those in the 1996 and 2001 censuses due to changes in definitions and so 1991 data are not considered. In this paper the best quality data available to date are used due to the revised Australian Standard Classification of Occupations (ASCO) codes. This allows for a much more detailed examination of specific areas within the IT sector so the true extent of the problem can be highlighted. In the following sections the nature of the data is described, data analysis with an integrated discussion is presented, followed by some concluding remarks.

C. Rangarajan (2006) has stated in his study titled 'Responding to Globalisation: India's Answer' that the term 'globalisation' means integration of economies and societies through cross country flows of information, ideas, technologies, goods, services, capital, finance and people. Cross border integration can have several dimensions – cultural, social, political and economic. In fact, some people fear cultural and social integration even more than economic integration. The fear of "cultural hegemony" haunts many. Limiting ourselves to economic integration, one can see this happen through the three channels of (a) trade in goods and services, (b) movement of capital and (c) flow of finance. Besides, there is also the channel through movement of people.

Changes in the foreign trade and foreign investment policies have altered the environment in which Indian industries have to operate. The path of transition is, no doubt, difficult. A greater integration of the Indian economy with the rest of the world is unavoidable. It is important that Indian industry be forward looking and get organized to compete with the rest of the world at levels of tariff comparable to those of other developing countries. Obviously, the Indian Government should be alert to ensure that Indian industries are not the victims of unfair trade practices. The safeguards available in the WTO agreement must be fully utilised to protect the interests of Indian industries.

Indian industry has a right to demand that the macro economic policy environment should be conducive to rapid economic growth. The configuration of policy decisions in the recent period has been attempting to do that. It is, however, time for Indian industrial units to recognise that the challenges of the new century demand greater action at the enterprise level. They have to learn to swim in the tempestuous waters of competition and away from the protected waters of the swimming pools. India is no longer a country producing goods and services for the domestic market alone. Indian firms are becoming and have to become global players. At the minimum, they must be able to meet global competition. The search for identifying new competitive advantages must begin earnestly. India's ascendancy in Information Technology (IT) is only partly by design. However, it must be said to the credit of policy makers that once the potential in this area was discovered, the policy environment became strongly industry friendly.

Over a wide spectrum of activities, India's advantage, actual and that which can be realized in a short span of time must be drawn up. Of course, in a number of cases, it will require building plants on a global scale. But, this need not necessarily be so in all cases. In fact the advent of IT is modifying the industrial structure. The revolution in telecommunications and IT is simultaneously creating a huge single market economy, while making the parts smaller and more powerful. What we need today is a road map for the Indian industry. It must delineate the path different industries must take to achieve productivity and efficiency levels comparable to the best in the world.

Binod Khadria (2006) has done a study on Skilled Migration to Developed Countries and Labour Migration to the Gulf and it reveals that after 1992, it was the relatively less noticeable route of temporary migration that started to become predominant. The 1990 Amendments, brought into effect in 1992, explicitly favoured the building up of the human capital capabilities of America by fulfilling its current and future requirements of highly skilled knowledge workers, finally bringing to relevance the immigration of Indians to the American labour market needs. Whatever few restrictive clauses these amendments had, like the introduction of a new definition for the highly skilled temporary workers, viz., the well-known nonimmigrant H1-B visa category, with an annual cap of 65,000 visas per year worldwide, the US Senate had to clear a bill for a limited expansion of these visas to 337,500 for the three-year period from 1999 to 2001. This was because the US had faced a decline in key undergraduate science degrees, an acute shortage of staff in high technology industries like software development, and exhaustion of the worldwide annual quota of H-1B visas too quickly in 1998, with 42 percent (or two out of every five visas) being issued to Indian IT software professionals. After 2001, when the number of H-1B visas issued to Indians went down because the American immigration scenario came to be determined more by the post-9/11 security concern in the U.S. and the subsequent recession that burst the IT bubble than by its actual labour market needs, the U.S. government has been under continuous pressure of different lobby groups, including the American industry and business to increase the H1-B visa limit once again. The Socio-economic and political profile of the skilled Indian diaspora in the developed countries reflects the empowerment of the Indian migrants in the developed countries over time. Within the European Union (EU) – the largest economic entity in the world today – two-thirds of the entire Indian migrant community still resides in the UK. The Indian community is one of the highest-earning and best-educated groups, achieving eminence in business, information technology, the health sector, media, cuisine, and entertainment industries. In Canada, with just 3 percent share in a population of 30 million, Indo-Canadians have recorded high achievements in the fields of medicine, academia, management, and engineering. The Indian immigrants' average annual income in Canada is nearly 20 percent higher than the national average, and their educational levels are higher too. In the east, there are 30,000 Indian citizens in Australia; and New Zealand has also witnessed a rise in the entry of Indian professional immigrants, those engaged in domestic retail trade, medical, hospitality, engineering, and Information

Technology sectors, and countries like Japan, Korea, and Singapore are also trying to attract Indian talent. These overseas Indian workers (OIWs) come mainly from the three states of Kerala, Tamil Nadu, and Andhra Pradesh, though Karnataka overtook Andhra Pradesh by a big margin in 2005. However, most of them have originated from Kerala. This had led to the establishment of a separate ministry for non-resident Keralites, and an international airport at Thiruvananthapuram. Some of the other states having sizeable number of total labour emigrants to Gulf are Karnataka, Maharashtra, Punjab and Rajasthan. The emigration clearance data gives an underestimate of Keralite worker migration to the Gulf because a person holding a graduate degree is exempt from emigration clearance, and the number of such graduates is very high among the Kerala migrants to the Gulf. Compared to all India, Kerala contributed an average of 25 percent of emigrants in 21st century, down from an average of 35 percent in the twentieth century. In other words, one out of every three or four Indians living in Gulf has been a Keralite. A preceding study conducted in 1998–99 had concluded, Migration has provided the single most dynamic factor in the otherwise dismal scenario of Kerala in the last quarter of the twentieth century... Kerala is approaching the end of the millennium with a little cheer in many of its homes, thanks to migration and the economic return that it brings. In Kerala, migration must have contributed more to poverty alleviation than any other factor including agrarian reforms, trade union activities and social welfare legislation (Zachariah et al, 2000). But, another study conducted five years later says, in the early stages of Kerala emigration, the beneficial effects over-shadowed the adverse effects. Now that Kerala emigration has come of age, secondary effects, which are not so beneficial, are beginning to appear. (Zachariah et al, 2004). One important negative effect has been the rise in unemployment rate due to education and replacement migration into Kerala from other Indian states. Emigration had a role in increasing the population with higher levels of education by boosting the willingness and the ability of the Keralite youth to acquire more education. Due to demonstration effect, a common aspiration is to emigrate to the Gulf, earn a lot of money, get married, and live happily ever after. In recent years, many countries in the Gulf have made it mandatory to have secondary level education for migrants to enter. This has led to considerable increase in the demand for secondary level education in Kerala.

Tomer Broude (2007) in his famous study has given the idea of how the factors of globalisation have the linkages with the migration of professionals. According to the regulations of WTO's General Agreement of Trade in Services (GATS), the Mode 4 is only internationally agreed legal instrument for migration and the labour migration is strongly associated with transnational differentials like wages, social benefits, skills etc. From this study we can get the effect of globalisation on migration.

Salahuddin M Aminuzamman (2007) has done a study on the migration of the Bangladeshi nurses and the broad objectives of the study are to assess the market and potential for Bangladeshi women to be employed overseas as nurses. The study has attempted to assess the trends in and potential demands for trained professional nurses in North America, Europe and the Gulf region. From this study we came to know that there is a global demand for skilled nurses, next is that Bangladesh export trained nurses to these countries as a part of its skilled and safe manpower export strategy, next is the major institutional and strategic limitations that the Nursing Training Facilities (NTF) in Bangladesh face in order to produce high standard human resources in nursing, keeping in view both national and potential international demand.

In the Conference on Global Forum on Migration & Development (2007) held in Brussels we came to know that in the world of globalised labour markets, there has been an increase in mobility of qualified and educated persons, among developing and developed countries alike. But for some countries the brain drain has become a brain gain through migrant investments, networking for contacts and projects, knowledge transfer etc. Migration however is rarely the cause for a lack of development, even if it is often blamed for negative outcomes. Migration is part of a broader development picture, and is as much a consequence of a lack of development as it is a cause of that lack of development. General development policies to stimulate economic growth, improve the rule of law and good governance can have an impact on a migrant's decision to migrate. However, a number of policies and initiatives are already in place in countries of origin and destination to specifically help to train, retain and regain skilled personnel for development. Joint approaches between governments and between public and private sectors can often ensure a better balance of interests and results.

This paper focuses on the health sector as a lens through which to examine the flows and impacts of skilled migration; and how effective policies have been to address these to the benefit of development: What incentives have been used to make these policies effective? What partnerships exist and how have they been made to work? How can development aid be used to support policy initiatives in this area? The paper identifies some good practices by governments and other agencies aimed at ensuring that skilled migration from developing countries, while meeting labour market needs in developed countries, does not negatively affect developmental efforts of the origin country.

Lars Magnusson (2007) had stated that after the Second World War Sweden has been recognised for its commitment to a policy of full employment. Compared to most other West European countries Sweden was less severely hit by mass unemployment in the 1970s and 1980s. Without any doubt this is a major explanation behind the rather low level of inequality and quite evenly distributed incomes that still prevail in this country. It is a well known fact that more than anything else unemployment has a tendency to increase income differences in only because high unemployment has a negative effect on the bargaining position of labour. Even more severe is the income loss that is suffered by the unemployed and to an even greater extent by those excluded recession hit the Swedish economy in the early 1990s and unemployment figures rose dramatically incomes and wages became less evenly distributed. This economic downturn was probably the biggest since the 1920s and led to severe unemployment figures around 10 to 12 percent the “old” active labour market policy no longer operated efficiently. In brief, the problem was that there was no supply of jobs and therefore matching activities became increasingly costly at the same time as they were largely ineffective. Some of the effects of mass unemployment visible in Europe during the 1970s and 80s were also felt in Sweden during the 1990s. However, since the late 1990s employment has risen once again although it is not at such a high level as around 1990. Also the trend of increasing wage and income differences has been halted. Undoubtedly, increasing economic growth as well as rising employment is playing a leading role in this development. There can be no doubt that the policy goal of what has been called “full employment” has been especially emphasised in Swedish macro-economic policies – monetary and fiscal – at least back to the 1950s. In contrast to developments in many other countries, different Swedish governments –social democratic as well as liberal or centre-right- wing – have

not simply accepted unemployment as a consequence of monetary instability and lower growth (stagflation), oil shocks or structural change.

NASSCOM Annual Report (2007-08) stated that how Indian IT/ITES industries have contributed to the Indian economy after globalisation and during 2007-08. In the last two decades, the Indian IT/ITES industry has contributed significantly to Indian economic growth in terms of GDP, foreign exchange earnings and employment generation. However, equally significant though not as tangible, has been the ripple effect it has created on the general economic environment in the national and international economic space. The industry has been the trigger for many “firsts” and has contributed not only to unleashing the hitherto untapped entrepreneurial potential of the middle class Indian but also taking Indian excellence to the global market. The current and evolving role of IT/ITES industry in India’s economy is well established. The sector is proving to be the major growth pole within the services sector, which in turn drives several economic indicators of growth in the country. The sector’s contribution to the country’s GDP has been steadily increasing from a share of 1.2 percent in FY98 to 5.2 percent in FY07. Export earnings in FY08 stood at approximately USD 40.0 billion with a growth of 36 percent. Direct employment in the sector is expected to be 2.0 million by end of FY08. A clear picture of Indian IT Industry and its contribution to the Indian economy is available from this NASSCOM study.

An article of UNCTAD (2008) stated that today, in the current, more mature postcolonial phase and second wave of trade-and investment-driven globalisation and capitalism, labour movement and integration is taking place in response to a number of push and pull economic factors and market forces. The scale and extent of this is unprecedented, although it is nowhere near the scope and extent of crossborder trade, and movement of goods, capital, entrepreneurship, information and technologies; nor is it anywhere near achieving its potential. There are signs that labour integration and mobility are beginning to have a positive impact on trade and investment-driven globalisation. Therefore, these factors are increasingly taken into account when devising national and international development strategies that include efforts to achieve internationally agreed development goals such as the United Nations Millennium Development Goals, in particular poverty reduction, gender equity, decent work and global partnerships for development. The

concept of labour integration in most literature is limited to the movement of people from the country of origin to the destination country. However, this paper suggests that a broader definition of labour integration and skills trade is also relevant, given the emerging contours of a global labour market. It is estimated that approximately one billion workers will enter the global workforce in the next decade, virtually all from the developing world. Labour integration does not only mean movement of labour from one country to another, but also the ability of business and consumers to access this global pool of labour in different ways through physical movement or otherwise, in an effort to achieve economic efficiency. However, while globalisation has spurred the movement of capital, goods and information, liberalisation of the movement of people has remained heavily regulated, notwithstanding the fact that market conditions have demonstrated the increasing need of host countries for foreign workers, particularly in sectors such as health, education, computer-technology and other professional services. While this demand is matched by the increasing capability of developing countries to provide such services, legal and procedural restrictions and political sensitivities in the host countries have impeded the free movement of people across borders. Protectionism also pervades other areas where developing countries are gaining a foothold: outsourcing information-technology-enabled services, for example, has increasingly benefited developing countries such as India, China, the Philippines, Ghana, Bangladesh, Uruguay, Costa Rica and some Caribbean countries.

Parveen Chopra (2008) stated that the Indians to corner majority of H1B visas in US and to grant the available 65,000 H-1B visas in the US as demand far outstrips supply, but a majority of them will again be cornered by Indian high-tech professionals, say immigration attorneys as they rush to file applications starting April 1, 2008 on behalf of American businesses. The US Citizenship and Immigration Services (USCIS) is expected to pick the lottery within a week, but the anxious wait for the applicants may continue for months as the department starts returning unsuccessful applications and sends receipts for the others. Those who get the three-year visa for skilled professionals can start work from Oct 1, 2008. While there were about 124,000 applications last year, the number this year may cross 150,000, Michael Phulwani, one of the first Indian origin immigration lawyers in the US, told IANS. Many will also be vying for the 20,000 H-1B visas meant for foreigners with US-earned masters' or higher degrees. "About 60-70 percent of all

applications are expected to be on behalf of Indians,” said Naresh Gehi, a New York lawyer, who is filing about 40 applications. The flow is unaffected by the recent downturn in the US economy or improved prospects in India, he believed. Gehi, like many others including Microsoft’s Bill Gates, argued, “There is a crying need to raise the H-1B cap as American businesses will benefit from hiring foreign highly skilled workers.” A new bill introduced in the Congress aims to raise the cap to 195,000, and another bill seeks to boost the cap as well as exempt foreigners educated at US institutions from the quota. Phulwani cited a recent study by the National Foundation for American Policy that found that on an average every foreign national on an H1B visa generates another five to 7.5 jobs. He pointed out that the sponsoring companies in their petitions have to specify the offered salary, which has to adhere to the prevalent market rates. There is some abuse which should be tightened. To stop another kind of abuse, USCIS has issued a new rule that prohibits employers from filing more than one petition for a single employee in a fiscal year. Indian outsourcing companies attracted criticism recently when the federal government released data showing that they accounted for nearly 80 percent of the visa petitions approved last year for the top 10 participants in the H1B programme.

Infosys had 4,559 and Wipro 2,567 approved visa petitions in the programme, which was initially set up to allow companies in the US to import the best and brightest in technology, engineering, and other fields when such workers are in short supply in America. Many companies, from India and elsewhere, get around the H1B visa caps anyway by taking the L-1 visa route, meant for intra-company transfers.

Tasneem Siddiqui (2008) has done a study on migration and gender in Asia. This paper concentrates on the participation of women of Asia in the short term international labour market. It highlights the diverse experiences of migration of women from various Asian countries, and tries to link this diversity to migration policies of their countries of origin and gender determined demands for labour in the destination countries. The paper is divided into five sections. Section one highlights the global scenario of female migration while section two presents the Asian trends. Section three presents government policies on female migration of a few selected countries and section four discusses the work conditions of female workers. Section five highlights the gender implications of

migration experiences of women. The concluding section draws some major conclusions. Female migration from Europe constitutes the highest percentage (53.4 percent) with Oceania 51.3 percent, North America 50.4 percent, Latin America and Caribbean 50.3 percent and Africa 47.4 percent. In other words, except Asia and Africa the number of women migrants exceeded the number of male migrants. Nonetheless, over the last decades growth rate of female migrants compared to male, is higher in Asia. Since the 1980s Asian women constituted the majority of migrant workers in countries such as the Philippines, Indonesia and Sri Lanka. A large number of female migrants in Asia go through irregular channels. So, they are not recorded in the official figures.

Moira Herbst (2009) said in Business Week that the US Citizenship & Immigration Service (USCIS) began accepting applications for H-1B visas for skilled workers. The number of applications will reveal US employers' current appetite for overseas workers. Because of the recession, the overall volume of applications is expected to be down from the previous two years, in which the offices were instantly flooded with applications from tech companies, outsourcing firms, school districts, and a variety of other employers. Still, it's widely believed that the 85,000 visas available under the cap will be used before the fiscal year begins on Oct. 1, 2008. That's because there is some pent-up demand from 2008 applicants who didn't receive visas, and because employers say there are positions they can't fill with U.S. labour, even as unemployment rises. Arun Kumar, Washington, (2009) stated that American businesses are finding it hard to fill skilled positions even as H-1B visas that bring in foreign professionals, including a large number from India, are creating jobs in the US, shows a new US study. Confirming Microsoft Chairman Bill Gates' contention that an arbitrary cap on H-1B visas is forcing them to outsource jobs, the study shows major US technology companies today average more than 470 job openings for skilled positions in the US while defence companies have more than 1,265 each. A second complementary study by the National Foundation for American Policy (NFAP) found after examining

H-1B filings and year-by-year job totals for the technology companies in the Standard & Poor (S&P) 500 that hiring skilled foreign nationals on H-1B visas is associated with increases in employment at US technology companies. The data collected by the Arlington, Virginia-based policy research group, on "H-1B Visas and Job Creation" show

that for every H-1B position requested with the Department of Labour, US technology companies increase their employment by five workers. For technology firms with less than 5,000 employees, each H-1B position requested in labour condition applications was associated with an increase of employment of 7.5 workers. This is particularly remarkable since the actual number of people hired on H-1B visas is likely to be much lower than the total number of applications filed with the Department of Labour, said NFAP, focusing on trade, immigration and related issues. "Combined, these two studies show that US employers continue to need skilled labour, including individuals not born in the United States who, the empirical evidence indicates, are creating new opportunities for US workers," said NFAP Executive Director Stuart Anderson. "While every H-1B hired may not necessarily lead to five to seven Americans being hired, the data does strongly imply, at minimum, that new H-1B professionals are complementing other US hires, rather than displacing them, as critics allege." According to "Talent Search: Job Openings and the Need for Skilled Labour in the US Economy", a number of companies have thousands of skilled positions open, with this level of openings persisting for a year or more. This is part of a longer-term trend that threatens to harm America's economic future, with US companies lacking access to the skilled professionals needed to grow and innovate inside the US.

More than 140,000 job openings for skilled positions are available today in the 500 companies that make up the S&P 500. S&P 500 companies employ only about 14 percent of individuals working in the US, so the overall demand for skilled labour in the US economy is much greater. The Department of Labour's JOLTS survey indicates that there are approximately four million job openings in the US every month at all skill levels. The S&P 500 companies with the most job openings as of January 2008 are Microsoft (4,005), Northrup Grumman (3,925), Lockheed Martin (3,901), General Electric (3,078), Countrywide Financial (2,415), JPMorgan Chase (2,164), Tenet Healthcare (2,050), United Health Group (1,927), Raytheon (1,694), IBM (1,670), Computer Sciences Corp. (1,666), Cintas (1,664), L-3 Communications (1,618), Bank of America (1,600), US Bancorp (1,562) and Cisco Systems (1,504). These are openings for jobs in the US requiring a BA, professional degree or higher. The NFAP study also found that even employers that reduced employment reduced it less if they had filed for H-1Bs visas. Examining companies in the sample that had layoffs, the regression results found for

every H-1B position requested on a labour condition application, total employment is estimated to be two workers more than it otherwise would have been. Data were used on total employment and H-1B labour condition applications between 2001 and 2005, allowing calculation of employment growth for 2002-2005. An NFAP survey of 120 major US technology companies, with a 22 percent response rate, indicates preventing companies from hiring foreign nationals by maintaining a low limit on H-1B visas is likely to produce the unintended consequence of pushing more work to other countries. Sixty-five percent of technology companies responding to the NFAP survey said in response to the lack of H-1B visas they had “hired more people (or outsourced work) outside the United States”. This is significant in that even if those companies responding to the survey are heavier users of H-1B visas, it means that these are the firms most likely to hire outside the US in response to an insufficient supply of skilled visas for foreign nationals. Fifty-two percent of companies believed that for every H-1B professional they hired, it created one or more complementary jobs at their firms or in the US economy. Twenty-two percent thought the hiring of an H-1B visa holder created 10 or more jobs. Seventy-four percent of company respondents said an inability to fill positions because of the lack of H-1B visas has potentially affected their “company’s competitiveness against foreign competitors or in international markets”. “The research showing H-1B visa holders are associated with increased hiring at US technology companies is further evidence that current restrictions on high skill immigration are counterproductive and the result of legislative inertia, rather than legitimate concerns,” said Anderson. The survey results indicate that when H-1B visa restrictions block cutting-edge companies from hiring foreign nationals in America, companies are likely to place more of their human resources outside the United States. Urging the US Congress to let more foreign engineers work in the US as immigration restrictions were forcing US high-tech firms to outsource jobs overseas, Bill Gates too made the point that the current cap of 65,000 H-1B visas aimed at highly skilled professionals “is arbitrarily set and bears no relation to the US economy’s demand for skilled professionals”.

Navind Beeharry (2009) has studied on the comparison of the impact of globalisation on the political economies of China and India. He stated China and India are two neighbouring countries in Asia who share the two largest population of the world and in fact added together they represent nearly one third of humanity. Globalisation has

imposed internal pressure and external pressure to bear on both India and China. For most Chinese and Indians alike, economic life is hard despite the fact that reforms and globalisation have created various new opportunities and as such both countries have witnessed an emerging middle class with Americanised tastes and preferences, irrespective of this however, both countries remain very poor. He also discussed the example of globalisation process. The story of the IT industry in India is a good illustration of the intricacy of the globalisation process. The first example is the case of the development of the IT industry in India. Computer engineering or computer science as degree courses were new avenues. After some 15 years, India started being hailed as one of the largest sources of skilled and trained computer technicians and IT specialists in the world. What were the reasons behind this massive development and how does this link to the issues of globalisation? For a very long time due to lack of opportunities and also a yearning to go and discover the West, many of the young Indian elite from the very best engineering colleges have been going abroad for higher studies as well as for securing some challenging and highly paid jobs specially in the United States. While for years this constituted certainly a brain drain for India, it was a source of highly talented human resources trained at the cost of Indian taxpayers money for America.

Despite the brain-drain effect the positive side of the story is that due to a lack of trained personnel in the industrialised world, and given the Indian connection a lot of linkages have been developed with India in this field, so much so that according to India Today many of the final year students of the famous Indian Institutes of Technology have already become software entrepreneurs running projects and research and development for many of their senior college fellows now in the USA. While in 1999, Indians received 47 percent of the 100,000 high-skill visas issued by the USA, an interesting development in India lately has been the massive investment made by Indian based in America in ploughing back some US\$300million into more. Based on the US Silicon Valley model, India has created its own cybercity in Bangalore and Microsoft giant made sure it is present in India by locating itself there. According to Business Asia (2007), India has 250,000 software workers which make about 30 percent of the world total IT workforce and in the past ten years, they have been involved in developing half of the world

software programs through export contracts. Indian IT companies are now listed on the NASDAQ.

The IT sector in India has not only become one of the leading players in software development but another factor which is closely linked to this is the fact that the movement of skilled and efficient labour to the developed countries like USA, Canada, Australia etc. Again many call centers are now being relocated from Europe and USA to India due to the internet revolution. IT has revolutionized the way the world does business across-borders and has definitely dislodged the geographical factor as an advantage.

CHAPTER -III

GLOBALISATION AND ITS EFFECTS ON MIGRATION OF INDIAN IT PROFESSIONALS

- **GLOBALISATION, *WTO* AND MIGRATION OF SOFTWARE PROFESSIONALS**
- **MIGRATION UNDER CONDITIONS OF GLOBALISATION**
- **INDIA'S SOFTWARE EXPORTS-BEFORE AND AFTER GLOBALISATION**
- **DIFFERENT MIGRATION TYPES**
- **BODY SHOPPING AND ONSITE LABOUR MIGRATION**
- **MIGRATION OF SOFTWARE PROFESSIONALS FROM INDIAN IT COMPANIES IN GLOBALISED REGIME**
- **A BRIEF IDEA OF H-1B & L-1 VISA STATISTICS FOR THE IT-PROFESSIONALS FOR MIGRATION TO USA**
- **'*IT*' INDUSTRY IN INDIA AND SKILLED HUMAN RESOURCE MOBILITY**
- **CONTRIBUTION OF '*IT*' INDUSTRIES TO THE INDIAN ECONOMY AFTER GLOBALISATION**

GLOBALISATION AND ITS EFFECTS ON MIGRATION OF INDIAN IT PROFESSIONALS

3.1: Introduction

Globalisation in general sense is the process of transformation of local or regional things into global ones. It is also used to describe a process by which the people of the world are unified into a single society and function together. This process is a combination of economic, technological, sociocultural and political forces. However globalisation is often used to refer to economic globalisation, that is, integration of national economies into the international economy through trade, foreign direct investment, capital flows, migration, and the spread of technology.

Due to globalisation the developed countries are doing their businesses all over the world. The companies of these countries are earning more money due to globalisation and investing more capitals. The software companies of these countries are also doing a worldwide business. After globalisation the technological development in economically developed countries like USA, Canada etc had attracted the Indian talent pool immensely. Due to globalisation, regional shortages of skilled workers, migration scenario, outsourcing scenario and the other factors like the methods of procuring skilled workers has changed in recent years. The countries have got a better infrastructure and wage policy which are due to the impact of globalisation and free trade among the countries and had attracted Indian IT professionals to these countries immensely. New technological development and the Universalisation of technology had given birth of so many software and hardware companies in USA and other developed countries where the demands of Indian IT professionals are huge. The Indian-American community now (2010) boasts 1.68 million people compared with 0.81 million in 1990—a growth of 106 percent after globalisation of Indian economy.

The launch of economic reforms in India in 1991 opened up new business opportunities for the Indian community in the United States. They have had an important role to play in high-tech development in India, focused primarily on the software industry. Many IT professionals rely heavily on strengths back home—the huge pool of skilled computer experts and software professionals—to subcontract work to their country of origin, thus creating a “virtuous” cycle for the Indian IT sector and economy. As an example, in the

software industry and IT-enabled services, investments of Diaspora members (those who are the permanent residents in foreign countries like USA) are quite limited (about 3 percent of FDI), but their contribution is mostly in the form of knowledge linkages, that is, with foreign markets, helping Indian firms to absorb technical and managerial knowledge. The initial momentum for outsourcing to India many times comes from the employees of Indian origin. The success of the Indian Diaspora has also attracted the attention of major MNCs to India's potential in the IT sector. India has attracted investment in many R&D centres wholly funded and established by GE, Cisco, Sun Microsystems, Microsoft, IBM, and Hughes Software. Intel has established their R&D centers in Delhi, Bangalore, and Mumbai for its global operations. Oracle Corporation has two development centers in Bangalore and Hyderabad. Phoenix Technologies, ABB Group, IBM, America Online, and J. P. Morgan Chase are in the process of setting up new R&D centres, and Lucent Technologies is also making inroads into India. All these events are the results of globalisation.

3.2 Globalisation, WTO and Migration of Software Professionals

The World Trade Organisation (WTO) is concerned with the rules of trade among nations. At its core there lies a body of trade agreements, of which the General Agreement on Trade in Services (GATS) is one of the main constituents. The GATS provides a set of predictable and legally enforceable conditions for services trade. The agreement aims to progressively expand the trade in services, as a means of promoting growth and development. The agreement applies not only to the traditional mode of trade, i.e. cross-border supply ("mode 1"), but encompasses three additional ways of trading services internationally: cross-border consumption ("mode 2"), establishment of a commercial presence ("mode 3") and, significantly, presence of natural persons ("mode 4"). As mode 4 involves the cross-border movement of people, the GATS is consequently concerned with international migration. Mode 4 encompasses the movement of natural persons who are either service suppliers (such as independent professionals) or who are employees of a service supplier, and who are present in the territory of another member for the purpose of supplying a service. This is especially affecting with respect to GATS Mode 4, because labour migration is strongly associated with transnational differentials in wages, social benefits and skills (Tomer Broude, International Law Forum of the Hebrew University of

Jerusalem Law Faculty, Research Paper, 2007).Due to globalisation a rapid development has been seen in the environmental, social, infrastructural areas in software sectors worldwide. At the period of globalisation (1991-2000) a boom in the software industries have been seen worldwide. Software companies like Intel, Cognizant Technologies, TCS, Google, Infosys etc have boomed up their business after 1991 and onwards.

Before 1993 the non-tariff trade barriers between India and USA was very strict. Like the H-1B Visa Global cap for the Indian professionals was not sufficient, wage parity was insisted upon by U.S.A which was discriminating, double taxation of social security (no benefits to Indian Employees), discriminating labour laws etc. After the formation of WTO in 1995 the scenario has changed. Now more H-1B visas are issued by US Govt., more transparency in visa program, totalisation agreement is signed by India and USA, new amendments to labour laws reducing discriminations, no insistence of wage parity. These are the latest policies taken by US Govt. for Indian talented IT professionals. And this is only because of the demands and impacts of globalisation.

Some factors of globalisation are taken for this study like Infrastructure, Working Environment, Quality of Work Life, Research Environment, Cost of Living, Social Security etc. for measuring the impact of globalisation on migration of Indian IT professionals to some of the developed countries.

Due to globalisation the rate of growth of GDP in India from the last five years at a stretch is among the highest in the world (Ray, 2008).The most significant aspect of this remarkable achievement in economic fortunes is the sharp rise in the share of the service sector in the GDP.The service sector now accounts for more than half of India’s GDP having gained at the expense of both the agricultural and industrial sectors through the 1990s.

Table3.1: Percentage of shares of the different sectors of the economy in GDP

| Sector | 1990-91 | 1998-99 | 2006-07 |
|-------------|---------|---------|---------|
| Agriculture | 30.93 | 26.83 | 18.50 |
| Industry | 25.38 | 22.01 | 19.60 |
| Service | 43.69 | 51.16 | 61.90 |

(Source: Glimpses of the Indian Economy (Select aspects of the Indian Economy))

The rise in the service sector's share in GDP marks a structural shift in the Indian economy and takes it closer to the fundamentals of a developed economy. Out of this service sector a major portion is captured by IT/ITES industries.

The story of India's information technology (IT) capacities is well known. The impulses of growth are now strengthening in other services as well such as engineering and consultancy, communication, entertainment, business, finance and information services as well as a host of personal services including tourism, health and hospitality.

The biggest contribution to this spectacular growth in the service sector has come from the jobs outsourced to India by the developed countries (BPO and KPO sectors) mainly USA. Outsourcing, off shoring and more specifically, offshore outsourcing are the buzz words in the modern globalized world.

India's IT export boom can trace its beginning back to the mid-1980s, when Texas Instruments opened a branch in Bangalore to focus on development, followed a year later by Motorola. Mainly American and West European multinationals from the electronics industry followed suit in the period to the middle of the 1990s; but it was not until the second half of the 1990s that big software houses such as Microsoft, SAP or Adobe opened development centers in India. In a parallel development, the number of Indian companies to which major American firms contracted out programming assignments has soared to more than 3000. India's export of software and services total more than USD 12 billion.

Liberalisation has taken roots in India and the Govt. has steadily lowered interest rates, eased up forex restrictions, and freed banks from their social obligations. With the rupee fully convertible, Indian businesses are now free to invest anywhere.

In a world of globalised labour markets, there has been an increase in mobility of qualified and educated human resources, among developing and developed countries. The out-flow or "brain drain" of highly skilled human resources from different sectors are the matter of concern for the developing country like India. Sectors such as health, IT, education and agriculture are the areas where migration rate of labour is highest. But for some countries the brain drain has become a brain gain through migrant investments. Lack of development

of an economy, lack of economic growth, rule and law of a country, good governance are the main causes of migration. However, a number of policies and initiatives have already taken by the countries of origin and destination to specifically help to train, retain and regain skilled personnel for development. Migration is not a simple action taken by an individual for betterment of life. One individual moves to other country due to the influences of some economic and non-economic factors. Migration and settlement tend to be a long process.

3.3: Migration under conditions of globalisation

The economic barriers among different countries are broken due to globalisation. Capital can move to any country and the commodities can be produced anywhere due to globalisation. Natural resources can also be transported to long distances for processing without excessive cost. Several multinational companies (MNCs) and individual entrepreneurs are producing commodities in the less developed countries at a low cost using their cheap labour and other natural resources and then selling these products to other countries. However, for the process to work by the companies and entrepreneurs, the governments are expected to provide transparent and stable administration, maintain law and order and create a friendly and competitive economic environment. The state should thus facilitate entrepreneurs in taking their own decisions regarding output and employment mix, location, export, import, appropriation of profits, etc. Of course, some of the small entrepreneurs expect governments to provide certain infrastructural facilities and basic amenities. The big companies are, however, often willing to undertake this responsibility themselves, in exchange of long-term agreements or for certain special fiscal and administrative concessions. Economic liberalisation reduces economic inequality at the global level through acceleration of growth in less developed countries which affect the labour migration scenario. It is generally seen that the liberalisation policy is associated with the mobility of workforce from one country to another. Now it is impossible to analyse the impact of liberalisation programme on movement of population as no reliable data on migration are available after 1991, the year in which the programme was formally launched by the government of India. Our society is bound by caste and family system and the traditional values often act as a deterrent to migration. By the same logic, improvement in the levels of education and communication facilities would increase mobility.

Interestingly, however, an analysis of the trend in population mobility in India reveals that, despite significant improvements in education, transport and communication facilities, growth of industries, diversification of the economy, modernisation of norms and values, etc, population mobility has decreased during the recent decades.

Two main models of migration can throw some lights on migration and social relations. First, the '*Settler model*', according to which immigrants gradually integrated into economic and social relations, re-united or formed families and eventually became assimilated into the host society (sometimes over two or three generations); second, the '*Temporary Migration Model*', according to which migrant workers stayed in the host country for a limited period, and maintained their affiliation with their country of origin. Globalisation has changed the context for migration. New technologies of communication and transport allow frequent and multi-directional flows of people, ideas and cultural symbols to different countries.

Globalisation is not just an economic phenomenon. Flow of capital, goods and services cannot take place without parallel flow of ideas, cultural products and people. Under the conditions of globalisation skilled migration tends to increase and migrants to become more diverse in social and cultural characteristics. Countries encourage skilled and entrepreneurial migration but resist unskilled migration. Globalisation plays a very vital role in migration.

The four features of globalisation are:

1. The growth of digitalized technology and communication which has transformed production.
2. The expansion of market economy and world trade which has softened boundaries of national economies and integrated transnational trading zones.
3. The economic integration facilitates flow of capital, raw materials, goods, services and people across national boundaries and a freedom is associated with free trade materials.
4. Economic globalisation brings an increasing demand for highly trained human capital in advanced developed countries.

These features have direct or indirect linkages with migration and brain drain.

3.4: Growth of Indian born population in USA after Globalisation of Indian economy

According to WTO and World Bank Report the Indian Economy had started to get the fruits of Globalisation after 1998. So the migration of the skilled Indian population (basically the IT professionals) to the other countries due to the demand of the skilled labour and free trade also has increased. Table 3.2 shows that there was a paradigm growth of Indian born population in

different states of USA between 2000 and 2006. These Indian born population are well educated, well placed and skilled and many of them are IT professionals.

Table 3.2: Top 10 States for Growth of the Indian-Born Population in USA, 2000 to 2006

| States in USA | 2000 | 2006 | Change 2000 to 2006 |
|----------------------|--------|--------|---------------------|
| Wyoming | 252 | 731 | 190.1% |
| Rhode Island | 1,423 | 3,273 | 130.0% |
| District of Columbia | 1,139 | 2,567 | 125.4% |
| Maine | 590 | 1,323 | 124.2% |
| Arizona | 9,134 | 19,982 | 118.8% |
| Washington | 14,714 | 30,941 | 110.3% |
| Connecticut | 15,108 | 29,437 | 94.8% |
| Alabama | 4,280 | 7,858 | 83.6% |
| North Carolina | 16,264 | 29,825 | 83.4% |
| Florida | 32,295 | 58,090 | 79.9% |

(Source: US Dept. of Labour, 2006)

3.5: India's Software Exports-Before and after Globalisation

In the year of 2008 India's software export reached to US \$40 billion. The growth is 72 percent comparing to the exports of \$23200 in 2007. Kiran Karnik, president of the association which has about 900 members, said the Indian software industry was on course to reach a target of \$US50 billion in sales by 2009. Software exports has major share in India's total exports. As of the year 2004-05, both software and services revenue grew by 32 percent to \$ 22 billions and \$ 28.5 billions in 2005-06.

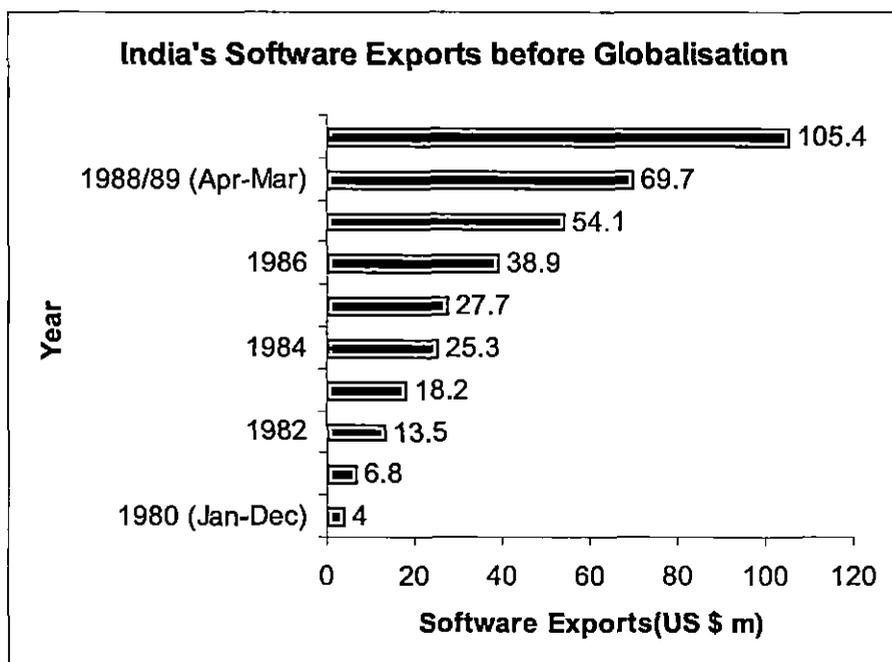
According to NASSCOM, India's domestic market grew by 24 percent. Presently Indian companies have concentrated on only two largest IT service markets. They are USA and the UK. Even Canada, Japan, Germany and France represent huge growth potential in the industry.

Table 3.3: Software Exports from India before Globalisation

| Year | Software Exports (US \$m) | Export Growth (%) |
|-------------------|---------------------------|-------------------|
| 1980 (Jan-Dec) | 4 | |
| 1981 | 6.8 | 70% |
| 1982 | 13.5 | 99% |
| 1983 | 18.2 | 35% |
| 1984 | 25.3 | 39% |
| 1985 | 27.7 | 9% |
| 1986 | 38.9 | 40% |
| 1987 | 54.1 | 38% |
| 1988/89 (Apr-Mar) | 69.7 | 29% |
| 1989/90 | 105.4 | 51% |

(Source: NASSCOM Annual Report, 2001)

Fig 3.1: India's Software Exports before Globalisation



(Source: Based on Table 3.3)

Table 3.4: Software Exports from India after Globalisation

| Year | Software Exports (US\$m) | Export Growth (%) |
|-----------|--------------------------|-------------------|
| 1990/91 | 131.2 | 24% |
| 1991/92 | 173.9 | 33% |
| 1992/93 | 219.8 | 26% |
| 1993/94 | 314 | 43% |
| 1994/95 | 480.9 | 53% |
| 1995/96 | 668 | 39% |
| 1996/97 | 997 | 49% |
| 1997/98 | 1650 | 65% |
| 1998/99 | 2180 | 32% |
| 1999/2000 | 3600 | 65% |
| 2000/01 | 5300 | 47% |
| 2001/02 | 6200 | 17% |
| 2002/03 | 7550 | 22% |
| 2003/04 | 8800 | 17% |
| 2004/05 | 12400 | 41% |
| 2005/06 | 16800 | 35% |
| 2006/07 | 23200 | 38% |
| 2007/08 | 40000 | 72% |

(Source: NASSCOM Annual Report, 2009)

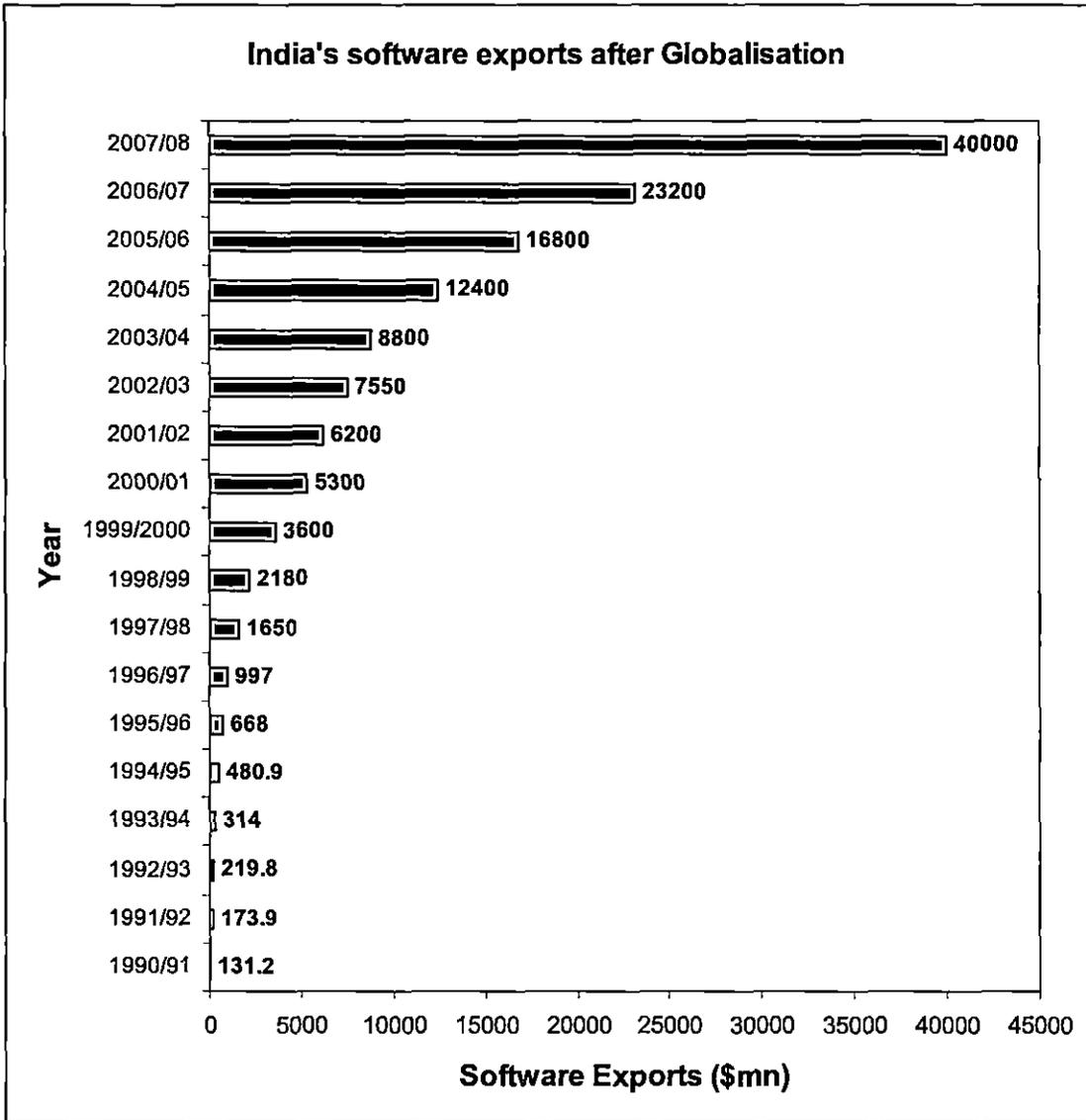
According to WTO the effect of Globalisation of Indian Economy can be seen from 1997. If we consider 1990-91 is the base year we can clearly see the export of Indian software was only \$131.2 mn. Whereas in the year of 1997 the export was \$ 1650.

Table 3.5: Top 10 Software Export Destinations (2001-02)

| | Total SW Exports | |
|-------------|------------------|------|
| | (Rs crore) | (%) |
| USA | 23,942 | 65.6 |
| UK | 5,149 | 14.1 |
| Germany | 940 | 2.6 |
| Japan | 912 | 2.5 |
| Singapore | 750 | 2 |
| Netherlands | 500 | 1.4 |
| Canada | 475 | 1.3 |
| Australia | 312 | 0.9 |
| Switzerland | 300 | 0.8 |
| France | 210 | 0.6 |

(Source: Data quest survey, 2002)

Fig 3.2: India's Software Export after Globalisation



(Source: Interviews, Indian Dept. of Electronics annual reports, Dataquest (India) surveys, 2009)

India's software and services exports have grown 32 percent to 31.3 billion U.S. dollars in 2006-07 and 40 billion in 2007-08, the Press Trust of India (PTI) reported, quoting the Indian information technology department. During 2006-07, electronics and IT exports went up to 35 percent over the previous fiscal, the PTI said. India's software and services export was estimated 31.3 billion U.S. dollars in 2006-07, compared to 23.6 billion U.S. dollars in 2005-06, an increase of over 32 percent in dollar terms and 36 percent in Indian rupee terms, the department said. In its forecast, IT association NASSCOM has said India's revenues from software and services will reach the 50 billion U.S. dollar mark in 2010-11.

3.6: Migration-Types and Patterns

Economic globalisation internationalizes national economies, encourages free movement of people/goods. Increased mobility not only from less to more developed regions but all among countries within integrated zone. EU maintains the principle of free movement first for migrant workers and then for all EU citizens. NAFTA signed 1994, has visa provision to allow professionals cross border employment. Economic globalisation removes mobility barriers and allows high trained human capital to move freely to different countries.

Since economic globalisation is premised on information technology, countries race to invest in the new economy in order to sustain future national growth and to capture a larger share of expanding world market. Hence, highly trained professionals responsible for the growth of the new economy --- those in information technology, finance, commerce, and advanced sciences --- are in great demand. Thus, economic globalisation creates the demand and the competition for highly trained professionals and skilled workers in the world labour pool.

World migration from less to more developed regions of the world is very common after globalisation. New demands are generated for immigrants in highly developed countries due to demographic transitions. Globalisation creates contradictory labour demands and displacements, creating mobility opportunities for some and uprooting others. Economic globalisation creates contradictory tendencies in international migration. World migration has added racial and cultural diversity to historically homogeneous populations

Some contradictory tendencies in migration are freedom of movement associated with free trade, high degree of mobility for those associated with the prosperity of the new economy, highly developed countries offer high remuneration and return to specialized human capital, hence movement from less to more developed regions. Developed countries also attract unskilled workers displaced by globalisation, who sought entry as illegal migrants & asylum seekers. Most immigrant countries define immigrants' value in terms of human capital. Competition for skilled immigrants leads to softening entry requirements. Avoiding unskilled immigrants leads to tightening border to bar the unwanted immigrants. Globalisation brings a contradictory response of border control: flexible and accommodating for high skilled workers towards unskilled workers and asylum seekers.

The migration of highly trained immigrants from less developed to more developed regions is a brain drain. But such a drain can not be carried as the economic disparities between regions get reduced. Countries which can maintain a competitive remuneration level and an enlightened policy of multiculturalism and integration will be better able to attract and retain immigrants. There is a need for international community to develop a universal framework to regulate international migration.

3.6.1: International Patterns of Migration

International migration occurs when persons cross state boundaries and stay in the host state for some minimum length of time. Migration occurs for many reasons. Many people leave their home countries in order to look for economic opportunities in another country. Others migrate to be with family members who have migrated or because of political conditions in their countries. Education is another reason for international migration, as students pursue their studies abroad. While there are several different potential systems for categorizing international migrants, one system organizes them into nine groups: temporary labour migrants; irregular, illegal, or undocumented migrants; highly skilled and business migrants; irregular migrants; refugees; asylum seekers; forced migration; family members; return migrants; and long-term, low-skilled migrants. These migrants can also be divided into two large groups, permanent and temporary. Permanent migrants intend to establish their permanent residence in a new country and possibly obtain that country's citizenship. Temporary migrants intend only to stay for a limited periods of time. Both types of migrants have a significant effect on the economies and societies of the chosen destination country and the country of origin.

Similarly, the countries which receive these migrants are often grouped into four categories: traditional settlement countries, European countries which encouraged labour migration after World War II, European countries which receive a significant portion of their immigrant populations from their former colonies, and countries which formerly were points of emigration but have recently emerged as immigrant destinations.

3.6.2: Internal Patterns

Internal migration occurs when persons migrate from one district to other district or one province to other province within a country's boundary. Generally the persons from rural

areas migrate to the big cities or urban areas for jobs, businesses and other purposes are also called Internal Pattern of migration.

3.6.3: Sectoral Patterns

Skilled personnel leave one sector and join to other sector in a country or in abroad. Low wages, working conditions and career prospects cause the professionals to move out of one job into other jobs including the Govt as well as private sector.

3.6.4: Patterns of Female Migration

Most of the female labour migrants, both within and outside of Asia, are unskilled. Migrant women are concentrated in jobs regarded as 'typically female': those of domestic workers, entertainers (often a euphemism for prostitution), restaurant and hotel staff, and assembly-line workers in clothing and electronics. These jobs are low in pay, conditions and status, and are generally shunned by local women. Many are often associated with patriarchal stereotypes of female characteristics, such as docility, obedience and willingness to give personal service. Occupations like domestic service lead to isolation and vulnerability for young women migrants who often have little protection against the demands of their employers (Lim and Oishi 1996).

3.7: Types of Migrants

Migrants are of four categories: professional, skilled, semi-skilled, and unskilled. Doctors, engineers, teachers and nurses are considered professionals. Manufacturing or garment workers, drivers, computer operators and electricians are considered skilled, while tailors and masons are considered semi-skilled. Housemaids, cleaners and menial labourers are considered unskilled workers. During the early years of short-term labour migration, the proportion of professional and skilled workers was higher than that of semi-skilled and unskilled workers. In recent times, however, semi-skilled and unskilled workers have made up the majority of the migrants. In this study the IT professionals are the skilled workers who are taking migration to foreign countries. However the empirical data indicate that remittance flows did not increase significantly with a rise in the number of emigrants. For example, in 1997 emigration grew by 79 percent compared to the figure for 1996, and the remittance flow increased 12.52 percent, while in 1998 emigration grew by 29 percent while growth in remittances increased only by 4.86 percent. Wage rates have also fallen

drastically over the past decade. It is also to be noted that at present the structure of job requirements in the receiving countries is undergoing significant changes. Skill development and occupational diversification are expected to become crucial. The ability to access opportunities opening up in developing countries, such as India, and developed countries, such as the UK, USA, Canada, and Japan, are also going to play an important part in this process. It is also imperative to think about a planned labour migration policy to address the demand side of the international market. Taking into account its huge population resources, India needs to review and examine its human resource development strategy in the light of the new and challenging opportunities in the international labour market.

3.7.1: Skilled & Professional Migration

A skilled worker is any worker who has some special skill, knowledge, or (usually acquired) ability in his work. A skilled worker may have attended a college, university or technical school. Or, a skilled worker may have learned his skills on the job. Examples like Doctors, Pilots, IT professionals etc. The methods of procuring skilled workers has changed in recent years due to globalisation because of regional shortages of skilled workers, migration, outsourcing, and other factors. All countries are in a process of change and transition which makes possible the migration of skilled workers from places of lower to higher opportunities in training and better working conditions. Although materialistic rewards play a role in skilled workers migration, it is the lack of security, opportunity and suitable rewards in the homeland that fundamentally makes this massive movement of people possible, going from places of lesser development to affluent societies. Some developing countries see the migration of domestically trained professionals abroad not as a drain but as a gain because these "brain bank" will return with their accumulated skills to their homeland and will contribute to the growth of the country. The demand for Information Technology (IT) skilled workers is on the rise. This has led to a lessening of the immigration restrictions prevalent in various countries. Migration of skilled workers from Asia to the United States, Canada, the United Kingdom and Australia is common, especially among students and among IT skilled workers.

3.7.2: Semi Skilled Migration

Semi skilled workers are partly skilled or trained but not sufficiently so to perform specialized work. Generally the construction companies, plantation companies recruit semi-skilled workers world wide. They need not to pay hi-fi salaries like skilled workers.

3.7.3: International Migration from Independent India

Two distinct types of labour migration have been taking place from India since independence:

- People with technical skills and professional expertise migrate to countries such as the USA, Canada, UK and Australia as permanent migrants (since the early 1950s).
- Unskilled and semi-skilled workers migrate to oil exporting countries of the Middle East on temporary contracts, especially following the oil price increases of 1973–74 and 1979.

The emergence of India as an information superpower is definite. As a major part of the young Indian professionals are working in several information technology based companies, information technology enabled service companies, software based companies, which have their headquarters in other countries outside India, the future demand for the work force suggests that countries like India and China would supply to the requirement of skilled labour pertaining to the information technology sector, industrial sector, telecom sector, electronic sector, etc. The role of migration in globalisation suggests that India is going to be among the next economic superpower in the forth coming decades.

3.7.4: Some of the recent trends in migration of labour:

- The destinations of labour migration are changing.
- The migration of labour becomes temporary.
- The migration of labour is exhibiting a trend where more women labours are on the move.
- The migration of labour is tipping the scale in favour of the unskilled or semi-skilled labour.
- The migration of labour is not uniform in nature.
- The migration of skilled labour raises the total production and the gains in the developed and developing countries.
- The migration of skilled labour increases the effective use of resources across the world.

- The migration of skilled labour boosts business endeavors and rejuvenates the sagging economies of Europe, Asia and helps the United States to have sustainable growth.
- The migration of skilled labour increases the amount of investments, savings, and the formation of the human resources.
- The migration of skilled labour increases the remittals to the other under developed countries.
- The migration of skilled labour gears up the speed of innovation.
- The migration of skilled labour increases the per capita income in turn boosting the gross domestic product of the host country.

Beginning as a filter in the 1950s, the skilled migration to the developed countries picked up in the post-mid-1960s, and became more prominent with the more recent migration of the IT workers, and nurses in the twenty-first century, contributing to the concentration of skilled Indian migrants in the US and Canada, the UK and other European countries, Australia and New Zealand. Side by side with this skilled migration to the developed countries, the twentieth century had also witnessed large-scale migration of unskilled and semi-skilled Indian labour to the Gulf countries in west Asia.

In the developed countries today, the focus on the Indian skilled migration remains in the United States, with up to 80 percent of Indian skilled migration to all developed countries. Indian immigration in the US, which constituted a minuscule of less than 1 percent of global immigration from all countries during the 1950s and 1960s, crossed a mark of 7 percent in 2004. Even in 2003, when security concerns in the post 9/11 phase had brought in a restrictive immigration phase in this country, Indian share amongst global immigrants thus continued to increase (from 6.7 percent in 2002 to 7.1 percent in 2003). In the two top categories of skilled immigrants in 2001, viz., professional and technical, and executive, administrative and managerial occupations, Indians occupied very high proportions of 24 percent and 11 percent respectively. In 2003 and 2004, one in every four global immigrants with an occupation has been an Indian (25 percent for 2003, and 24.7 percent for 2004). The 1965 amendments to the US Immigration and Nationality Act, which formed the basis of all these, remained the principal determinant of Indian skilled immigration into the US for one quarter of a century between 1968 and 1992. The new legislation gave priority to highly trained and educated professionals, at least for the first seven to ten years explicitly.

As a result, urban, educated, and English speaking masses of Indian population became distinctly visible in the US, carrying a large share of India's human capital to the U.S., and causing brain drain for India because, as Jensen (1988, 280) recorded, almost a hundred thousand engineers, physicians, scientists, professors, teachers, and their dependents had entered the U.S. by 1975. India's brain drain to the US had become less after the mid-1970s. After 1992, it was the relatively less noticeable route of temporary migration that started to become predominant. The 1990 Amendments in US immigration law, brought into effect in 1992, explicitly favoured the building up of the human capital capabilities of America by fulfilling its current and future requirements of highly skilled knowledge workers. These amendments had few restrictive clauses, like the introduction of a new definition for the highly skilled temporary workers, viz., the well-known nonimmigrant H1-B visa category, with an annual cap of 65,000 visas per year worldwide etc.

The US Senate had to clear a bill for a limited expansion of these visas to 337,500 for the three-year period from 1999 to 2001. This was because the US had faced a decline in key undergraduate science degrees, and due to this there was an acute shortage of staff in high technology industries like software development. In 1998, two out of every five H-1B visas (42 percent) were issued to Indian IT software professionals. After 2001, the number of H-1B visas issued to Indians went down because of post-9/11 security concern in the U.S. The subsequent recession also burst the IT bubble and the skilled manpower need was drastically gone down. But now the U.S. government has been under continuous pressure of different lobby groups, including the American industry and business to increase the H1-B visa limit once again.

Only the skilled Indian professionals are not migrating to the developed countries, the Indian students are also migrating temporarily to the developed countries for their studies. Infact the number of Indian students in USA is the highest than the students from other countries. Data collated by the US Institute of International Education's *Open Doors 2005* survey revealed that in 2004-05 India retained its No. 1 position in the US university enrolments (followed by China, Korea, Japan, Canada, and Taiwan) for the fourth year in a row. In 2005-06, the numbers of applications from Indian students have been reported to have registered a 23 percent increase over the previous year, the highest amongst all countries (*Hindustan Times*, 23 March, 2006). To serve the dual purpose of sustaining an expensive higher education system, and meeting *short-term* labour shortages, both the UK

and the US, with other developed countries following suit, have adopted a policy of allowing foreign students in their universities respectively, to stay on and work, rather than return to their countries of origin on completion of their degrees (*The Hindustan Times*, March 2005; Khadria 2006). In addition, the destination countries gain political mileage in the form of a bonus that the foreign students become their long-term ambassadors in the international political arena. India has thus become a destination for internationally renowned educational institutions shopping for knowledge capital – i.e., to woo the Indian student (*The Hindu*, Nov 26, 2000). In October 2000, four countries had mounted education fairs in Delhi and other Indian cities, and since then it has become a regular feature of bilateral relations in India. Indian students accounted for 4 percent of all foreign students enrolled in tertiary education in OECD countries in 2001. Almost eighty percent of Indians migrating abroad for higher education went to the US in 2001, occupying a 10 percent share amongst all foreign students enrolled in the US. In 2004, this share of Indian students amongst all foreign students in the US went up to 14 percent.

The Socio-economic and political profile of the skilled Indian diaspora in the developed countries reflects the empowerment of the Indian migrants in the developed countries over time. Within the European Union (EU) – the largest economic entity in the world today – two-thirds of the entire Indian migrant community still resides in the UK. The Indian community is one of the highest-earning and best-educated groups, achieving eminence in business, information technology, the health sector, media, cuisine, and entertainment industries. In Canada, with just 3 percent share in a population of 30 million, Indo-Canadians have recorded high achievements in the fields of medicine, academia, management, and engineering. The Indian immigrants' average annual income in Canada is nearly 20 percent higher than the national average, and their educational levels are higher too. In the east, there are 30,000 Indian citizens in Australia and New Zealand and they are engaged in domestic retail trade, medical, hospitality, engineering, and Information Technology sectors. Countries like Japan, Korea, and Singapore are also trying to attract Indian talent. Migration of Indians to the US has been the backbone of Indian scientific diaspora formation there. No other diaspora preceding the Indian numerical rank acquired such positions in USA. It is hardly surprising therefore if in terms of the place in the US economy indexed by employment, occupation, education and income of the immigrants, the Indian diaspora had continued to rank amongst the top all through the 1970s till the present. There are over 1000 US-based organizations of Indians in North America, with

branches in Canada. These represent various interest groups in India, ranging from regions to states to languages, etc. Religion, caste, cultural and linguistic identities find significant space in these associations and networks. However, some professional groups are involved in grass-root development activities in India as well as in the welfare of their members abroad in the professions. India had a moderate number of universities at the time of independence but it lacked highly trained scientific and technical human resources and an institutional base in science and technology (S&T) to embark upon the industrialization and modernization planned under the Nehruvian leadership of the early decades. The first Indian Institute of Technology was established nine years after India's independence, at Kharagpur in 1956. The five IITs, modeled on the Massachusetts Institute of Technology (MIT), were created to train the best engineers who would play an important role in assimilating technological change and revolutionizing India's industrialisation programme. The IITs not only created space for hundreds of faculty members, but also attracted a good number of them back from abroad. As all the IITs in the beginning had intellectual and material support from various advanced donor countries such as the USA, USSR, Germany, and the UK, they introduced the guest faculty system from the respective countries. The exchange put Indian scientists in touch with the cutting-edge of technological research and advanced training (Indiresan and Nigamm 1993). The Council for Scientific and Industrial Research (CSIR) which instituted a National Register of Scientific and Technical Personnel in the late 1940s, created a special section – the Indians Abroad section of the National Register in 1957 towards this end, which of course did not succeed.

The migration of the highly skilled professionals from India to the developed countries was first seen as brain drain when the Nobel Prize of 1968 in medicine brought global recognition to gifted Indian scientists Har Gobind Khorana who had migrated to the United States and naturalized as an American citizen around that time. However, the IT bubble burst in the wake of the American recession and hordes of techies were sent back to India, having lost their H-1B visa contracts.

Western European countries in the EU, including the UK looked as a more sustainable destination, and East/South East Asia looked at as an emerging destination. However, Germany's Chancellor Gerhard Schroeder's scheme of issuing 20,000 Green Cards to computer specialist from non-EU countries, mainly India (between 7,000 to 10,000) and

Eastern Europe launched in August, 2000. Eventually, opportunities of employment multiplied within India under the emergence of business process outsourcing (BPO). Now MNCs are moving their capital to India rather than labour moving out of India. In fact, the latest NASSCOM Strategic Review (2005a) and the NASSCOM–McKinsey Report (2005b), apprehends huge shortage of IT-related as well as BPO-related skills in India. The report said that currently only about 25 percent of the technical graduates and 10–15 percent of general college students were suitable for employment in the offshore IT and BPO industries respectively, and estimated that by 2010 the two industries would have to employ an additional workforce of about one million workers near five Tier-I cities, viz., New Delhi, Bangalore, Hyderabad, Chennai and Mumbai, and about 600,000 workers across other towns in India (*Economic Times*, 17 Dec, 2005) will get jobs. On talent supply, it is said that India would need a 2.3 million strong IT and BPO workforce by 2010 to maintain its current market share. The report projected a potential shortfall of nearly 0.5 million qualified employees – nearly 70 percent of which would be concentrated in the BPO industry.

3.7.5: High-Tech Migration

While information technologies have been used to control migration across international borders, international migration has facilitated the development of information technologies of the “new economy” that have boosted globalisation. To encourage the information revolution which actually increasing the growth of their economies, the US, Canada, Australia, New Zealand, Germany, Ireland, the U.K. and the Czech Republic have planned special visas and programmes to attract highly skilled computer programmers and other IT professionals from developing countries such as India and China as well as East European countries and Russia. Moreover, a rapidly growing cyberspace of multiplying websites developed by these and other IT workers has globalized the market for skilled workers themselves as high tech job recruiting and placement has gone online.

The impact of international migration on the development of information technologies in USA is displayed in the epicentre of the information revolution, Silicon Valley. For example, about a third of the valley’s engineers are foreign born. Chinese and Indian immigrants to Silicon Valley alone have started some 2,700 companies since 1980, accounting for a sixth of the total sales seen in the valley in the last 20 years (Zachary 2000; Saxenian 2002). None other than Federal Reserve Chairman Alan Greenspan has

argued that the 11 million immigrants who came during the 1990s have been crucial to sustaining the US' longest-ever economic boom.

Largely due to the influence of the IT lobby, Congress passed the "American Competitiveness and Work Force Improvement Act" in 1998. This legislation increased the number of temporary employment (H-1B) visas from 65,000 to 115,000 per year for fiscal years 1999, 2000 and 2001. Under the H-1B program, employers sponsor workers for a three-year visa that is renewable to six years total.

The role of the IT industry in immigration to the U.S. is highlighted in the changing demographics of the recipients of visas for temporary workers. Of the H1-B visas granted in 1999, 53.3 percent were for systems analysts and programmers, 4.9 percent for electrical engineers, 3.4 percent for other computer occupations. Moreover, the major countries of origin had shifted dramatically as well. While Great Britain and the Philippines were the top countries of origin in 1989, Indian nationals received 55,047 of the 116,695 H-1B visas in issued in 1999. British high-skilled workers came in second with 6,665 and China third with 5,779. After the internet economy bubble popped, post-Sept 11th uncertainties over the economic and security environments reduced hiring of H1-B workers and foreign student enrollment in U.S. universities dropped off. Other countries were waiting with open arms for experienced high-tech workers leaving American shores and computer science and engineering students opting against study in the U.S. For some time now, Canada, Australia and New Zealand have had immigration policies based on point systems, in which desired skills count toward attaining permanent resident status. Additionally, the New Zealand Immigration Service has a special unit in India to help IT professionals interested in immigrating.

3.7.6: Body Shopping and Onsite/Online Labour Migration

Basically there are two types of IT professionals who are migrated to other countries. One is called the Body Shoppers and another is called as Onsite Labour. Body shoppers or Body Migration means the physical migration. The software professionals hired through body shopping are required to be present physically at the site of work. Body shopping is generally done through some kind of recruitment agencies in India for providing people on a temporary basis.

Whereas On-line Labour or On-line IT professionals can have three types of features:

i) the programmers in India are connected to clients' machines in the US through 64 Kbps and above satellite links and Internet/e-mail; ii) where the situation demands, the client is able to monitor the progress on a continuous basis, implement quality checks and communicate with the programmers and analysts, as if they were on site; iii) since the US and India have an average 12-hour time zone difference, the client enjoys—for certain software projects—virtual round-the-clock office hours. Lots of companies in India organize programmers to provide on-line software labour to the companies in the United States and other countries. By December 1998, more than 109 Indian software firms had acquired international quality certification (Nasscom 1999). Some well-known U.S. firms that figure in the client list of these Indian firms are Intel, Merrill Lynch, AT&T, and IBM among many others. According to *The Economist* (1996, p. 32), "More than 100 of America's top 500 firms buy software services from firms in India, where programmers are typically paid less than a quarter of the American rate." By 1998, Indian software providers have already captured an 18.5 percent market share in global cross-country customized software work, and the Indian IT sector has consistently achieved more than 50 percent compounded annual growth rate since 1991 (Nasscom 1999). National Task Force on Information Technology—a support arm of the Indian government—has set a target of \$50 billion of exports by 2008 (Nasscom 1999). And the export earnings in FY08 stood at approximately USD 40.0 billion with a growth of 36 percent. It must be noted that these US dollar earnings assume even bigger proportions on conversion into the Indian currency (Rupee) in terms of their purchasing power. The software relationship between India and the U.S. is particularly significant. Just as India is becoming the largest supplier of software labour to the United States both in terms of body shopping and of online labour. And U.S. has turned out to be the largest source of foreign exchange earnings for India.

The mutual importance of the US and India for each other is reflected in the following statement of one of my informants, a spokesperson for the National Association of Software and Service Companies (NASSCOM): we can't deny the fact that the U.S. is a major market for our software industry. So we just can't deny the fact that it's the largest market in the world. If the Indian software engineers were to go back home, the U.S. IT industry would collapse the next morning. Infact India has become a powerful supplier of IT professionals and about 70,000 H1B visas were offered to IT specialists from India to USA in recent years. Before 2001, UK was the best option for migration for the Indian IT

professionals. But after 2001 USA has become first preference of the *IT* professionals for migration destination. In 2000, 19.7 percent of work permits granted by the UK went to the computer industry, which was the six times bigger than the numbers in between 1995 and 2000.

3.8: Migration to Industrialised Countries-An overview

Although labour flows to the industrialised countries have continued for a long time, information on them is insufficient. Whatever analyses have been carried out to date on the composition of these flows is based on immigration statistics of destination countries. Nayyar (1994) provides an analysis of the trends in migration flows from India to three industrialised countries, the USA, Canada and the UK, for the period between 1951 and 1990. The USA received the largest number of Indian emigrants.

The general trend shows that Indian immigration, which constituted a negligible proportion to the total immigrants in the USA and Canada, increased rapidly during the 1960s and 1970s. Of the total immigrants in the United States and Canada, Indians constituted migration, the impact on pro-poor growth should be maximised through appropriate institutional and policy measures.

Four major categories of interventions can be envisaged, which will differ for internal and external migration. These categories relate to:

- addressing underdevelopment and improving the synergy between migration and development;
- improving labour market outcomes;
- ensuring basic entitlements to migrant workers; and
- improving the social and political environment for migration.

The proportion of Indian immigrants to the UK declined drastically from around 20 percent during the 1960s to about 10 percent during the 1980s. Migration flows to industrialised countries during the 1990s, considered as the most critical phase of contemporary globalisation, are of great importance both for theoretical and policy reasons. However, there is hardly any detailed analysis of the changing nature of this flow. The information in relation to major destinations like USA, UK, Canada and it is evident that the annual inflow of Indian immigrants in the USA and Canada increased in the 1990s. The average annual inflow of Indian immigrants to the USA increased from 26,184

persons during the 1980s to 38,330 (3.5 percent of total immigrants) during the 1990s. In the case of Canada, the average annual inflow of Indian immigrants increased from 7,930 during the 1980s (6 percent of its total immigrants) to 13,770 during the 1990s (7 percent of total immigrants).

Table 3.6: Stock of India-born Population (2001) in Different Countries

| | |
|-------------------|--------------------------|
| USA | 11,00,000(Approx) |
| Canada | 2,40,560 (1996) |
| UK | 8,84,000 |
| France | 60,000 (approx) |
| Netherland | 8,265 |
| Germany | 37,000 (approx) |
| Australia | 95,455 |

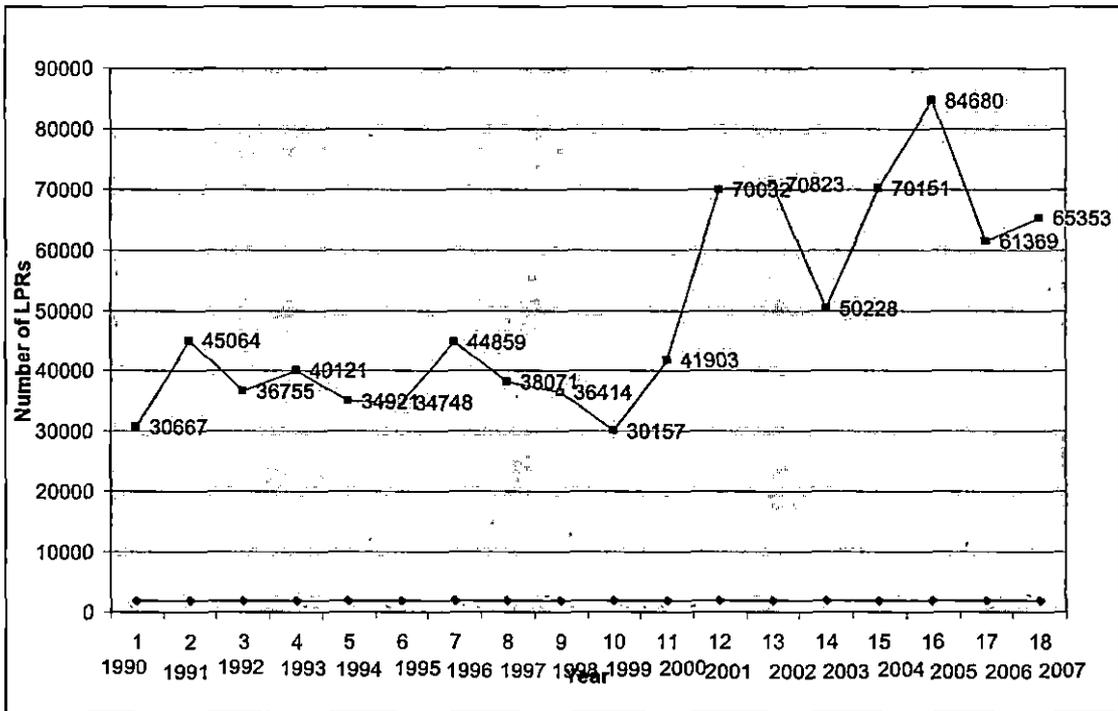
(Source: DOL Govt of India, 2001)

After 1990 there was a significant flow of Indian professionals, especially IT professionals, to countries such as Australia, Germany, Japan, and Malaysia. For instance, nearly 40,000 Indians migrated to Australia, accounting for 4.1 percent of total immigrants during this period. Migration from India to industrialised countries, though modest in scale, grew steadily between 1950 and 2000. Nearly 1.25 million Indians have migrated to the principal destinations. The flow was especially impressive during the 1990s, a period that incidentally witnessed tightening of immigration policies in many industrialised countries. The average inflow of Indian immigrants to these principal destinations have in fact increased from around 10,300 persons per annum in the 1950s to around 60,000 persons per annum during 1990s. The growth during the 1990s is especially striking as it took place in a period when immigration laws were made more restrictive in many industrialised countries. *Occupational distribution and skill composition* analysis of the occupational distribution of the Indians immigrating to industrialised countries shows that in the first half of 1970s, persons with professional expertise, technical qualifications and managerial talents constituted a large proportion of the emigrant workforce from India to the USA.

3.9: Some Other Migration Statistics and Impact of Globalisation on Migration

The Indian foreign born accounted for about 4.2 percent of all lawful permanent residents living in the United States in 2006. According to data from the Office of Immigration Statistics (OIS), the Indian foreign born accounted for 4.2 percent (510,000) of the 12.1 million lawful permanent residents (LPRs, also known as green card holders) living in the United States in 2006. They are the third-largest LPR group after the Mexican born (27.3 percent or 3.3 million) and Filipino born (4.5 percent or 540,000). About 886,000 Indians have gained lawful permanent residence in the United States since 1990. Between 1990 and 2007, 886,316 Indian-born immigrants obtained lawful permanent residence in the United States (see Figure 12). This figure shows that the impact of globalisation had boomed up the permanent migration of Indian skilled professionals to USA. The Indian born accounted for 6.2 percent (or 65,353) of the total 1.1 million immigrants who received lawful permanent residence in 2007.

Figure 3.3: Number of Indian Born Who Received Lawful Permanent Residence in the United States, 1990 to 2007



(Source: US Dept. of Labour, 2008)

Nearly half of Indian-born lawful permanent residents in 2007 were employment-sponsored immigrants. Of the 65,353 Indian born granted LPR status in 2007, 43.9 percent (28,703) were employment-sponsored immigrants, 27.9 percent (18,205) were immediate

relatives of US citizens, 23.8 percent (15,551) were family-sponsored immigrants, and 4.1 percent (2,680) were refugees. Indian-born lawful permanent residents accounted for 2.4 percent of all those eligible to naturalize as of 2006. Indian-born LPRs are the 10th-largest group of permanent residents eligible to naturalize. According to OIS estimates, of the 8.3 million LPRs eligible to apply for citizenship as of 2006, 200,000 (2.4 percent) were born in India.

The Indian born were the fourth-largest group of student and exchange visitors admitted to the United States in 2006. In 2006, the United States admitted 69,790 student and exchange visitors and their families from India, or 6.0 percent of the total. They are the fourth-largest student and exchange visitor group after the South Korean born (11.6 percent or 135,265), Japanese born (7.7 percent or 90,490), and Chinese born (6.0 percent or 70,503). Trends in the annual outflow of migrant labour from India to the Middle East for the period 1976 to 2001 based on the available statistics, although an underestimate, are outlined in Figure 3.3. The data show that out migration increased at a phenomenal rate through the late 1970s, peaking in 1981. From 1979 to 1982, nearly 234,064 persons per annum had migrated from India to the Middle East for employment purpose. The period during 1983 to 1990, however, witnessed a significant reduction in the number of Indian workers migrating to the Middle East with the average number of persons migrating per annum declining to 155,401. Such a decline could mainly be attributed to the reduction in demand for migrant workers in the Middle East emanating mainly from the oil glut of the early 1980s. Viewing this trend, apprehensions were expressed in many quarters as to whether Indian labour migration to the Middle East would be sustained in a significant manner in the next couple of decades.

These apprehensions were further aggravated by the events relating to the Gulf crisis of 1990-1991 which forced nearly 160,000 Indians to return home from the warzones in distressed conditions (Sasikumar, 1995). Contrary to apprehensions of declining out migration, evidence indicates that labour migration from India to the Middle East has picked up substantial momentum since the initial hiatus in the early 1990s. During 1992–2001, nearly 360,000 persons per annum migrated from India to the Gulf countries. This is significantly higher than the quantum of labour outflows from India attained even during the ‘Gulf boom’ of the late 1970s and early 1980s. Within India, migration to the Middle East originates from a number of states. A detailed review of the migration literature in India, however, reveals Kerala has always had a dominant position in terms of the export

of manpower to the Middle East. Three states, Kerala, Tamil Nadu and Andhra Pradesh together contribute to about 60 percent of those who have obtained emigration clearance. In terms of the share of these prominent states, there has been a steady decline in Kerala's contribution where as the share of Tamil Nadu and Andhra Pradesh has registered considerable increases. This could also mean that larger numbers of people who are migrating from Kerala are now engaged in skilled/professional related activities in the Middle East where as there is a larger outflow of unskilled labourers who require emigration clearance emigrate from the other states. Return migration is an inevitable aspect of temporary or contract migration. In the case of Indian labour migration to the Middle East, return migration has assumed important dimensions since the mid 1980s.

After 1991 and in that period US had announced an increase in the H1B visa or the work permit visa from a mere 65,000 to 2 lakh for the Indian IT professionals and then Germany also announced a raise in its visa numbers to 20,000, which are specifically for IT related jobs. This move, in fact followed the German Chancellor's call to Indian IT professionals to take up opportunities in his country. Not to be left behind, Japan and Australia also followed suit. Though the UK was already in the reckoning, it was only in recent times that it is pitching for IT in a big way. The Japanese proposal, which too came in during its Prime Minister's visit to Bangalore, includes issue of multiple-entry visas valid for three years to Indian IT specialists.

A National Association of Software and Services Companies (NASSCOM) report says that in 1991, when the exports of the IT companies were close to \$100 million, almost 95 percent of the exports were to the USA with Europe accounting for the rest. Now, at the end of the decade, when software and services worth \$2.65 billion dollars were exported, almost 23 percent went to Europe and 60 percent to the US. The figure is expected to rise by another 10-15 percent in the next five years in favor of Europe. Still, many were cryptic when questioned about a shift in exports from the US to newly opened European and other traditionally closed markets such as the Middle East. But Indian professionals, who have always worked to stretch their horizons towards newer and better opportunities, seem to welcome the opening up of new opportunities with its associated challenges. This is evident from the fact that software companies are beginning to see a steady increase in their software exports to Europe and other countries. The US no longer has a monopoly hold over our software exports.

Though IT in a larger sense consists of many related fields like e-commerce, telecom and wireless, when it comes to software exports, the perceived notion is that e-commerce related exports form a large chunk of the US market and wireless application software dominate the European market. By and large, e-commerce solutions dominate the US market whereas wireless holds the swing in the European market. Embedded technology solutions form a core area of the European segment and we have had excellent track record in this area. A marketing professional from a leading software company says that his company ventured into the German market in the area of Y2K and e-biz solutions even before the now hyped up visa boom. He admits that though his company faced problems initially, it is now being acknowledged for the quality project carried out and is now one of the sought after solution providers. The company's software exports to Europe, mainly to the UK and Germany, account for 30-40 percent of its revenues. And, this figure is expected to improve in the coming years.

According to a report, the Indian IT sector can clinch a major share of the \$2-3 trillion market for e-commerce and other IT enabled services such as medical transcription and call centers including many outsourcing works. Another report, in fact says that IT is now heading to be the major revenue earner and could contribute significantly to the country's GDP in the coming years. Though, many of them attribute this to the cheap labour available, it's an established fact that recognition has come at last although late for all the hard work and quality inputs.

India has one of the brightest, skilled, experienced, English speaking pools of Software & Hardware professionals in the world. The Indian IT professionals are adaptable, hard-working, intelligent and dedicated and they have proven their courage all over the globe. Top Indian and Multi-national organisations are finding consistently effective, experienced and competent IT Software Programmers, Specialists and Administrators for work in U.S., Europe, Australia, Far-East and India.

3.10: Migration of Software Professionals from Indian IT Companies in Globalised Regime

Indian IT professionals are high in demand in all over the world. After 1991 the establishment of IT Companies in India and in other developed countries the number was gone up drastically. The rate of migration of skilled software professionals from Indian IT companies was also very high in that period. The Indian IT professionals are well recognised by USA, Canada, Australia, New Zealand and Gulf Countries. The German Green Card, the American H1-B visa, the British work permit, the Canadian investment visa, the Australian student visa, the New Zealand citizenship, all are encouraging to acquire the Indian talents. USA has become a popular destination for migration of IT professionals. Out of total IT migration from India, 70 percent migration takes place in the USA only. Now the question is: why the IT professionals from India are in a great demand? The main reason is cost to company (CTC) of an Indian IT professional in USA is \$60000-70000 per annum, whereas for an American professional the CTC is near about \$100000. It caters the economy of the software houses. Next reason is the education level of the Indian IT professionals. Indian education system is highly recognised by the world. IITs, IIMs, IISCs, RECs are the reputed Institutions in all over the world. The English speaking capabilities of the students are very good. So for these reasons the demand of the Indian IT professionals is very high. Most of the Indian IT professionals are migrated to USA only. Out of the total migration takes place every year, 70 percent takes place in USA only.

For migration of the IT professionals to USA two types of visas are required. H-1B visa and L-1 visa. Both H-1B and L-1 visas are temporary in nature but the 'Green Card' holders are the permanent residents of USA. Indian technology majors received the maximum number of H-1B work permits (Rediffmail.com, 5th March, 2009), according to the statistics for 2008 published by US immigration authorities.

The figures provided more ammunition to the critics of the H-1B visa programme who have opposed the dominance of Indian firms when it comes to bagging H-1B visas.

The statistics is for the fiscal year which ended September 30, 2008. In 2007 also Indian companies topped the list of H-1B recipients. Six of the top 10 visa recipients that year were based in India.

Seven Indian firms (Wednesday, Feb 25 2009), including fraud-hit Satyam, are among the top 10 companies which were issued maximum H1B visas in 2008, allowing professionals to work in the US for up to six years. These companies include IT firms Infosys, Wipro, fraud-hit Satyam, Tata Consultancy Services (TCS), Cognizant and IBM India, and engineering and construction major Larsen and Toubro, which altogether received 11,944 H1B work permits in 2008.

On April 1, 2009 the US Citizenship & Immigration Service (USCIS) began accepting applications for H-1B visas for skilled workers. The number of applications revealed US employers' current appetite for overseas workers. Because of the recession, the overall volume of applications is expected to be down from the previous two years, in which the offices were instantly flooded with applications from tech companies, outsourcing firms, school districts, and a variety of other employers. Still, it's widely believed that the 85,000 visas available under the cap will be used before the fiscal year begins on Oct. 1. That's because there is some pent-up demand from 2008 applicants who didn't receive visas, and because employers say there are positions they can't fill with U.S. labour, even as unemployment rises.

The Senators of Govt. of USA have planned to introduce legislation in the US Congress to change the programme, as they feel it has benefited the foreign workers. The stimulus bill, the American Recovery and Reinvestment Act, prevents the US companies receiving federal bailout money from hiring those on H1B visas. It is being argued that at a time when as many as 3.6 million Americans have lost their jobs in recession, the US companies are given preference to natives rather than hiring foreign workers

Four Indian IT outsourcers - Infosys Technologies, Wipro Technologies, Satyam Computer Services and Tata Consultancy Services (TCS) - dominate the list of companies who won H-1B visas in 2008 (Washington, March 4, 2009, IANS). The four together used more than 10,000 of the visas for skilled professional limited to 65,000 foreign-educated workers per year, according to the US Citizenship and Immigration Services (USCIS). Microsoft was the only US company with more than 1,000 H-1B visas, while Cognizant Technology Solutions and Cisco Systems made the top 10 list of H-1B visa users. Other US companies grabbing H-1B visas in 2008 were Google, Oracle, Yahoo, Motorola, IBM and Apple.

Leading the list of 2008 H-1B visas was Infosys Technologies with 4,559 visas. It was followed by Wipro Technologies with 2,678 H-1B visas, Satyam Computer Services with 1,917 H-1B visas and TCS with 1,539 H-1B visas. Microsoft clocked in with 1,307 H-1B visas in 2008. Cognizant Technology Solutions (467 visas) and Cisco Systems (422) were the only other US companies making the top 10 list of H-1B users. Other notable US technology firms using H-1B visas in 2008 included Google (207), Oracle (168), Yahoo (139), Motorola (112), IBM (104) and Apple (70).

American technology companies use the H-1B visas for a temporary work programme allowing American companies and universities to employ foreign guest workers who have the equivalent of a US bachelor's degree in a job category that is considered by the USCIS to be a "specialty occupation." The H-1B programme has been dogged by controversy over the last decade as Silicon Valley companies have repeatedly urged Congress to raise the cap on the number of visas allowed, currently set at 65,000 visas per fiscal year. Lawmakers have resisted, citing concerns over fraud in the H-1B programme.

In October 2008, a USCIS report was published where it was reported that the H-1B programme had a more than 20 percent violation rate. The fraud identified in the report included jobs not being located where employers claimed, H-1B visa holders not being paid the prevailing wage, forged documents, fraudulent degrees and "shell businesses."

Even before the report was issued, three senators, Chuck Grassley of Iowa, Dick Durbin of Illinois and Bernie Sanders of Vermont were seeking reform of the H-1B visa programme.

The Programmers Guild and Hire Americans First groups opposed H-1B visa programme, always cite the dominance of Indian firms to oppose it. They advocate that only the US business should be allowed to bring workers on H-1B visa.

Critics point out the difference between Indian companies and the US companies which use the visa. Most of the US companies will keep the H-1 workers and sponsor them for Permanent Residence. But the Indian companies bring them for only a brief period with low wages. They will get training in the offices of US clients, and go back after some time.

With the expertise gained from the US they can work for the US companies from India.

Meanwhile, companies and job seekers are again gearing up for applying for the H-1B visas, which will become available in financial year 2010, which begins in October. The

USCIS will receive application for the 65,000 visas on April 1, 2009. If they get more applications as in earlier years, winners will be selected in a lottery.

Every now and then, the H1B visa has been in the eye of a storm as anti-immigration lobbies get to work. In recent times, however, a lot of attention is being directed at L1 visas also, which are also used by Indian IT services providers. Now the question is what is H-1B and L1 visa? A brief description of these two visas is discussed below.

3.11: A Brief Idea of H-1B & L-1 Visa Statistics for the IT-Professionals for Migration to USA

For migration to the USA it is very essential for the IT professionals to get H-1B & L-1 visa from the US Govt. Basically the software firms who have their business in India as well as in USA apply for the bulk of H-1B and L-1 visa. As because 70-80 percent of IT migration takes place USA only ,so these visa statistics are very important.

3.11.1: The H-1B Visa

It is one of the most regulated immigration visas to the US. This is a temporary work visa. The Professionals are allowed to take wage employment for six years under this visa. If an H1B loses his/her job, he/she has to return to India immediately. If he/she changes job, an H1B transfer from the new employer is required. Any company that has more than 15 percent of its workforce on US soil on H1B visas is called an H1B Dependent company. (All large Indian software houses for instance would be H1B dependent).Previously applicants had to pay Rs.1, 06,000 towards fees. Now they will have to pay Rs.1, 98,000 as per the new decision taken by US Government (Jhunjhunwala, The Statesman, 16th Sept, 2010) H1B employers have to show two things: An NDA (non- displacement attestation): That is, companies have to show that no American employee with similar skill sets was fired 90 days before or after an H1B with those skill sets was hired. A Recruitment Attestation: That is, show a "good faith" effort to find similar kind of employee locally. Some minimum wage requirements have to be met.

USA is going to give only 65000 H-1B visa for the skilled professionals in the year 2009.Due to financial recession and security purpose the US Govt. has taken this decision. It was 1, 20,000 in the year of 2006. At the end of 2006, more than 1 million skilled

professionals (engineers, scientists, doctors, researchers) and their families were in line for a yearly allotment of only 120,000 permanent resident visas.

Regarding the elimination of H-1B visa by United States in recent days the Foreign Secretary of Govt. of India Shiv Shankar Menon said in Washington (Times of India, Feb, 2010) that there is absolutely nothing India can do about it because it's the sovereign prerogative of the US.

The US move could adversely affect Indian IT professionals who have been the major beneficiaries of the programme.

While there were about 124,000 applications in 2008, the number this year i.e in 2010 may cross 150,000, Michael Phulwani, one of the first Indian origin immigration lawyers in the US, told IANS. Many will also be vying for the 20,000 H-1B visas meant for foreigners with US-earned masters' or higher degrees. "About 60-70 percent of all applications are expected to be on behalf of Indians," said Naresh Gehi, a New York lawyer, who is filing about 40 applications. The flow is unaffected by the recent downturn in the US economy or improved prospects in India, he believed.

Recently USCIS has issued a new rule that prohibits employers from filing more than one petition for a single employee in a fiscal year. Indian outsourcing companies attracted criticism recently when the federal government released data showing that they accounted for nearly 80 percent of the visa petitions approved last year for the top 10 participants in the H1B programme.

Infosys had 4,559 and Wipro 2,567 approved visa petitions in the programme in 2008-09, which was initially set up to allow companies in the US to import the best and brightest in technology, engineering, and other fields when such workers are in short supply in America. Many companies, from India and elsewhere, get around the H1B visa caps anyway by taking the L-1 visa route, meant for intra-company transfers.

With US immigration authorities getting enough applications for H-1B visas coveted by Indian IT professionals (April 09, 2008) within a week, a random lottery would pick the 65,000 lucky winners for 2009. The USCIS announced that it had received enough petitions for the 65,000 H-1B visas available for fiscal year 2009.

A recent study (NFAP Policy Brief, March 2010) was conducted by the National Foundation for American Policy (NFAP) shows that American businesses are finding difficulties to fill skilled positions even as H-1B visas which bring foreign professionals and are creating jobs in the US technology companies.

Two influential US senators, Democrat Dick Durbin and Republican Chuck Grassley, meanwhile, have questioned 25 top H1-B visa users, including nine Indian firms about their recruitment process for professional workers. According to their views the H-1B programme should not allowed to become a job-killer in America. USA needs to ensure that firms are not misusing these visas, causing American workers to be unfairly deprived of good high-skill jobs. The nine Indian companies to get the questionnaires by the US Senators were Infosys, Wipro, Satyam, Tata Consultancy Services, Cognizant Tech Solutions, Patni Computer Systems, I-Flex Solutions, Larson & Toubro Infotech Ltd and Mphasis Corporation (*LANS*).

Table 3.7: H1B visa scenario in USA (2001-2009)

| | |
|---|----------------|
| H1B visas issued in 2001 | 163,600 |
| H1B visa extensions in 2001 (not counted under cap) | 342,000 |
| H1B visas issued in 2002 | 79,100 |
| H1B applications pending from 2002 | 18,000 |
| H1B extensions issued in 2002 (not counted under cap) | 215,000 |
| H1B cap in 2002 | 195,000 |
| H1B cap proposed in September 2003 | 65,000 |
| H1B cap proposed in September 2006 | 65,000 |
| H1B cap proposed in September 2007 | 65,000 |
| H1B cap proposed in September 2008 | 65,000 |
| H1B cap proposed in September 2009 (May) | 45,000 |
| (*Source: George F McClure of IEEE's Workforce Policy Committee, quoting US Bureau of Labour Statistics) | |

(Source: US Department of Labour, 2009)

Most of the H-1B visas are used by the Indian IT professionals.

3.11.2: The L-1 Visa

The L-1 visa is an "intra-company transfer" visa which is used by the companies who are having their branches in USA. Like Infosys, this is an Indian Company but having branch in USA. When Infosys will transfer IT professionals to their USA branch temporarily, they will apply for L-1 visa. It's a temporary transfer though the visa can and is given for periods of up to 6 years. It requires that the employee going on an L1 must have worked for the company for at least one year. L-1 employees can be paid any agreed-upon salary,

without having to meet U.S. government standards. To be eligible for the L-1 category, the employee must be offered a position in the U.S. as either a "Manager," "Executive" (referred to as an L1A), or a person with "Specialized Knowledge" (referred to as an L1B). Can be used on multiple locations. So typically used for employees who are likely to move from project to project in the US. Based on some qualifications companies can be given Blanket L1s – which allows them to send any number of employees on transfer.

3.12: Recent Threats for the IT Professionals in the USA

Due to current economic recession in 2009, Indian IT companies are also affected immensely like the other sectors. US Government has proposed an amendment to the H-1B visa and L-1 visa to the senate for legislation. It will create a huge problem for the Indian IT professionals to get the work visa in the USA. Due to the amendment of this law the multinational software houses like TCS, Wipro, IBM etc having their offices in India and the USA cannot recruit fresh IT professionals if 50 percent of their employees are already having H-1B visa or L-1 visa. According to some sources TCS itself has near about 3500 employees who have H-1B & L-1 visa. Wipro is having near about 3000 employees who have these visas (Ananda Bazar Patrika, 4th May, 2009). The small IT companies will face a huge problem because they have to bear a huge CTC for the American IT professionals. Florida based IT Company Acclaris has expressed a deep concern regarding this law.

3.13: Indian IT Professionals versus Foreign IT Professionals

The US Govt. is forcing Indian as well as American software companies to hire more American professionals in their firms located in the USA. Mr. Chuck Grassley and Mr. Dick Durban, Senators, US Senate have proposed a bill which has changed the Indian IT industry's recruitment strategy (Venkatesh G., Business World, 11th May, 2009). The legislation of this bill seeks to bar Indian companies that have more than 50 percent of their work force on H-1B and L-1 visas. Durban-Grassley bill will require employers to make a 'good faith' effort to hire Americans first, employers will also have to show that the H-1B worker would not displace an American. This move comes against the backdrop of a US labour department report that altogether 6,00,000 jobs were lost in the month of January 2009. That is the biggest drop in the past three decades, taking the US unemployment rate to 16 percent. Already the USCIS has said that it would only accept H-1B visa applications within the terms and conditions imposed by the recently approved

Employed American workers Act. The proposed bill had become law in the month of May,2009.India’s largest software exporter ,TCS ,plans to double it foreign workforce from the current 10000 over the next five years, while Infosys and Wipro expect to see foreigners make up 10-15 percent of their total employee base in three to five years from about 5 percent at present. Only these numbers would still be minuscule compared to the 1, 00,000 plus employee base of the Big Three, or the fact that were each hiring 40,000-50,000 Indians annually when the market was doing better. Meanwhile, TCS has entered into an agreement with the state of Ohio, by which it will get an incentive package worth \$19 million (Rs 95 Crore) in return for creating local jobs. Similarly HCL Technologies has announced that it is setting up a 400 strong development centres in North Carolina, investing \$3.2 million over next five years.

Table 3.8: Foreign Nationals working in Indian IT Companies (2009)

| Company | Foreign Nationals | Total Workforce |
|----------------|--------------------------|------------------------|
| TCS | 10,000 | 1,43,761 |
| Infosys | 4,718 | 1,04,850 |
| Wipro | 4,890 | 97,810 |

(Source: Companies balance sheets,2009)

If the H-1B visa and L-1 visa legislation bill is passed in US parliament, the ability of Indian companies to leverage their cost advantage will be challenged. Hiring more overseas employees would put more pressure on the IT companies, which earn more than 60 percent of their revenues from the US and are already bruised with clients who are demanding price cut in this recession. In the past three years (i.e.2006, 2007, 2008), the 65000 cap on H-1B visa quotas was snapped up within a few hours of the applications being allowed by the US Govt. According to the USCIS, only 45000 applications for H-1B visas have been filed by 2009. Indian IT companies have not aggressively applied for H-1B expecting a slowdown in outsourcing orders.

NASSCOM have expressed its deep concern over the proposed amendment to the H1B visa legislation taken by Obama Government and the President of NASSCOM Mr. Mittal said “This law is strictly against the fair competition. The amendment is likely to isolate and unfairly target Indian IT companies, restricting the level-playing field”(Times of India,Feb,2010). Contrary to popular belief that Indian IT firms take the majority of H-1B visas, only 11 percent of the total visas in 2008 were taken by IT sector. Previously the

salary of a mid level US programmer was \$60,000(Rs.30 Lakhs) per year in 2004. But today (2009) due to economic recession they are available at \$20,000. So the IT firms are recruiting US professionals rather than the Indian IT professionals. A team of six officials of NASSCOM recently visited the US to prevail upon them over the visa issue and also over the proposed 'Buy America' measure of the Obama administration. The delegation met Senator Chuck Grassley, belonging to Iowa, who is spearheading the H1B legislation. NASSCOM would be working with him to ensure that any fake use of the H1B visas are apprehended and will be stopped and ensure legitimate business users will not be affected.

3.14: Global Human Resource Mobility

One of the consequences of globalisation has been a shift in the global demand for labour which is bound to have a substantial effect on the HR planning of different organisations. In recent years, many richer economies have suffered declining rates of fertility and shifts in types of industry, creating new work opportunities. At the same time, development and democratisation in poorer economies have created a labour force more eager and able to migrate to take advantage of these opportunities. The result has been a significant expansion of global mobility of labour.

Governments in both origin and destination economies are formulating policies, independently, bilaterally and multilaterally, that respond to this shifting of global demand for labour. The introduction of the H-1B visas in the United States and 'green cards' in Germany are recent examples of destination countries opening the door to increasing numbers of skilled non-permanent immigrants. Several origin countries in Asia, including India and the Philippines, also actively seek labour markets for their workers overseas. At the multilateral level, the World Trade Organization's General Agreement on Trade in Services (GATS) makes provision under its 'Mode 4' for member countries to commit themselves to certain defined limits for the temporary inward mobility of service sector workers, although bilateral temporary labour schemes are a more common way in which such mobility is facilitated.

ILO carried out a research project titled "Skilled Labour Migration ('the Brain Drain') from Developing countries: Analysis of impact and policy issues" for the Department of International Development, UK, during 2001/02. The ILO research reviewed the experience of the USA and the UK, and also commissioned a series of studies in selected

source countries in different regions: Bulgaria, Argentina and Uruguay, Jamaica and the Caribbean, India, Philippines, South and Southern Africa and Sri Lanka. Some key features of ILO studies on skilled migration for India are shown in Table 3.9.

ILO Studies on Diverse Impacts of the Brain Drain

Table 3.9: Brain drain profile in India

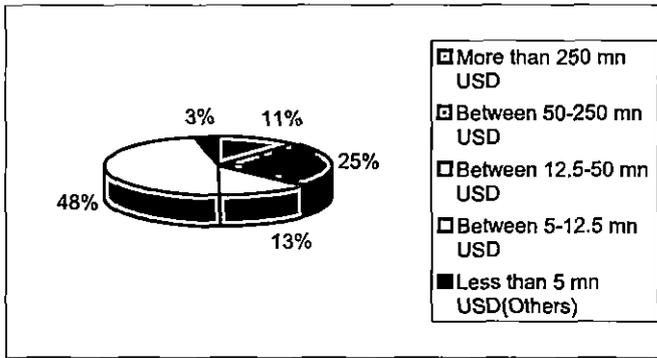
| Features | India |
|--|--|
| Extent | High in absolute numbers but low in relation to national stock |
| Sectors | Scientists, IT professionals, health workers |
| Domestic supply response of human capital | High: large tertiary education infrastructure and output; Local demand for IT workers projected to exceed supply |
| Perceptions | Necessary aspect of globalisation; migrants eventually return. |
| Return | Reasonable levels; persons with experience and capital |
| Diaspora | Diaspora investment in Govt. bonds etc; high tech parks in Bangalore, Karnataka tap diaspora; Liberalisation policies not limited. |

(Source: Khadria , 2002)

3.15: 'IT' Industry in India and Skilled Human Resource Mobility

The Indian IT/ITES industry's contribution to the country's GDP has been steadily increasing from a share of 1.2 percent in 1998 to 5.2 percent in 2007, it has contributed to foreign exchange reserves of the country by increasing exports by almost 36 percent and its direct employment as grown at a CAGR of 26 percent in the last decade, making it the largest employer in the organized private sector in the country. Export earnings in 2008 stood at approximately USD 40.0 billion with a growth of 36 percent. In addition, it also indicates that the IT/ITES industry has significantly contributed through socially relevant products/services and community initiatives in human resource development, education, employability, health, encouraging women empowerment and employment of differently abled and 'out-of-the-mainstream' candidates.

A turnover range of Indian IT/ITES industries in 2008-09 is shown below:



(Source: NASSCOM Annual Report, 2008)

Figure 3.4: Profile of respondent cos. in terms of turnover Range (in numbers) in 2007-08

Figure 3.4 shows that 11 percent of the Indian IT/ITES Companies have more than 250 million USD turnover in 2007-08. Around 25 percent of the Indian software companies have turnover between 50-250 million USD in 2007-08 and 48 percent companies have their turnover between 5-12.5 million USD. This turnover shows the employability of the IT professionals in this sector. The professionals are recruited by the IT companies and after having some experience the professionals either resign from the company and join foreign companies or getting H-1b or L-1 visa to shift to foreign companies.

3.16: Contribution of 'IT' Industries to the Indian Economy after Globalisation

The current and evolving role of IT/ITES industry in India's economy is well established. The sector is proving to be the major growth pole within the services sector, which in turn drives several economic indicators of growth in the country. A few key indicators of direct contribution are:

- Growing share of the country's GDP: The sector's contribution to the country's GDP has been steadily increasing from a share of 1.2 percent in 1998 to 5.2 percent in 2007.
- Boosting the foreign exchange reserve of the country: Export earnings in 2008 stood at approximately USD 40.0 billion with a growth of 36 percent
- Employment generation: Direct employment in the sector is expected to be 2.0 million by end of 2008.
- Additional employment generation: The indirect employment generated, at the rate of 4 additional jobs created in the economy for every 1 job created in the sector, is even more socially relevant as nearly 75 percent of the workforce employed in those additional jobs are SSC/HSC or less educated

- Driving growth of other sectors of the economy: Apart from contributing to the growing income of its direct stakeholders (promoters, shareholders and employees), the IT/ITES industry has had a multiplier effect on other sectors of the economy with an output multiplier of almost 2 through its non-wage operating expenses, capital expenditure and consumption spending by professionals
- Study show that USD 15.85 billion spent by the IT/ITES industry in the domestic economy in 2006 generates an additional output of USD 15.5 billion
- Encouraging balanced regional development: By gradually spreading their business operations to smaller Tier II/III cities, the IT sector (besides generating revenue and employment) is also assisting in improving the supply of talent pool and development of physical and social infrastructure, either directly by themselves or by spurring the Government to action

A study by NASSCOM (NASSCOM Annual Report, 2007) indicated that in 2006, out of the total revenue of 33.55 billion USD of the industry, 15.85 billion USD is spent in the domestic economy via non-wage operating expenses, capital expenditure and consumption spending by professionals. This spending, in turn, generates additional output of 15.5 billion USD via its direct and indirect backward linkages with other sectors and induced effect of wages and salaries. The sectors which are most impacted through this multiplier effect include housing/construction, transport services, communications, consumer durables, food items and clothing.

In the year 2008, for about 30 percent of companies worldwide which have reached Level 5 of Capability Maturity Model Integration (CMMI) are Indian IT/ITES firms. Nearly 75 percent of Fortune 500 and 50 percent of Global 2000 corporations source their technology related services from India with an increasing number of MNCs outlining their investment plans for setting up R&D operations in India.

The IT/ITES companies are providing high growth opportunities for the youth. The industry has created excellent employment and fast track growth opportunities for the younger section of the population and is likely to become one of the largest employers of a growing 'young population' of India. And globalisation has a great effect on the growth of IT sector, free trade among the countries and the migration (brain drain) of IT professionals from India to the developed countries.

CHAPTER-IV

WOMEN IN INDIAN *IT* SECTOR AND THEIR MIGRATION

- **A BRIEF OVERVIEW OF WOMEN *IT* PROFESSIONALS IN INDIA**
- **GLOBALISATION AND ITS IMPACT ON ‘WOMEN *IT* MIGRATION’**
- **GENDER SEPARATION IN THE *IT* SECTOR**
- **GOVERNMENT POLICIES FOR WOMEN CONTRIBUTION IN *IT* SECTOR**
- **WOMEN MIGRATION FROM INDIAN *IT* SECTOR**
- **SCENARIO OF INDIAN WOMEN *IT* PROFESSIONALS MIGRATED TO USA**

WOMEN IN INDIAN *IT* SECTOR AND THEIR MIGRATION

4.1: Introduction

India has emerged as one of the well-recognized developing countries that is serving the Globe with its Information Technology Industry contribution. Women personalities like Indira Gandhi & Indra Nooyee (CEO, Pepsi Co., Worldwide) made India proud by leading from the front. Today, there are many such women who have been the backbone of the recognition that India has achieved in ICT business. A silent revolution is taking place with evolution of women empowerment in the knowledge era. They are getting the best access to Information and Communication Technology (ICT) education, employment opportunity & becoming owners of IT companies.

One of the purposes of this study is to design the role of Women in Information & Communication Technology in India and their migration scenario to look at what could happen in future, if this trend continues and is maintained with gender equality.

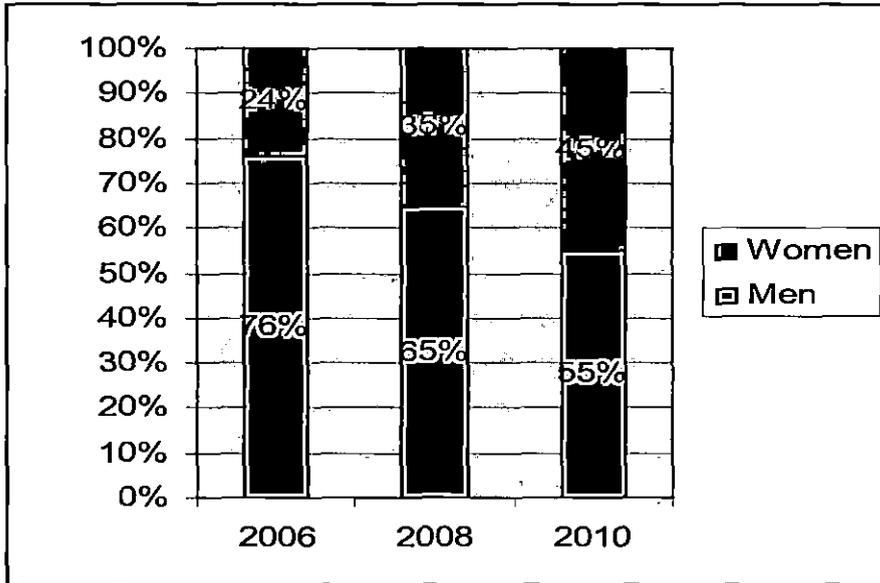
The Indian IT/ITES industry's contribution to the country's GDP has been steadily increasing from a share of 1.2 percent in 1998 to 5.2 percent in 2007. It has contributed to foreign exchange reserves of the country by increasing exports by almost 36 percent and its direct employment has grown at a CAGR of 26 percent in the last decade, making it the largest employer in the organized private sector in the country. In addition, it also indicates that the IT/ITES industry has significantly contributed through socially relevant products/services and

community initiatives in human resource development, education, employability, health, encouraging women empowerment and employment of differently abled and 'out-of-the-mainstream' candidates.

4.2: Women in IT Sector

The growing trend in the number of women employed in IT sector indicates that not only does the IT industry offer equal opportunity to women but also has in place proactive and sensitive mechanisms which counter the common causes that discourage women from pursuing employment in the corporate sector. Women employment in the industry is set

to rise to 45 percent by 2010 from the current 30 percent (Exhibit 4.1). Now when a woman took admission in an engineering college she is morally boost up and encouraged that she will be absorbed by the corporate companies and she is having the stamina to work in corporate sector or public sector.



(Source: NASSCOM Annual Report, 2010)

Fig 4.1: Percentage of women employees in the IT/ITES industries.

Increasingly, mid and top level IT companies are watching at a gender crisis as more and more women IT professionals are quitting to give focus on family or to pursue careers that have less working hours and lesser time-zone complications. India's second-largest IT Company, Infosys, which employs about 33,700 women, has opened lactation centres at its campuses. Wipro has increased the maternity leave from six months to one year. All the top IT companies are today offering work-from-home policies for women, and some even are open to relocate them to a city of their choice if their husbands get transferred. TCS, Wipro and Infosys, the top three IT service providers in India, alone employ over 1 lakh women, but most of them crowd the entry level. The industry as a whole employs over two million people, and industry body Nasscom estimates that the average male to female ratio has improved to 70:30 now from 76:24 in 2005.

Wipro employs almost 28,000 women in its total headcount of 97,000 employees. Its Bangalore rival Infosys Technologies has 33.4 per cent women employees, though

among 232 title holders (positions at assistant vice president and above), less than two per cent are women.

Currently, Infosys employs the largest percentage of women at 33.4 per cent, followed by TCS 30 per cent and Wipro 29 per cent. In absolute numbers, TCS employs the largest number at 42,500 employees out of its total headcount of 142,000 employees.

Indian IT Industry performance in 2002-2003 was US\$ 16,500 Million. Software & Services was US\$ 9876 Million, Domestic US \$ 2583 Million, Training US \$ 333 Million & Hardware Peripherals and Networking US \$ 3708 Million. Total manpower of 650,000 contributed to this performance and out of that 205,000 manpower have contributed in S/w & Services, 160,000 IT professionals have contributed in ITES, 25000 IT professionals have contributed in Domestic S/w market and 2, 60,000 IT professionals have contributed in User Organization. And women IT professionals have a great role for the development of the IT sector in India.

4.3: Globalisation and Its Impact on 'Women IT Migration'

Consolidation of IT Industries encourages the students to opt for the IT profession as a lucrative profession in India. The IT training institutions have increased rapidly after 1991. Globalisation is one of the major contributors of this IT growth. The enrollments to the IT Institutions and Universities to study IT have increased dramatically. Women are also competing with the men for studying IT and career in IT. Presently, around 21percent of women in the Metros are very much part of the ICT (Information and Communication Technology) sector. Literacy level was 64 percent amongst urban female and 31percent amongst rural female at that time. As per 2001 census, 54.16 percent of female are literate with 72.99 percent being urban female and 46.58 percent rural female. Figure: 4.2 depict the female literacy growth in India. This certainly indicates a much healthier situation in literacy rate owing to ICT access. In the year 2001, nearly 7929 colleges for general education & 2223 engineering and professional colleges have enrolled 36.9 percent of women in higher education (degree and above level). Figure 4.3 indicates the enrolment increase of Girls for higher education. NASSCOM survey indicates that 76 percent of all software professionals are graduate degree holders. This

trend is a sign of growing literacy amongst women and the valuable role they play as major contributors in the economic growth outside the family.

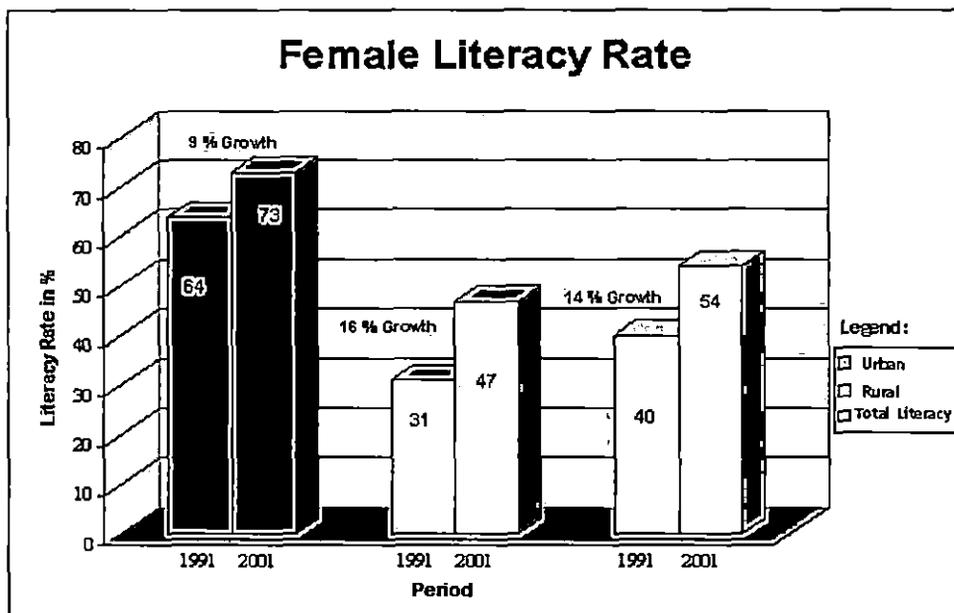


Fig. 4.2 – Female Literacy growth as per 1991 & 2001 Census.
 (Source: NASSCOM Annual Report, 2001)

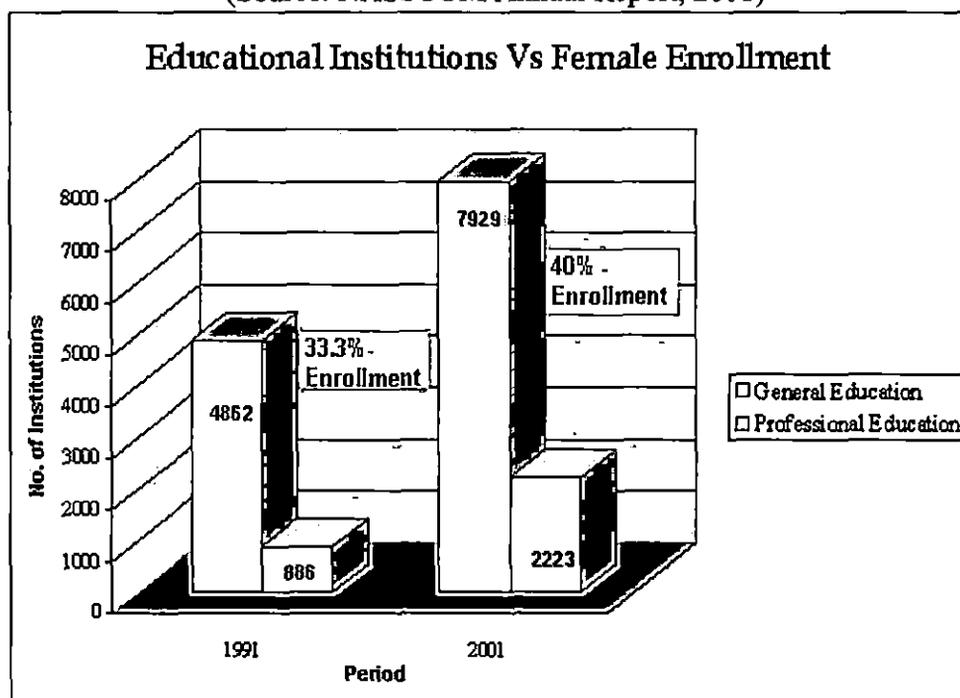


Fig 4.3: – Increase in enrollment of girls in higher education.
 (Source: NASSCOM Annual Report, 2001)

This literacy growth in IT access has made Indian women to attain certain degree of cultural and economic independence to take their own decisions. Let us look at this trend in the right perspective on emerging trends in employment of women in IT.

4.4: Gender Separation In The IT Sector

Despite being the women literacy rate is increased the employment ratio of male and female in Indian IT sector is not so good. The computer occupations are expanding at a faster rate in software companies as well as in the other companies. The computer industry is new and expanding. The dynamic nature of the IT industry has given the impression of the gender equity in occupational distribution. However, some studies reveal that gender segregation is very much predominant in this industry. For instance, an ILO survey conducted among the IT professionals in the software industries in India has revealed the prevalence of gender inequality in its various forms. It has also show-cased how women are relegated to the less prestigious and low-paid jobs.

Table 4.1: Segregation of women among the various subsets of IT

| S.No | IT Sector | F/M Ratio | Type of Work & Skill Requirements |
|------|------------------------------|-----------|--|
| 1. | Software Industry | 19:81 | Software development not just design, customization and adaptation of software |
| 2. | Telecom Industry* | 40:60 | Technical and creative work. Required highly qualified engineers |
| 3. | Airlines | 80:20 | Customer service. Required Communication, language & software skills |
| 4. | ITES (Medical Transcription) | 45:55 | Demands in linguistics and functional /domain skill |
| 5. | BPO** | 49:51 | Indian BPO is predominantly voice-based (outbound calls) |

(Source: Data quest Survey, 2009)

But some of the IT companies (Suriya, 2003) have recruited a good number of women employees as IT professionals now a days. Wipro –Spectramind a renowned ITES company employed 49 percent of women professionals out of 5000 total number of employees. The male female ratio of Infowayz International is 40:60 out of 1000 employees. Dash E-Services have male female ratio of 60:40 & GE have the ratio of male female as 60:40.

Table 4.2: Position of Men and Women in the Various Organisational Hierarchy of the IT Sector in India

| Position | Male | Female | Total |
|---------------------------|--------------|---------------|--------------|
| Call Services | 40.00 | 60.00 | 100 |
| Software Engineers | 54.69 | 45.31 | 100 |
| Consultants | 75.00 | 25.00 | 100 |
| Project Managers | 94.44 | 5.56 | 100 |
| Total | 67.13 | 32.87 | 100 |

(Source: Data Quest Survey, 2009)

4.5: Emerging Trend of Women in Information Technology

The current trend (Rajalakshmi, 2003) in employment of women in ICT work arena is with a gender ratio (female: male) varying from a best level of 1:3 to the least level of 1:7 in major organizations with exceptions upto 1:19 in few organizations. The following table is a sample indicative of this trend in 2008-09.

Table 4.3: Women employment ratio in Indian IT multinationals in 2008-09

| Organization Name | Total Employment | Women Employed | Ratio |
|----------------------------|-------------------------|-----------------------|--------------|
| WIPRO | 12658 | 2530 | 1:5 |
| TCS | 21800 | 5450 | 1:4 |
| INFOSYS | 15356 | 2896 | 1:5 |
| HEWLETT-PACKARD | 2245 | 320 | 1:7 |
| POLARIS | 4800 | 1200 | 1:4 |
| L&T INFOTECH | 2250 | 900 | 1:2.5 |
| HCL TECHNOLOGIES | 5757 | 1150 | 1:5 |
| SUN MICROSYSTEMS | 596 | 119 | 1:5 |
| ORACLE INDIA | 2702 | 540 | 1:5 |
| PHILIPS SOFTWARE | 757 | 190 | 1:4 |
| SIEMENS INFORMATION | 1390 | 260 | 1:6 |
| ROLTA INDIA | 2346 | 123 | 1:19 |

(Source: Data Quest Survey, 2009)

Table -4.3 provides employment in a defined sample size with ITES & Other category segment amongst MNCs & Indian companies. The gender ratio is also depicted for the sample size of employment. The emerging trend is such that women are proliferating at Grass root level of ICT application. Certain percentage of this proliferated segment have found their way onto the highest level of occupation with varied degree and quantum in terms of numbers, growth and sustenance. Their contribution to Indian economy today cannot be ignored. However, it is revealed through research that this beginning will create amazing changes where working women will become a reckoning force to measure the economic growth within a decade in India.

The composition of Male versus Female was at 79 percent versus 21 percent. This was anticipated to grow to 65:35 level by the year 2005. This prediction was largely due to intake of manpower for ITES segment which is at present @ 200 manpower per day. The intake for ITES when looked in isolation will be in reverse composition at 65 percent women & 35 percent men. However due to the financial recession the overall recruitment in IT and ITES companies have gone down in 2009.

Though the enrollment and literacy level in IT area have been showing very positive sign of growth trend, the drop out level after getting employed and not able to sustain employment has been a matter of concern. This drop out effect is because of the cultural & social barrier faced by even educated women today. It is a fact that women deliver 100 percent both at work & home. This 200 percent output makes women burnout easily. Entering a marriage phase or encountering a child birth forces many women to drop out of IT. "Marriage-Baby" phase for women aspiring to grow with self esteem is crucial. To overcome this, the society at large should bring proper understanding in family life and support work going women in shouldering some of her burdens. In nuclear families, husband has to support the work going wife. Organizations have to arrange more flexible time at work, even to the extent of supporting women to "work from home", with investment in ICT infrastructure and flexible compensation packages. The emerging trend of dropout working women due to family and social causes shall certainly increase the unemployed women.

Marriages amongst IT professionals lead to better understanding and it is happening. IT companies are appreciated this trend, because it ensures sustenance of women employment. Even if demand for time & client interaction issues, travel etc may be a deterrent to career growth, they have the option of dropping out of employment and transforming themselves into entrepreneurs.

An excellent example to show case on emerging trend is the response for this study from Mrs.Sarada Ramani of M/s. Computer International (R.Rajalakshmi, 2003).She was a housewife since marriage from 1983 till 1994. She got her ICT education in 1995 & became an employer in IT industry. In 1997 she became an employee and graduated to a successful entrepreneur. She has traveled widely over the globe and has been successful in meeting the demands of the industry. She acknowledges the fact that access to ICT for women has been in geometrical progression. However, in a traditional and conservative society the progress of women has been hindered. IT demands client interaction and very small percentages of women who meet this demand have grown up the ladder.

Looking at the 21 percent women in IT work, it is a fact that this percentage of women in IT being employed is largely due to the growth of IT enabled service sectors in the past few years. This trend is positive because of today's women with minimum degree (professional or general) and English language proficiency getting greater job opportunity and reasonable pay with required support to sustain the work pressure. Option of working in shifts has been a boon to this growth in employment. Growing Back Office and Business Process Outsourcing operations by Multinational Companies has created this opportunity. This trend is expected to further enhance the employment prospects of women in IT.

As long as female enrolment in ICT education fulfills the demand for IT and ITES sector, there will not be much of cultural, ethical issues to be faced in future. This is because of the reason that today's youth have adapted to living in cosmopolitan environment. This is much applicable to the urban female in India, before their marriage.

Rural female contribution to this trend is at present very negligible but with ICT reach to rural areas it is possible that they would also contribute to sustain the predicted growth in

this segment. The projected demand for IT professionals by the year 2010 reveals a shortfall of approximately 3, 00,000 people. Even at a supply level of predicted 885,000 professionals in 2008, this shortfall has been assessed because of the envisaged growth in outsourcing & domestic demand. The opportunity for Indian women is wide open to make this shortfall become surplus.

4.6: Government Policies for Women Contribution in IT Sector

Government of India has been instrumental in bringing about an IT policy with a vision to make Indian IT sector as a recognized global super power before 2008. The main focuses of this vision were creation of wealth, employment generation and IT led economic growth.

The following initiatives have been implemented with positive outlook towards making women contribute to this vision:

- i. Nearly 30 percent employment of women in IT organization will attract capital subsidy of specified amount in certain states.
- ii. E-governance and computerization of government organizations through Rural Access to Services through Internet (RASI) projects has created ample opportunity for ICT access.
- iii. Setting-up of agricultural kiosks, “rural knowledge centre” with pro-women orientation for effectively enhancing self-esteem and social prestige of women living in poverty. This tool is to cross the social, gender, genetic and technological divide with “New Technologies: Reaching the un-reached” concept.
- iv. Exclusive financial assistance through bank loans for women entrepreneur for establishing industry with specific tax exemption limits.
- v. Flexi working times with autonomy for recording attendance under self declaration & relaxation on industries act / labour laws permitting women to work in night shifts.

The initiatives are just the beginning to encourage women to take part in the economic development of the country. Though they would not have created much impact as on date, it is a sure indication that the emerging trend is positive to count on their contribution for economic development of Indian society from this decade. It is believed that there will be a sea change in the perspective of policy making body to give equal importance to women in the society to support this cause.

4.7: Status of Women in the IT Sector in India

The proportion of women into the various IT based industries in India is in the order of 19 percent in the software industry; 40 percent in the telecom industry; 80 percent in the airlines; 45 percent in the ITES; and 50 percent in the BPOs (NASSCOM, Annual Report, 2007-08). The high rate of women employees (45 percent on an average) in the ITES sector is a welcome change from the low 12.5 percent women being employed in the IT industry. According to a Dataquest-IDC survey in October 2002, the highest number of women was employed by NIIT at 29 percent while Rolta India employed the lowest number of women at 4 percent. Top software companies like Infosys employs 17 percent women, TCS employs 20 percent and Wipro employs 19 percent women. The massive incorporation of women into paid work has marginally increased their bargaining power and undermined the legitimacy of men's domination as providers of the family. While women are in positions of authority in the IT industry and they have improved their social position. The issue to be addressed is which categories of women are benefited through this sector? To which class of women does this help? What also came out quite well in the case studies is that there were different kinds of women. There are women who are top software programmers who can go to Silicon Valley and there are women who have to rely on Internet kiosks to start self employment.

4.8: Job Opportunities for Indian Women in the IT Sector

The IT sector in India has created employment opportunities in areas such as telecommunications, banking, shopping, education, health and business. In addition, the Internet has also generated new jobs in areas like the design, maintenance and management of sites on the World Wide Web. There are real possibilities that women may be able to access opportunities they never had before. According to a prediction by NASSCOM, by 2009-10 there will be one-and-a-half million jobs in the IT Enabled

services. If 50 percent to 70 percent of these jobs were to go to women, the impact will be tremendous. There is going to be such a shortage of skills that women will have to be included.

4.9: Position of Women in the Various Segments of the Software Activities

There are different segments of software activities in IT sector. An analysis of the gender situation in the stratified nature of the software development activities (high value added & low valued added activities), shows that a largest segment of women are clustered in the low-end jobs; while a smallest segment of women are found at the higher end reflects to a larger extent the gender divide in the IT industry. Though women are better represented in the IT sector, they have not assumed significant role and status. Most of them have been concentrated in the lower status jobs such as coding and programming and only a minor percentage are noted in the development part of IT. The distribution of women in software activities has been shown in the table 4.4 below.

Table 4.4: Distribution of Women in the Various Segments of the Software Activities

| S No | Segment of Activities | Companies | Contribution of Women |
|------|--|-------------------------------------|-----------------------|
| 1 | Development & marketing of software package | MNCs(Texas Instruments, Motorola) | Low |
| 2 | Customization of software & development of software solutions (design projects | Large firms & MNCs | Medium |
| 3 | Software services (coding, programming & testing either through body-shopping or off shore with extensive on-site work | Small & medium sized software firms | High |

(Source: Data Quest survey, 2009)

4.10: Reasons for Low Participation of Women in the IT Sector

The low enrolment of women in the science and technology slow down their ability to occupy higher positions in the IT organisations. According to 2001 census, female

literacy is 54.16 percent as against male literacy of 75.85 percent in India. The enrolment of girls in educational institutions decreases as educational level goes higher. In particular, the percentage of girls enrolled to total enrolment is 43.6 percent in primary, 40.1 percent in middle, 37.1 percent in secondary level and 34.8 percent in higher education according to statistics of 1997. The enrollment of girls in Engineering/Technology/Architecture at graduation level (in 1998) is 57968 as against 285137 boys. This imbalance is largely due to socio-economic reasons. In addition, a series of social and cultural norms restrict women's access to ICT, especially in common use facilities, such as cyber-cafes, tele-centres and phone shops. In many culturally conservative societies, women are often not allowed to go out without supervision to public venues where men are present. This is yet another reason for the low rate of participation of women professionals.

4.11: Challenges for Career Development of Women in the IT Sector

There are not only restrictions at the entry point, but there are many barriers blocking women from moving up in the ladder of the organizational hierarchy. Studies have reported that women were not able to rise to the expected level of performance of the IT employers. With the advancement in the levels of experience, the ratio of women drops steadily and at the senior levels, women constitute less than 6 percent of the workforce.

4.11.1: Factors Restricting Women's Career Choices: Marriage & Family

Commitments

The factors deterring women's career choices have been analysed and presented by Dataquest surveys. Marriage is found out as a point at which the shrinkage of women from the career pipeline has started. The first sharp drop in the number of women professionals is at 3+ years of experience. It is because childcare and housework remain women's responsibilities, irrespective of her income, educational level or employment. This places a great burden on women and restricts women's choices in terms of better job opportunities. Though women employed in the IT industry are relatively free from domestic hard work, this is a class-specific phenomenon restricted to a few in high level jobs whose domestic responsibilities have been transferred to women of a lower economic class. The opportunities offered by IT have only benefited a privileged few.

Married women outnumber men in low-experience categories, but in 10+ years'—the stage at which serious seniority should come in, a large number of women either opt out of their careers, or accept less demanding roles.

4.11.2: Obstacles for Career Development in the IT Sector: Gender Discrimination in the Workplace

What about gender discrimination in the workplace? A Survey among the HR managers reported that gender discrimination is not considered as an issue because the type of work done by software professionals, whether men or women is the same and they have equal opportunities of rising up the ladder provided they stay on in the job (Data Quest Survey,2009). In software, as the surveys in the project reveal, women enjoy preferences on a scale that they never experienced in any other field of engineering and science. In India, women occupy 19 percent of professional jobs in the software industry. In Kolkata and Bangalore, the figure is higher than the average for India. In both of these cities, the proportion of women varied from company to company, and it is not unusual to find women occupying 20 to 25 percent of professional jobs. Neither in Bangalore nor in Kolkata did the researchers find any evidence of discrimination, either at the point of recruitment or in career progression. In some cases, companies prefer to recruit women as the attrition rate among women is lower than that among men.

Prevalence, IBM and Dataquest the three major software and consultancy firms have surveyed among IT professionals and found out the barriers for women IT professionals in their career? The survey report is given below.

Table 4.5: Barriers for Women's Progression in IT Carrier-A Survey Report

| S.No | Barriers/Issue | Survey report | Employers remarks |
|------|--|----------------------|--|
| 1. | Gender preference Or gender bias | Prevalence Survey | Out of 500 employers, 80 confirmed gendered preference in outsourcing or sub- contracting No =80 percent Yes=20 percent |
| 2. | Burnout Syndrome | Prevalence Survey | The routine nature of the job forced women to switch jobs (Airlines employees) |
| 3. | Lack of confidence | IBM Survey | Women have the ability, education and experience to handle challenging jobs, but what they lack is confidence |
| 4. | Differences in the way men and women approach technical subjects | IBM Survey | Women possess soft skills while men have technical skills |
| 5. | Assignment of Priorities (family Vs Profession) PadmajaKrishnan, Xansa | Dataquest Survey | Proportion of women in the IT workforce is 19percent, but at senior position 6percent. There is a smooth going from the fresher to the team leader and project leader stage. Growth of women IT professionals stop at the team leader stage |
| 6. | Glass ceiling (H.R.RajasekarVP Mistral Software) | Dataquest Survey | No discrimination towards women IT professionals |
| 7. | Social factors (Mita Brahma, HR Head of Nucleus Software) | Dataquest Survey | Since many women manage to enter the workplace by rising above the social biases, they are strong and do well when given the opportunity |
| 8. | Performance Robert F Danbeck V- P-HR at IBM India | Dataquest Survey | Indian women make better engineers; they have qualities like strong team playing abilities, the capacity to juggle a variety of issues, flexibility and creativity in abundance. |

(Source: Results of the Prevalence Survey, IBM Survey & Dataquest Survey, 2009)

4.12: Women Migration from Indian IT Sector

When the question of skilled migration comes only the migration of males do come in the picture of skilled migration. The migration of skilled women has not drawn much attention till recently, because of the widespread acceptance of the gendered migration model that assumes males move in search of jobs, while their wives and children follow later. If women get married and migrate to USA they have to get H-4 visa which not

allow them to work in US. They may have degrees in IT and Computers. They get frustrated and looking forward for Green Card.

Skilled migration is one area where women's experiences remain relatively invisible. Since family reunification, where women migrate as dependents of males, makes up a significant proportion of female migration to Europe and America, it is important to examine whether highly skilled women migrate as wives rather than highly skilled workers. Now the question is that why women will migrate and how they attempt to re-establish their careers upon migration? Most of the empirical work on international skilled migration has focused on professionals and managers in large corporations, or in political assignments (such as colonial bureaucracies), and consequently focused primarily on males. Many of these studies focus on expatriates, those who move within and between large multinational corporations with work sites located in different countries (Findlay and Gould, 1989; Salt, 1992; Tzeng, 1995). Women are rarely picked for such international assignments in corporations. They are often seen as better able to deal with "soft" assignments in their home countries. A range of social expectations and understandings about women's relative ability to perform in 'upper level' jobs in different settings contribute to the limited opportunities to get such offers which are often routes to other senior management positions (Hardill, 1998). In addition, in a dual-career household, if the male receives such an offer, the female, who is less likely to get a similar offer, has to make the "rational" decision about whether or not to put her career on a slower track to support the 'household' interest (e.g. Hardill and MacDonald, 1998). Since the scholarly literature has focused mostly on these highly skilled male migrants and the institutional contexts within which they migrate, the highly skilled spouse, who may put her career on a slower track temporarily and migrate as the "dependent wife" rarely appears in studies on highly skilled migrants.

Immigration laws, which reflect the economic and political interests of nation-states, are another source of defining who is highly skilled. Like the corporate policies, the particular types of "high skills" that are categorised by these immigration laws enhance gender distinctions. In many Euro-American countries skills in medicine, upper level management, engineering, information technology, and physical science research are defined as 'highly skilled' for immigration purposes (e.g. Kofman et al., 2000; Purkayastha, 2002a). Given the continuing gender disparities in education, individuals

with these skills, are more likely to be males rather than females. Therefore, among couples with high levels of education, who migrates as a “highly skilled worker” and who migrates as “the wife” is predetermined by structural requirements irrespective of the woman’s skills, training, and inclination (Kofman et al., 2000). Coupled with such emphases on certain occupations, as long as family reunification remains the main channel through which women with high human capital are allowed to migrate and access mainstream jobs with social benefits and citizenship rights. It is probable that even women with very high human capital will migrate as wives. The theoretical challenge that gender scholars such as Kofman et al. (2000) raise is to centrally incorporate the experiences of these highly skilled migrant wives in order to gain a better understanding of the nature of highly skilled migration of men and women, instead of developing models which are based on primarily men’s experiences.

Gender differences are also enhanced through barriers to female labour force participation after international migration. Bruegel (1996) and Hardill and MacDonald (1998) among others have documented how the wives of migrating expatriates find it difficult to access jobs. Several studies have done on long-term migrants highlight the career disadvantages that women face because of labour market segmentation and their relegation to lower tier jobs (e.g. Man, 1995; Fernandez-Kelly and Garcia, 1989; Sassen, 1996).

Ferree and Purkayastha (2000) have examined how women are disadvantaged at work, and have argued for the need to adopt a longitudinal perspective which takes into account how discrimination at one level, cumulatively affects an individual woman at the next level. A woman who had to be better than her male counterparts at level one, will, in subsequent levels, have to negotiate not only the effects of inequality at that level but also of earlier levels, and thus is subject to unequal evaluation criteria over the span of her career. This cumulative disadvantage model can be fruitfully applied to an understanding of the gender disadvantages inherent in the immigration experiences of highly skilled women. The highly educated immigrant women compete with more immigration barriers than men (in their capacity as wives). Women’s position in such migration trajectories keeps changing in ways that maintain the gender/race hierarchies. Traditionally seen women migrants begin lives in new countries with considerably less power than their male counterparts because of their political status as dependants. Since most of the highly skilled males are likely to already be in white-collar occupations that demand long hours

of work, the care-work tasks can easily become solely the female's responsibility. These additional demands on immigrant women's time play a role in how they are able to rebuild their lives after migration.

The following are some of the distinctive features of female labour migration:

- Supply has been very flexible and migration has often been a family survival strategy. The relative lack of social constraints, the high female labour force participation rates, the active role of governments and migration agents and the support of social networks have all contributed to the flexibility.
- Many decisions about the migration of women are made by people other than the women themselves -- families, communities, agents.
- Social networks have supported and sustained the flows.
- Female migrants are particularly vulnerable because they often go into individualised work places where there is greater isolation, less chance of contact and support, less protection of their rights and conditions and greater exploitation.
- The question of skills is imprecise or vague -- many women take up 'unskilled' positions even though they have qualifications and experience in more skilled occupations, and some jobs are defined as skilled (such as entertainers) in order to satisfy government regulations in either sending or receiving countries. Nursing is the only skilled occupation that results in significant female migration (mostly to the US and Middle East).
- Female migration represents a chance to break with tradition and the wheels of familial control, to experience new environments, and to develop their confidence and skills. Female migration from Bangladesh is a recent phenomenon.

4.13: Scenario of Indian women IT professionals migrated to the USA

According to the 1990 Census of the USA the number of migrants from India was close to a million in the US, and women made up 49.8 percent of the group (US Statistical Abstract, 1998). Since 1990, this group has been officially referred to as Asian Indian, to distinguish them from Native Americans. The total number of migrants from India rose to 27,859 in 1966–1970 to 142,140 between 1986–1990 (Barringer et al., 1995). The total population of Asian Indians in the US is now 1.7 million (2000 US Census).

In 1990, 43.6 percent of Asian Indians were in professional and managerial occupations, with another 33.2 percent in technical, sales and administrative support occupations (Reddy, 1993). The crucial distinction is embedded in the definition of “highly skilled” vs. “highly educated”. According to the US Department of Labour, “highly skilled” in the 1960s and 1970s referred to people with medical, engineering, science/research and informational technology training. As the US sought to fill the shortage of white-collar professional labour by recruiting “highly skilled” immigrants who had been trained in other countries, like India became the main beneficiaries of this selective recruitment (Bonacich, 1994; Fong, 1998).

Table 4.6: The Occupational Characteristics of Indian emigrants in USA based on gender (2000)

| | Male (%) | Female (%) |
|-------------------------------------|-----------------|-------------------|
| Professional (IT & etc.) | 38.5 | 19.3 |
| Managerial | 18.9 | 8.1 |
| Technical/sales | 23.7 | 15.7 |
| Administrative support | 9.8 | 17.2 |
| Service | 7.3 | 9.0 |
| Precision craft | 7.8 | 2.1 |
| Operative labourer | 11.6 | 6.8 |
| Farming/Fishing/forestry | 0.9 | 0.2 |

(Source: US census, 2000)

The table 4.6 shown above is stated the clear view of male female percentages of Indian emigrants to the USA. It is seen from the table that 19.3 percent of Indian women who have been migrated to the USA are related to IT or other highly skilled professions.

Table 4.7: The Male Female percentage of Indian skilled emigrants to USA (2000)

| | |
|------------------------------------|---|
| | 4 years and above college experience |
| Out of all Indian emigrants | 58% |
| Male | 65.9% |
| Female | 48.7% |

(Source: US census, 2000)

The table-7 shown above is clearly stated that among all Indian emigrants to USA, 58 percent are having 4 years and above college experience. Out of those 58 percent, 65.9 percent are male and 48.9 percent are female. This table is for all skilled emigrants who are migrated to the USA.

Table 4.8: Economic Characteristics of Indian emigrants

| | |
|------------------------|----------------|
| Median Earnings | \$49309 |
| % Below poverty | 7.2 |

(Source: US census, 2000)

The table 4.8 shown above is stated that the median earnings of skilled Indian professionals is \$49309. Out of these migrated skilled Indian professionals most of them are IT professionals.

While women are beginning to appear in the ranks of information technology professions, most of the IT professionals who come to the US from India are male. The altered visa structure no longer allows their spouses to work. The “H1-B wives” have two options—either living in a split household in order to continue her career (i.e. she remains in India, while he temporarily moves to the US), or she accompanies him to the US and becoming a full-time homemaker.

The spouses of H1-B information technology workers face similar predicaments. They cannot legally work in the US, nor can they easily go to school because their qualifications and experiences are not recognised by universities and colleges. They have few avenues of gaining US based experience, which helps build up their resumes.

4.14: Migration of Women IT Professionals-Some Other Issues

A study is done on the women IT professionals (Raghuram, 2004) who have been migrated to different countries. Interviews conducted with four women working for two Indian consultancy firms which are currently deployed on onsite projects in the UK. The snowballing procedure was used to identify interviewees with different immigration and family histories. As in the overall IT migrant sector all the women were young, between 26 and 35 years. Three (Geeta, Mala, and Kamini) were married of whom two (Geeta and Mala) had children. The fourth interviewee (Sadhana) was unmarried. Three women had come as work permit holders while the fourth (Kamini) was employed in the IT industry but had come to the UK as spouse of an IT worker (who held a work permit) and was therefore on a dependant visa. When asked to talk about the problems they faced in their IT careers, all of them cited the requirement for flexibility and, particularly, the geographical mobility expected of them as a major issue. These responses highlighted the limits of seeing the problems that women in the sector face within the context of the sector alone. However, there have specific effects on women's participation in the IT sector. There are three particular aspects of mobility which are crucial to how it is experienced. First, the short-term nature of the projects which means that mobility is a constant, in fact the only constant part of the job. There is now some recognition of the ways in which mobility negatively influences women's careers due to women's continued responsibilities to the household (see, for example, Willis & Yeoh, 2002). For example, IT workers from India are usually paid a salary in India and a tax-free daily allowance while they are onsite. The allowance is not large but is enough.

The accommodation in foreign countries is another important issue for migration of women IT professionals. Married women are expected to stay with their husbands so that the responsibility of career compromises when women are expected to be mobile in their careers falls on women. On the other hand, career compromises are not equally expected of men when their careers require mobility. One example can be discussed here. Like Geeta, a computer professional, she undertook a project in the US for 4 months. Then she got married. Immediately she did not want to come away because she wanted to carry on with her family married life, so she carried on for one year, even though she was pressurized to go onsite. Geeta compromised out there. She reached a stage where she

had to go onsite or leave the job or something like that so she decided that she will leave the job and go for a company that is India based. She tried a few interviews and she got a job and she decided to leave but by chance the papers for her visa had come, so she decided she should stay there till the project completes.

Another example is Kamini, an IT professional, has been following her husband as he moves from one country to another. Her husband is a team manager for a consultancy firm while she is employed through a UK recruitment agency on a temporary contract.

She has compromised her career because her husband's postings are short and the length of their tenure is often unknown. When her husband got a job in Taiwan she accompanied him, and then applied and secured a job. However, by the time the Taiwanese work permit arrived allowing her to work, her husband's posting in Taiwan came to an end. As a result after just 1 month of work she gave up her job. These issues have been much discussed in the large literature on tied migration, most of which suggests that women's careers are penalized when their partner's jobs require mobility (see, for example, Cooke, 2001; Cooke & Bailey, 1999; Clark & Withers, 2002; but see Raghuram, in press).

Among the 629,218 Indian-born male workers aged 16 and older employed in the civilian labour force in USA, 27.4 percent reported working in information technology, and 20.0 percent reported working in management, business, and finance. Out of this 13.1 percent women who are Indian-born are working in IT sector in USA. Compared to other immigrants, Indian-born male workers age 16 and older employed in the civilian labour force were also more likely to report working as physicians, scientists and engineers, and in sales.

Table 4.9: Occupations of Indian born Employed Workers in USA by Gender and Origin, 2006

| | Indian Foreign Born | | All Foreign Born | |
|---|---------------------|-------------|------------------|------------|
| | Male | Female | Male | Female |
| Persons age 16 and older employed in the civilian labour force | 629,218 | 346,733 | 13,285,912 | 8,921,521 |
| | (%) | (%) | (%) | (%) |
| Management, business, finance | 20.0 | 15.3 | 10.2 | 9.8 |
| Information technology | 27.4 | 13.1 | 3.9 | 1.9 |
| Other sciences and engineering | 11.2 | 6.2 | 4.1 | 2.3 |
| Social services and legal | 0.8 | 1.2 | 1 | 1.9 |
| Education/training and media/entertainment | 4.7 | 8.7 | 3.3 | 6.9 |
| Physicians | 4.8 | 5.8 | 1.3 | 1 |
| Registered nurses | 0.2 | 5.9 | 0.3 | 3.3 |
| Other health-care practitioners | 1.8 | 6.1 | 0.9 | 3 |
| Health-care support | 0.3 | 2.7 | 0.6 | 5.2 |
| Services | 3.3 | 5.8 | 16.9 | 25 |
| Sales | 11.4 | 11.1 | 7.8 | 10.9 |
| Administrative support | 4.3 | 11.9 | 5.5 | 15.1 |
| Farming, fishing, and forestry | 0.1 | 0.3 | 2.5 | 1.1 |
| Construction, extraction, and transportation | 5.4 | 1.5 | 26.8 | 3.4 |
| Manufacturing, installation, and repair | 4.4 | 4.7 | 15 | 9.4 |

(Source: US Dept. of Labour, 2009)

From this table 4.9 it is clearly seen that only 13.1 percent of the Indian born women who are in IT profession are compared with the 27.4 percent of the male counterpart. These women professionals are Indian born.

Emerging trend in Indian IT Industry indicates that women have spread their wings into various segments with prominent presence in Financial, Human Resource, Quality, Facility creation and ITES work. Today's successful women are examples of having had the courage and willpower to withstand the "Marriage-Baby phase" and build a career.

This trend needs to be taken as a healthy sign for Indian Women to overcome the cultural and ethical barriers for upward mobility. As our famous Nobel Laureate and world renowned economist Professor Amartya Sen mentioned, the word “gender equality” is a terrible evil and social failure. Indian women require both cultural and economic independence to take their own decisions. They should play major part in the economic growth outside the family to visualize INDIA as a developed nation. They are not far behind from their male counterpart in IT sector. A good number of women IT professionals leave India every year. This is a loss of our country. Women IT professionals are settled down in countries like USA, Canada, Australia etc. The question is why they have left India? What were the influencing factors for their migration? These aspects must be explored.

CHAPTER-V

ONLINE MIGRATION (VIRTUAL MIGRATION) OPPORTUNITY FOR DIFFERENTLY ABLED *IT* PROFESSIONALS

- **DISABILITY IN INDIA-AN OVERVIEW**
- **EMPLOYMENT OPPORTUNITIES FOR THE DIFFERENTLY ABLED PERSONS IN *IT* SECTOR**
- **STRATEGY OF *IT/ITES* COMPANIES TO HIRE PHYSICALLY DISABLED PERSONS**
- **ONLINE MIGRATION OPPORTUNITIES FOR THE DISABLED *IT* PROFESSIONALS**

ONLINE MIGRATION (VIRTUAL MIGRATION) OPPORTUNITY FOR DIFFERENTLY ABLED 'IT' PROFESSIONALS

5.1: Introduction

Software programmers based in India are governed by local practices of employment, taxation, and labor regulations. But when they do break national barriers by directly occupying some employment space in concerned sectors of the foreign countries, like other immigrant workers, they migrate without migration. This type of migration is called “virtual migration” (A. Aneesh, 2000). The concept of virtual migration recognizes that the programmer sitting in India can actually access a computer in the United States or other countries. Since globalisation the demand for the skilled IT professionals from India has gone up. The differently abled persons are grabbing those opportunities to work in IT sector. Most of the software houses and BPO sectors in India are providing the job opportunities for the disabled persons. Now a days IT and ITES companies are finding differently abled people who are loyal and hard working. These companies have no problems hiring them as long as their disability does not affect work. Knowledge-based industries hire disabled people because disabled people bring complementary skills to the table and reduce the attrition rate. The industry does not differentiate them from other candidates. Disabled people are not given differential treatment in these companies. They are handling consultancy, customer care, technical support jobs through online. They are treated as onsite labour for the foreign countries. They are getting their online migration. They are providing consultancy, customer care and technical support to the foreign companies. Lots of companies in India arrange on-line software labour for the companies in the United States and other countries. The disabled IT professionals in BPO sectors are fulfilling these features and enriching their skills and their lives in IT sector. The industry, however, is hoping that such recruitment can offset attrition. Because the overall attrition rate in IT and ITES companies is very high. Recruitment of differently abled persons can reduce the growing gap between the demand and supply of skilled manpower.

5.2: Disability in India-An Overview

There is no universally agreed definition of disability. Disability is understood to be primarily a social phenomenon. It is society that disables people who have impairments, by failing to recognise and accommodate difference and through the attitudinal, environmental and institutional barriers that it erects against people with impairments. Disability thus arises from a complex interaction between health conditions and the context in which they exist.

In India, the persons with disabilities (Equal Opportunities, Protection of Rights and Full Participation Act, 1995) define disability as one or more of the following: blindness, low vision, leprosy cured, hearing impairment, locomotor disability, mental retardation and mental illness. It says that to be considered disabled, a person must suffer from not less than 40 percent of any disability, as certified by a medical authority. There are approximately 90 million disabled people in India. Disability was included in the census for the first time in 2001 (Table-5.1, 5.2 & 5.3), following a sustained campaign by the Indian disability movement. The census found that 2.2 percent of the populations were disabled. However, this figure is contested by organisations working in the field, which estimate India's total disabled population at approximately six per cent or 70 million – a figure larger than the entire population of the United Kingdom.

Table 5.1: Disability Data for India

| Item | Number |
|--------------|-------------------|
| Urban | 5,518,387 |
| Rural | 16,388,382 |
| Total | 21,906,769 |

(Source: Census of India, 2001)

Table 5.2: State/ Union Territory Wise Population of Persons with Disabilities as Per the Census 2001

| Sl.No. | States/Union Territory | Number of persons with disabilities. |
|--------|---------------------------|--------------------------------------|
| 1. | Jammu & Kashmir | 302670 |
| 2. | Himachal Pradesh | 155950 |
| 3. | Punjab | 424523 |
| 4. | Chandigarh | 15538 |
| 5. | Uttaranchal | 194769 |
| 6. | Haryana | 455040 |
| 7. | Delhi | 235886 |
| 8. | Rajasthan | 1411979 |
| 9. | Uttar Pradesh | 3453369 |
| 10. | Bihar | 1887611 |
| 11. | Sikkim | 20367 |
| 12. | Arunachal Pradesh | 33315 |
| 13. | Nagaland | 26499 |
| 14. | Manipur | 28376 |
| 15. | Mizoram | 16011 |
| 16. | Tripura | 58940 |
| 17. | Meghalaya | 28803 |
| 18. | Assam | 530300 |
| 19. | West Bengal | 1847174 |
| 20. | Jharkhand | 448377 |
| 21. | Orissa | 1021335 |
| 22. | Chhattisgarh | 419887 |
| 23. | Madhya Pradesh | 1408528 |
| 24. | Gujarat | 1045465 |
| 25. | Daman & Diu | 3171 |
| 26. | Dadra & Nagar Haveli | 4048 |
| 27. | Maharashtra | 1569582 |
| 28. | Andhra Pradesh | 1364981 |
| 29. | Karnataka | 940643 |
| 30. | Goa | 15749 |
| 31. | Lakshadwwe | 1678 |
| 32. | Kerala | 860794 |
| 33. | Tamil Nadu | 1642497 |
| 34. | Pondicherry | 25857 |
| 35. | Andaman & Nicobar Islands | 7057 |
| | Total | 21906769 |

(Source: Census of India, 2001)

Table 5.3: Disability-wise State-wise Number of Persons with Disabilities in the Country as Per Census of India, 2001.

| S. No. | State/UT | Visual disability | Speech disability | Hearing disability | Locomotor disability | Mental disability | | | Total |
|--------|----------------------|-------------------|-------------------|--------------------|----------------------|-------------------|---------|--------|------------|
| | | | | | | | Rural | Urban | |
| 1 | Jammu & Kashmir | 208,713 | 16956 | 14,157 | 37,965 | 24,879 | 18,959 | 5,920 | 302,670 |
| 2 | Himachal Pradesh | 64,122 | 12,762 | 15,239 | 46,512 | 17,315 | 15,975 | 1,340 | 155,950 |
| 3 | Punjab | 170,853 | 22,756 | 17,348 | 149,758 | 63,808 | 43,016 | 20,792 | 424,523 |
| 4 | Chandigarh | 8,422 | 882 | 607 | 3,828 | 1,799 | 163 | 1,636 | 15,538 |
| 5 | Uttaranchal | 85,668 | 16,749 | 15,990 | 56,474 | 19,888 | 15,082 | 4,806 | 194,769 |
| 6 | Haryana | 201,358 | 24,920 | 27,682 | 151,485 | 49,595 | 34,309 | 15,286 | 455,040 |
| 7 | Delhi | 120,712 | 15,505 | 8,741 | 64,885 | 26,043 | 1,543 | 24,500 | 235,886 |
| 8 | Rajasthan | 753,962 | 73,147 | 75,235 | 400,577 | 109,058 | 80,019 | 29,039 | 1,411,979 |
| 9 | Uttar Pradesh | 1,852,071 | 255,951 | 128,303 | 930,580 | 286,464 | 211,463 | 75,001 | 3,453,369 |
| 10 | Bihar | 1,005,605 | 130,471 | 73,970 | 512,246 | 165,319 | 145,153 | 20,166 | 1,887,611 |
| 11 | Sikkim | 10,790 | 3,174 | 3,432 | 2,172 | 799 | 715 | 84 | 20,367 |
| 12 | Arunachal Pradesh | 23,079 | 2,429 | 3,072 | 3,474 | 1,261 | 1,068 | 193 | 33,315 |
| 13 | Nagaland | 9,968 | 4,398 | 5,245 | 4,258 | 2,630 | 2,330 | 300 | 26,499 |
| 14 | Manipur | 11,713 | 2,769 | 2,994 | 6,177 | 4,723 | 3,190 | 1,533 | 28,376 |
| 15 | Mizoram | 6,257 | 2,006 | 2,421 | 2,476 | 2,851 | 1,655 | 1,196 | 16,011 |
| 16 | Tripura | 27,505 | 5,105 | 5,699 | 13,970 | 6,661 | 5,470 | 1,191 | 58,940 |
| 17 | Meghalaya | 13,381 | 3,431 | 3,668 | 5,127 | 3,196 | 2,604 | 592 | 28,803 |
| 18 | Assam | 282,056 | 56,974 | 51,825 | 91,970 | 47,475 | 41,309 | 6,166 | 530,300 |
| 19 | West Bengal | 862,073 | 170,022 | 131,579 | 412,658 | 270,842 | 181,981 | 88,861 | 1,847,174 |
| 20 | Jharkhand | 186,216 | 39,683 | 28,233 | 138,323 | 55,922 | 41,442 | 14,480 | 448,377 |
| 21 | Orissa | 514,104 | 68,673 | 84,115 | 250,851 | 103,592 | 87,319 | 16,273 | 1,021,335 |
| 22 | Chhattisgarh | 160,131 | 30,438 | 34,093 | 151,611 | 43,614 | 34,301 | 9,313 | 419,887 |
| 23 | Gujarat | 494,624 | 66,534 | 70,321 | 310,765 | 103,221 | 65,433 | 37,788 | 1,045,465 |
| 24 | Daman & Diu | 1,898 | 189 | 120 | 690 | 274 | 138 | 136 | 3,171 |
| 25 | Dadra & Nagar Haveli | 2,346 | 295 | 337 | 795 | 275 | 222 | 53 | 4,048 |
| 26 | Maharashtra | 580,930 | 113,043 | 92,390 | 569,945 | 213,274 | 124,748 | 88,526 | 1,569,582 |
| 27 | Madhya Pradesh | 636,214 | 75,825 | 85,354 | 495,878 | 115,257 | 78,280 | 36,977 | 1,408,528 |
| 28 | Andhra Pradesh | 581,587 | 138,974 | 73,373 | 415,848 | 155,199 | 116,909 | 38,290 | 1,364,981 |
| 29 | Karnataka | 440,875 | 90,717 | 49,861 | 266,559 | 92,631 | 62,325 | 30,306 | 940,643 |
| 30 | Goa | 4,393 | 1,868 | 1,000 | 4,910 | 3,578 | 1,972 | 1,606 | 15,749 |
| 31 | Lakshadweep | 603 | 207 | 147 | 505 | 216 | 126 | 90 | 1,678 |
| 32 | Kerala | 334,622 | 67,066 | 79,713 | 237,707 | 141,686 | 105,842 | 35,844 | 860,794 |
| 33 | Tamil Nadu | 964,063 | 124,479 | 72,636 | 353,798 | 127,521 | 67,483 | 60,038 | 1,642,497 |
| 34 | Pondicherry | 10,646 | 1,818 | 2,277 | 8,830 | 2,286 | 736 | 1,550 | 25,857 |
| 35 | Andman & Nicobar | 3,321 | 652 | 545 | 1,870 | 669 | 497 | 172 | 7,057 |
| | | | | | | | | | 21,906,769 |

(Source: Census of India, 2001)

According to some sources, as many as one person in ten has a disability. Three out of four of those are thought to live in developing countries. 'Disability limits access to education and employment, and leads to economic and social exclusion. Poor people with disabilities are caught in a cruel cycle of poverty. The Indian National Sample Survey conducted two countrywide surveys in 1981 and 1991 to assess the number of people with disabilities. From these it was estimated that the population with a disability in India is approximately 90 million. Within this figure it is estimated that 12 million are blind, 28.5 million have limited vision, 12 million have speech and hearing impairments, 6 million are orthopaedically handicapped, 24 million have a cognitive disability, 7.5 million are mentally ill, and 1.1 million are disabled as a result of leprosy. Estimates vary greatly according to definitions and methods, but negative attitudes towards disability in most communities mean that these are probably underestimates.

5.3: Employment opportunities for the Differently Abled Persons in India

Many countries throughout the world have, in recent years, adopted policies aiming to promote the rights of people with disabilities to full and equal participation in society. This has often been in response to the ILO Convention No. 159 concerning Vocational Rehabilitation and Employment of Disabled Persons (1983) policy on employment opportunities for people with disabilities is frequently supported by legislation and implementation strategies as essential. The Ninth Five Year (1997-2002) Plan committed the Government of India to prepare a National Charter for Social Justice to provide equal opportunities for the disabled. It also proposed the earmarking of a certain percentage of benefits for the disabled under various poverty alleviation schemes, including 3 percent under a scheme – 'Swamajayanti Gram Swarozgar Yojna' (SGSY) – aiming to provide a 'sustainable income' to rural families below the poverty line through self-help groups and micro-enterprise development. Given the existence of such quotas and welfare benefits for the disabled, some may argue that their needs are already catered for and there is no need to modify other schemes and programmes to include people with disabilities. These arguments are based on rather a limited view of sustainable development, failing to recognise the role played in development by those who are not seen to be working in productive activities.

5.4: Employment Opportunities for the Differently Abled Persons in IT sector

Now IT industries specifically BPO sectors are recruiting disabled persons as per their HR policies. Like Intel's Centre for Economic Empowerment of Intellectually Challenged (CEEIC), Intel has established Centres for Economic Empowerment of Intellectually Challenged (CEEIC) in partnership with a NGO Amba. CEEIC has developed a specialized curriculum based on the needs and intellectual capabilities of people with below average IQ. The centres use interactive modules to help the intellectually challenged learn new skills and generate employment. Apart from imparting technical skills, the CEEIC has been also instrumental in ensuring holistic development of special children which includes increasing their self esteem and motivation levels and making them more confident in interacting with others. A total of 105 individuals have been trained so far of whom 62 have been placed already and for the rest placements are being explored. Another 41 individuals are currently undergoing training. From one centre, CEEIC has now grown with support from various partners to 5 – two in Bangalore, one in Mandya, one in Chennai and another in Delhi. A sixth centre is being planned in West Bengal at Barrackpore.

Globalisation has accelerated creation of innovative business models and provided unprecedented benefits for economies of the world. Corporate Social Responsibility (CSR) is another vital responsibility for the business houses. The contribution of the business houses is notable in India. The Indian IT-BPO sector had been a frontrunner for India has played a pivotal role in securing the irreversibility of this trend. The Indian IT-BPO industry, which began based on the value proposition of cost advantage, has today evolved into a large knowledge-based industry. Multiple dimensions like productivity, value add, quality and security have become synonymous with this industry and in fact set global benchmarks for outsourcing. According to the Centre for Monitoring Indian Economy, the offshore IT and BPO industries accounted for nearly 95 percent of the absolute growth in foreign exchange inflows associated with services industries between 2000 and 2004.

Today, the size of the Indian Software and services (exports+domestic) IT industry is \$ 39.6 billion, recording a growth rate of over 30 percent in 2006-07, employing 1.6 million individuals. The industry is on course to achieve the growth target of \$ 60 billion in exports by 2010, employing 2.3 million individuals by then. What the Indian BPO industry has also achieved is providing employment to 553,000 individuals. It has changed the aspirations of the youth - brought down the criteria for employment and offers opportunity to graduates at the basic levels.

5.5: IT/ITES Industries start to hire Physically Challenged Persons as their strategy

The IT/ITES sector is beginning to play a notable role in providing employment opportunities to people with disabilities. As depicted in Fig 5.1 below the NASSCOM-Deloitte survey (2008) indicated that 64 percent of IT/ITES companies employ people with disabilities.

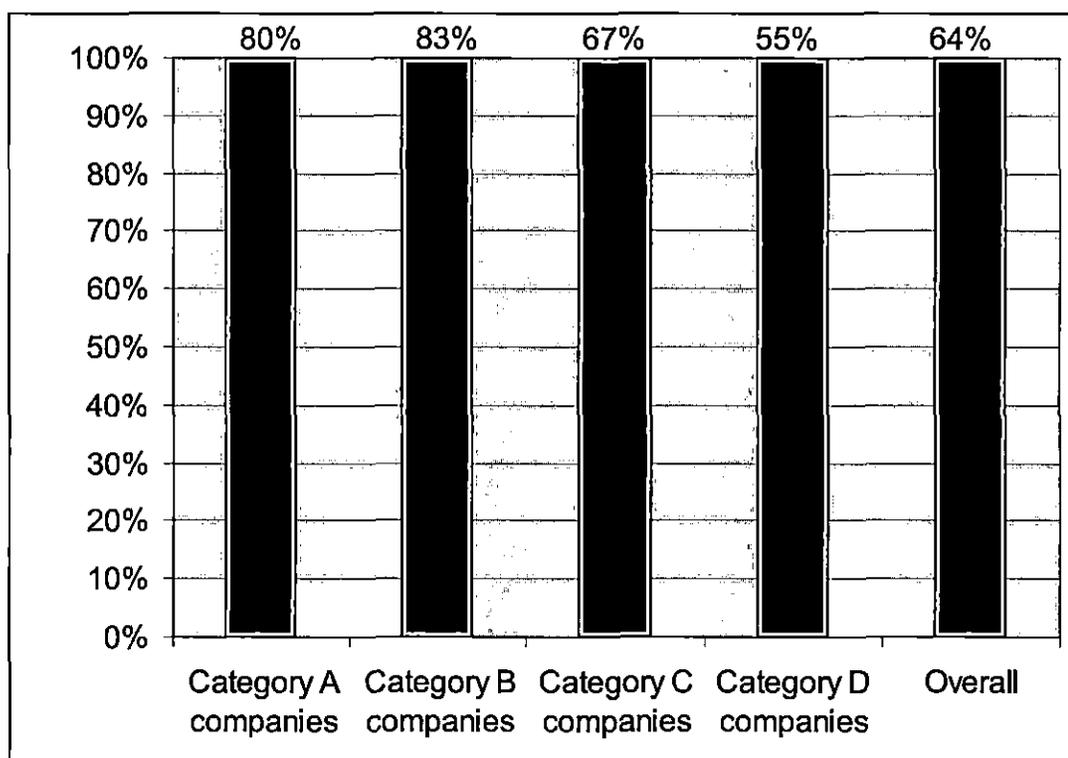


Fig 5.1: Percentage of differently abled employees absorbed by IT/ITES companies (2008)
(Source: NASSCOM-Deloitte Survey, 2008)

Companies are also making efforts to create a suitable working environment for differently-abled people by making workplaces more accessible, arranging transportation and sensitising employees. The fact the companies are seeking to employ differently abled employees encourages such persons to pursue their education.

The business processes outsourcing (BPO) industry, affecting from attrition rate of staffs, is reaching out to the disabled in the hope that they would be unlikely to job-hop. Till 2006, NASSCOM, Wipro BPO, TransWorks, Progeon Ltd and 24/7 Customer had not a single physically challenged employee on their rolls. But in 2007, each has about 15 and is gearing up to hire more. “The companies that have employed them (the disabled) are happy with their quality of work and loyalty,” NASSCOM chief Kiran Karnik said. “To a certain extent, the appointments will offset attrition because these employees are stable and do not leave for a better salary.”

The Indian ITES-BPO sector is expected to touch \$20 billion by 2008-09, and employs around one million people. But the non-availability of talent and high attrition rates are driving companies to discover new sources of talent. One such option is the recruitment of disabled people, say industry experts. However, software companies deny they are using disabled people as an alternative. The company does not keep a separate record for staff with disabilities or treat them differently, but it does create the infrastructure needed for their comfort. However, this situation is likely to change soon. Information technology (IT), IT-enabled services (ITES) like BPOs are seriously considering employing a greater number of disabled people. The reasons include increasing attrition levels in IT (10-25 percent), and ITES/BPO (35-50 per cent) firms. Corporate Social Responsibility (CSR) is also driving firms to recruit disabled people. Some software firms say 5-10 per cent of their staff comprises disabled people. At Chennai-based Laser Soft Infosystems, 10 percent of the 500-plus employees are physically challenged. It was no surprise then that at a recent job fair held on 17th November, 2006 in Chennai for disabled people, over 30 companies screened around 700 candidates. The fair drew good response from the ITES sector, while participation from the IT sector was minuscule — only one company. However, the BPO companies are only now waking up to the prospect of employing disabled people. “For the physically challenged, the ITES/BPO industry promises a level playing field”, says Ranjit Pisharoty, Senior Vice-President,

Lason India. At the entry level, apart from basic data processing skills, what is required is discipline, diligence, the ability to perform repetitive tasks and an eye for detail. So, all other things being equal, recruiting disabled people in a BPO industry happens by design, and not due to a human resource crunch, he says. "We do not see this as a social or community cause. It is a part of our business delivery model," adds Pisharoty. ValueLabs, a US-based BPO and software services company, has employed three disabled persons at its Hyderabad offshore development centre.

Infosys actively seeks to hire and train persons with disabilities. In 2006 and 2007, Infosys BPO received the Helen Keller award for the best employer from the National Centre for Promotion of Employment for Disabled People (NCPEDP). On December 3rd,

Infosys BPO, the business process outsourcing subsidiary of Infosys Technologies, celebrated to commemorate The World Disability Day. In Celebrating Diversity Week, a series of internal and external events were organised across Infosys BPO centers in Pune, Jaipur, Gurgaon and Bangalore. It seeks to communicate to employees and to the general public Infosys BPO's Equal Opportunity Policy of inclusion and diversity and to invite all to express solidarity for the cause of the differently abled. Infosys BPO encourages differently enabled persons to apply for roles/positions and supports them with the right tools and environment that in turn helps them realize their full potential as contributors to society. The industry has neither earmarked a chunk of jobs for the handicapped nor evolved special norms for recruiting them. The disabled candidates are chosen like others. They are chosen after a communication test and technical test followed by an interview," said S. Varadarajan, vice-president (talent engagement and development), Wipro BPO.

TransWorks (an Aditya Birla Group company offering customer care and BPO services) and 24/7 Customer (a Bangalore-headquartered BPO company) have a couple of employees who were trained at EnAble India, an NGO in Bangalore for the differently abled persons. Progeon Ltd (subsidiary of Infosys Technologies Ltd) has listed the services of the National Society for Disabled, New Delhi, for a training curriculum for handicapped youth looking for openings in the BPO sector. This organisation has helped the organization by training 15 physically challenged staff. The firms plan to hire people with disabilities for tasks such as quality control, email processing, data entry, transaction

processing or voice and accent trainers. Openings in administration, training and human resource wings, too, are a certainty. According to the experiences of the BPO executives the people with disabilities are on a par with other employees. EnAble identified job opportunities in the industry and mapped the tasks and the methods a disabled person would employ to handle them overcoming barriers of technology, attitude and ability. The industry, however, is divided on whether such recruitment can offset attrition. The study shows that the growing gap between the demand and supply of trained manpower can be balanced if Industries like BPO go for differently abled persons. One constraint to recruiting more disabled is the telecom policy that prohibits a company from diverting its lease line to homes, Karnik the NASSCOM President said.” Our telecom policy is an inhibiting factor for the physically challenged to work from home. We have brought this to the notice of the government,” the NASSCOM president said. Most recruiters find physically challenged candidates confident and assertive. Some demonstrate a high level of maturity in stressful situations, which comes handy in customer service jobs.

5.6: No Differential Treatment for the Disabled IT professionals at work

ITES companies find differently abled people loyal and hard working and have no problem hiring them as long as their disability does not affect work. Knowledge-based industries hire disabled people because they bring complementary skills to the table. The industry does not differentiate them from other candidates. Disabled people are not given differential treatment, but the company keeps in mind basic considerations such as holding a meeting close to the person's seat, outdoor travel accompanied by spouse (if possible) and so on. In the BPO world, delivery is demanded at accuracies of 99.995 and assurance levels bordering on Six Sigma — a process must produce no more than 3.4 defects per million opportunities. Here, Lason India finds its disabled personnel an asset as they apply themselves single-mindedly to their work.

Lason India is a subsidiary of the US-based Lason Inc. The company designed a BPO training programme for the disabled. Lason trainers learnt sign language to impart data processing instructions to the disabled. The first batch of trainees has found gainful employment. Lason recruited 12 of them. Vivek Tripathi, Senior HR Manager, Adobe Systems India, which has recruited one disabled person, says the company does not give any concession to candidates with physical disability. Many ITES companies have

created special facilities at their campuses such as customised computers, ramps, chairs and rest rooms. Disabled persons are also given preference for day shifts. ValueLab Company planned to construct a ramp in its new building, and specially designed toilets for them.

5.7: Online Migration Opportunities for the Disabled IT Professionals

Basically there are two types of IT professionals who are migrated to other countries. One is called the Body Shoppers and another is called as Onsite Labour. Body shoppers or Body Migration means the physical migration. The people hired through body shopping, requiring physical presence of software professionals at the site of work Body shopping is essentially when people are sitting in some kind of recruitment shops in India. Whereas On-line Labor or On-line IT professionals can have three types of features: i) the programmers in India are connected to clients' machines in the US through 64 Kbps and above satellite links and Internet/e-mail; ii) where the situation demands, the client is able to monitor the progress on a continuous basis, implement quality checks and communicate with the programmers and analysts, as if they were on site; iii) since the US and India have an average 12-hour time zone difference, the client enjoys—for certain software projects—virtual round-the-clock office hours. Lots of companies in India organize programmers to provide on-line software labor to the companies in the United States and other countries. By December 1998, more than 109 Indian software firms had acquired international quality certification (NASSCOM, 1999). Some well-known U.S. firms that figure in the client list of these Indian firms are Intel, Merrill Lynch, AT&T, and IBM among many others. According to *The Economist* (1996, p. 32), "More than 100 of America's top 500 firms buy software services from firms in India, where programmers are typically paid less than a quarter of the American rate." By 1998, Indian software providers have already captured an 18.5 percent market share in global cross-country customized software work, and the Indian IT sector has consistently achieved more than 50 percent compounded annual growth rate since 1991 (NASSCOM 1999). Earnings from software exports are projected to gross \$9 billion by the year 2001-02, while the National Task Force on Information Technology—a support arm of the Indian government—has set a target of \$50 billion of exports by 2008 (NASSCOM 1999). It must be noted that these US dollar earnings assume even bigger proportions on

conversion into the Indian currency (Rupee) in terms of their purchasing power. The software relationship between India and the U.S. is particularly significant. Just as India is becoming the largest supplier of software labor to the United States both in terms of body shopping and of online labor.

Migration of disabled professionals from India to other countries is very difficult. Some of the countries do not permit work visa for physically or mentally handicapped people. But in BPO sector the disabled IT professionals are getting job opportunity by which they are getting online migration opportunity. Basically they are working for the other countries through online consultancy, online customer care and online technical support. The disabled IT professionals may be sitting in India but actually they are working for the companies in USA, Canada, UK, Australia etc. They are treated as 'onsite labour' for these countries. It means a lot for them. They feel important as the other migrated IT professionals who have physically migrated to various countries. And they are getting the salaries at par with the other 'Body Shopper' migrated candidates who are physically working in foreign countries.

CHAPTER-VI

CAUSES OF MIGRATION OF SKILLED HUMAN RESOURCES FROM INDIAN *IT* SECTOR---DATA ANALYSIS, DISCUSSION AND FINDINGS

- **SCENARIO OF INDIAN *IT* PROFESSIONALS IN USA**
- **CAUSES OF USA BEING AN ATTRACTIVE DESTINATION TO INDIAN *IT* PROFESSIONALS**
- **MAJOR REASONS FOR MIGRATION OF INDIAN *IT* PROFESSIONALS**
- **PREFERENCES OF MIGRATED *IT* PROFESSIONALS**
- **SKILLS OF MIGRATED *IT* PROFESSIONALS –HAPPY OR NOT?**
- **FRACTION OF SALARY SENT BY THE MIGRANTS TO THEIR HOMES IN INDIA**
- **JOB SATISFACTION OF THE MIGRANTS**
- **THE RELATIONSHIP BETWEEN JOB SATISFACTION AND MENTAL SATISFACTION**
- **HYPOTHESES TESTING AND FINDINGS**

CAUSES OF MIGRATION OF SKILLED HUMAN RESOURCES FROM INDIAN *IT* SECTOR AND THE INFLUENCING FACTORS OF GLOBALISATION

6.1: Introduction

Skilled migration has become an extremely important form of migration in the modern world. Various globally important countries like the USA, Canada, Australia, New Zealand, UK (Quaked, 2002) etc. have opened up immigration for the highly skilled professionals and the main criterion of selection of the migrants is their skills. Since the liberalization of Indian economy and particularly between 1999 and 2001(Hira, 2004), India has become one of the powerful sources for skilled human resource migration. The migration from India increased due to increase in highly skilled professionals in Indian *IT* sector. Towards the end of 1990, there was a large increment in the number of work permits issued to the *IT* sector from India and this was in response to the hike in the global demand of skilled human resources. However to the best of knowledge, despite this consistent rise in the migration, till date very few studies have focused on the specific issues related to *IT* migrants.

Globally, India has become a dominant supplier of IT professionals to various countries like USA, Germany, Australia, Gulf, New Zealand, UK etc. The German Green Card, the American H1-B visa, the British work permit, the Canadian investment visa, the Australian student visa, the New Zealand citizenship, all are encouraging to acquire Indian talents including skilled professionals. The Indian IT professionals who go to different parts of the world, 90 percent of them go to the USA only. According to the agreement between the USA Govt and WTO and the 'Agreement of Uruguay', the US Govt. is bound to issue minimum 65000 H-1B visas for foreign skilled professionals every year. The H-1B and L-1 visas are the temporary visas given to the skilled professionals from foreign countries for temporary immigration to USA. Due to the demands of skilled professionals in the US companies the Govt. of USA had issued approximately 3, 00,000 H-1B visas in 2007-2008 (Bureau of Citizenship and Immigration Services, USA Govt.). Basically the demands of H-1B & L-1 visas come from the IT industries. The IT companies of USA have always demanded the number of H-1B visas should be increased for the Indian IT professionals. Because Indian IT professionals are

skilled, bright, good English speakers and above all cheaper than their USA counterparts. The cost to company (CTC) of an Indian IT professionals in USA is \$60000-70000 per annum, whereas for an American the CTC is near about \$100000. Most of the H-1B visas and L-1 visas are availed by Indian IT professionals. Approximately 50 percent of those visas are availed by Indian IT professionals (Bibek Debray, Anandabazar Patrika, 28th May, 2009). Indians IT professionals are in great demand in US companies. Approximately 10 lacks Indian have stayed in the USA. Those who have got 'Green Card' became the permanent residents of the USA but those who have got only H-1B visas and L-1 visas will be facing some problems in future due to new immigration policies taken by Obama Govt. regarding H-1B visas due to recent economic recession. Approximately 90,000 Indian students who are doing higher studies in the USA will work in the USA after completion of their studies and will face problems due to new law. Indian IT professionals are the pioneers in the development of software Industries in the USA. The Indian IT professionals have great contributions in setting up of establishments like Google, Intel, e-Bay, Yahoo etc. in the USA. Approximately 1, 63,000 H1B visas were offered to IT specialists from India during 2007-2008 (Bureau of Citizenship and Immigration Services, USA Govt.). The demands of H-1B and L-1 visas are very high for the multinational software houses which have their offices both in India and the USA. In the year of 2008 there were demands of 85000 H-1B visas by the Indian IT professionals. In 2001, India was the largest source of H-1B petitions. Out of the 331,206 H-1B petitions approved by BCIS (Bureau of Citizenship and Immigration Services, USA Govt.) in 2001, 161,561 or 49 percent went to Indian nationals. The next closest country was China, with 27,331, or 8 percent, approved petitions. Almost all, precisely 92 percent, of the petitions for Indian workers were for computer-related or engineering occupations. It is clear that employers of Indian nationals with *IT* skills are the heaviest users of the H-1B visa. In the year of 2009 during the recession the US Govt. has passed a bill to provide limited number of H-1B visas to software professionals. In 2009 the number has decreased to around 45,000. According to data released by the US Citizenship and Immigration Services (USCIS), Infosys tops the list with as many as 4,559 visas, followed by Wipro with 2,678, Satyam 1,917, TCS 1,539, Cognizant 467, L&T 403 and IBM India got 381 H1B visas. Microsoft, the US Company with 1,037 H1B visas issued, ranked fifth in the list. Among other US companies, Google got 248 visas, while Lehman Brothers received 130 visas. The H1B visa has been designed for US corporations to

remain competitive in the world market. In the times when the US is experiencing recession, there has been a general animosity against the H1B visas in America. Recently a statistics is published by USCIS(Rediffmail.com, May 20, 2009)that nearly 20,000 slots open seven weeks after the US Citizenship and Immigration Services (USCIS) started receiving applications for the financial year 2010 beginning October 2009.The USCIS said it has so far received approximately 45,500 H-1B petitions counting toward the Congressionally-mandated 65,000 cap. USCIS said it has received approximately 20,000 petitions for the advanced degrees category. However, it would continue to accept advanced degree petitions since experience has shown that not all petitions received are approvable, the USCIS said in a statement. The Congress mandated that the first 20,000 of these types of petitions are exempt from any fiscal year cap on available H-1B visas. For the fiscal year 2010, the USCIS is already started receiving H-1B petitions from April 1, 2009. In the first five working days, it received 42,000 H-1B petitions. In the month and half since then, USCIS has received just 3,500 more H-1B petitions, indicating the slump in demand for H-1B work visas.

The growing competition among themselves have necessitated the countries like the US, the UK, Canada, Australia, New Zealand, Ireland, and Singapore, as well as non-English speaking countries like France, Germany, Netherlands and South Asian countries to look for the cream of Indian professionals. Data collated by the US Institute of International Education's *Open Doors 2005* survey revealed that in 2004-05 India retained its No. 1 position in the US university enrolment (followed by China, Korea, Japan, Canada, and Taiwan) for the fourth year in a row.

The *IT* professionals are in a huge demand in the developed countries .The German Green Card, the American H1-B visa, the British work permit, the Canadian investment visa, the Australian student visa, the New Zealand citizenship, all are encouraging to acquire Indian talents including skilled professionals as well as students. A new destination, that rapidly gained popularity, has been the Middle East. Some south-east countries like Malaysia became such destination later on.

6.2: Scenario of Indian *IT* Professionals in the USA

Almost 90 percent of Indian skilled human resources move to the USA every year. Globally, India has become a powerful supplier of *IT* professionals and about 1, 63,000 H-1B visas were offered to *IT* specialists from India to USA in recent years (2007-2008). Before 2001, UK was the best option for migration for the Indian *IT* professionals. But after 2001 USA has become first preference (Hira, 2004) of the *IT* professionals for migration destination. In 2000, 19.7 percent of work permits granted by the UK went to the computer industry, which was the six times bigger than the numbers in between 1995 and 2000. In the year of 2008 near about 85000 H-1B visas were available for the Indian professionals according to the US Citizenship & Immigration Service (USCIS).

Information Technology (*IT*) industries can be an important source of economic growth and development for developing countries. The Indian software industry, which has been successful at exporting *IT* services, is the exemplar for developing countries. NASSCOM, the Indian software services industry association, estimates that the Indian *IT* industry has grown nearly eightfold from 1994 to 2001, with revenues in 2001 of approximately US\$13.5 billion and 2.87 percent share of India's GDP. At the end of 2006, more than 1 million skilled professionals (IT engineers, scientists, doctors, researchers) and their families were in line for a yearly allotment of only 120,000 permanent resident visas to the USA. Many Central and Eastern European countries have similar pools of technically competent workers, and they liberalized their economies at approximately the same time as India did. Therefore, why has India been so successful than other countries, such as Romania or Russia? There are many explanations for India's recent success in *IT*. The most important reason is India's economic liberalization after 1991. Then intellectual mindset of Indian students, technically trained workers who are willing to work for low wages in foreign countries, good English skills. These are the reasons for what India has become a superpower in the field of Information Technology. The number of *IT* professionals who migrate from India every year can be obtained from the statistics provided by Department of Labour, Govt. of India. For getting migration to the US, H-1B visa is required. A study on H-1B visa will easily throw a light on migration scenario of Indian *IT* professionals every year.

6.3: H-1B and L-1 visa for migration of Indian *IT* Professionals

Occupation like *IT* profession is a highly skilled profession, which requires theoretical and practical application of highly specialized knowledge and skills. It also requires a bachelor's degree from a recognized University. The H-1B visa has been the category of visa, which is most closely linked to the *IT* industry. The United States employs a variety of visa categories to admit foreigners for business, pleasure, study, work, or immigration. H-1B (Hira, 2004) is a temporary worker visa issued to employers to hire specialized occupation workers. From fiscal years 1991–1998 the maximum number of new H-1B visas had touched to 65,000. For 1999 and 2000, it was raised to 115,000 and for FY 2001–2003, it was raised to 195,000. For 2004, it again reverted to 65,000.

Table 6.1: Top 5 H-1B occupations shift between 1995 and 1998

| 1995 | | 1998 | |
|----------------------|----------------------|----------------------|----------------------|
| Top 5 occupations | Percent of H-1Bs (%) | Top 5 occupations | Percent of H-1Bs (%) |
| Therapists | 54 | Computer specialists | 57 |
| Computer specialists | 25 | Therapists | 14 |
| University faculty | 2 | Accountants | 7 |
| Physicians | 2 | Electrical engineers | 3 |
| Accountants | 2 | Architects | 2 |

(Source: US Dept. of Labour, 2004)

Table 6.1 shows the comparisons of occupational mix of H-1B beneficiaries between 1995 and 1998. It is clear from the above table that *IT* has become the first preference in recent days H-1B beneficiaries after 1998.

Table 6.2: Top H-1B petitioners, Oct.1999-Feb.2000

| Rank | Company | Rank | Company |
|------|---------------|------|--------------------------|
| 1 | Motorola | 9 | Wipro |
| 2 | Oracle | 10 | Tata Consultancy Service |
| 3 | Cisco Systems | 11 | Price Waterhouse Coopers |
| 4 | Mastech | 12 | People Com Consultants |
| 5 | Intel | 13 | Lucent Technologies |
| 6 | Microsoft | 14 | Infosys |
| 7 | Rapidigm | 15 | Nortel Networks |
| 8 | Syntel | 16 | Tekedge |

(Source: US Dept. of Labour, 2004)

Table 6.2 displays the names of the 16 employers/companies requesting H-1B visa for Indian IT professionals. There are a few large employers on the list such as Oracle, Lucent, and Motorola, but the list also includes software body shops such as Tata Consultancy Services (TCS) and Mastech. TCS is an Indian-based *IT* firm that was one of the first to penetrate the U.S. market.

By 2001, India was, by far, the largest source of H-1B petitions. Out of the 331,206 H-1B petitions approved by BCIS (Bureau of Citizenship and Immigration Services, USA Govt.) in 2001, 161,561 or 49 percent went to Indian nationals. The next closest country was China, with 27,331, or 8 percent, approved petitions. Almost all, precisely 92 percent, of the petitions for Indian workers were for computer-related or engineering occupations. It is clear that employers of Indian nationals with *IT* skills are the heaviest users of the H-1B visa.

On the other hand L-1 is an intra company transfer visa used by multinational companies to move employees to the United States for temporary assignments. The employees are required to be executives, managers, or in other positions that require specialized knowledge like a Project Manager of a software developing firm. Executives and managers are able to stay up to seven years, while specialized knowledge workers can stay up to five. There is no annual number for L-1 visas and no prevailing wage requirement. These features may make the L-1 more attractive than the H-1B. Some Indian IT firms have increased their use of the L-1 more rapidly than the H-1B.

6.4: Uses of H-1B and L-1 visas by Indian IT firms

By the end of 2002, at the peak time of NASDAQ, Infosys had 2884 employees on temporary visas in the United States, a 200 percent increase from March 2000. H-1B and L-1 workers represented approximately 21 percent (NASSCOM, 2003) of Infosys' worldwide workforce.

The BCIS tracked the leading H-1B petitioners for a short window from October 1999 to February 2000, and the top 5 firms are shown in Table-6.3. Three of the top Indian *IT* firms, namely TCS, Wipro, and Infosys, are among the top H-1B petitioners (PTI, 2003). Not only do the Indian *IT* firms use a large number of H-1B and L-1 visas, but they are also among the leaders in H-1B petitions.

Table 6.3: LCA requested by leading IT firms in 2001

| Company | Number of employees requested on LCAs | Total LCA wages to be paid (US \$ millions) | Average wages paid per position per year (US\$) |
|---------|---------------------------------------|---|---|
| Wipro | 3120 | 158 | 50,648 |
| HCL | 3828 | 147 | 38,428 |
| Satyam | 8692 | 483 | 55,621 |
| Tata | 11,982 | 437 | 36,502 |
| Infosys | 12,211 | 657 | 53,880 |
| Totals | 39,833 | 1884 | 47,294 |

(LCA=Labour condition application)
 (Source: US Dept Of Labour, 2004)

6.5: Causes of USA being an attractive destination to Indian *IT* professionals

Labour cost is a major driver in winning business in the *IT* market, and, if H-1Bs are a cheaper alternative compared to American workers, then, those companies utilising the H-1B will have a competitive advantage. Typically, for a TCS employee with five years experience who is migrated, the annual cost to the American company is \$60,000–70,000, while a local American employee might cost \$80,000–100,000. This (labour arbitrage) is a fact of doing work onsite.

Why would an Indian H-1B worker accept a lower salary than that of a comparably skilled American? Salaries for *IT* workers in India are significantly lower than in the United States and thus, the salary expectations of Indian workers are lower. Instead of getting low salary in America, Indian *IT* professionals want to stay back there for non-monitory benefits and possibility of getting permanent immigration in USA. While the cost of living in the United States is higher than in India, the H-1B's perception of his or

her net pay is influenced by the substantial differences in purchasing power parity (PPP), an international cost of living index, between the United States and India. The World Bank has calculated a PPP of approximately 0.2 between India and the United States, which means that US\$10,000 in India has the same purchasing power as US\$50,000 in the United States. This PPP differential amplifies any savings by the Indian H-1B workers.

6.6: Data Analysis

With the help of the data obtained through the questionnaire, an effort has been made to illuminate the following:

1. Major reasons for migration of Indian *IT* professionals.
2. Preferences of migrated *IT* professionals.
3. Importance of role played by some decision makers in compelling the migrants to take migration decision.
4. Present skills of migrated *IT* professionals.
5. Fraction of salary sent by the migrants to their homes in India.
6. Job satisfaction of the migrants.
7. Age distribution of the migrants.
8. Academic background of the migrants.
9. Work experience of the migrants.
10. The relationship between job satisfaction and mental satisfaction of the migrants.
11. Factors influencing the relative job satisfaction of the Indian migrants in the foreign country with respect to home country.

6.7: Major Reasons for Migration of Indian IT Professionals

After 1991 when globalisation took place in the Indian economy the scenario of migration of IT professionals to USA and other countries has been changed. After 1991 the issue of H-1B visa for the Indian IT professionals has increased extensively. Under the condition of globalisation and the condition of ILO some factors have become very crucial for migration decisions for the skilled professionals. The working infrastructure, salary structure, cost of living, Quality of Work Life (QWL), opportunity of utilizing skills etc have infact become crucial factors. These factors have become influential in migration decisions of the IT professionals.

Out of the questions asked in the questionnaire, there was one question in which the respondents were asked to give scores on the influences of some factors (in a scale of ten) in causing their migration. The averages of the scores of all the respondents have been obtained for each of the factors and are displayed in the Table-6.4. The factors are ranked according to their mean score.

Table 6.4: Major reasons for migration of Indian IT professionals

| FACTORS (influencing migration) | MEAN SCORE (OUT OF 10) | STD DEV. | RANK |
|---|-----------------------------------|-----------------|-------------|
| <i>Improved Infrastructure</i> | 7.97 | 1.08 | 1 |
| <i>Better Working Environment</i> | 7.67 | 1.09 | 2 |
| <i>Salary</i> | 7.65 | 1.29 | 3 |
| <i>Political Turmoil</i> | 7.59 | 1.62 | 4 |
| <i>Better Opportunity Of Utilising Your Skill</i> | 7.07 | 1.91 | 5 |
| <i>Quality Of Work Life</i> | 7.07 | 1.09 | 5 |
| <i>Achievement</i> | 6.46 | 1.00 | 7 |
| <i>Recognition</i> | 6.43 | 0.84 | 8 |
| <i>Research Environment</i> | 6.14 | 1.05 | 9 |
| <i>Indian Social Security</i> | 5.31 | 1.38 | 10 |
| <i>Cost Of Living In Your Present Country</i> | 5.29 | 1.95 | 11 |
| <i>Cost Of Living In India</i> | 4.14 | 1.30 | 12 |

(Source: Computed from Data Collected from the Respondents)

From Table 6.4 it can be witnessed that out of these 12 factors the main factor influencing migration from India to other countries and staying there is ‘Improved Infrastructure’ in foreign countries. Improved infrastructure obviously implies the job infrastructure in foreign countries like technological infrastructure, management support, job design, job responsibility etc. ‘Better Working Environment’ gets the 2nd rank. Better working environment comprises of cozy working environment, less politics at the work place, recognition of work etc. ‘Salary’ is found to be the 3rd influential factor for migration. ‘Political Turmoil’ in India is ranked 4th for migration. The migrated IT professionals feel that political turmoil in India is not good for doing job in India. ‘Better opportunity of utilizing skill’ and ‘Quality of Work Life’ in foreign countries are jointly ranked 5th as the factors influencing the migration. ‘Cost Of Living in India’ and ‘Cost Of Living in Foreign Countries’ are the two least influential factors for migration.

6.8: Preferences of migrated IT professionals

One question was asked in which the respondents had to give scores (in a scale of ten), which would reveal their preferences towards movies, foods, culture and work culture. The responses obtained are shown in Table-6.5. The factors are ranked according to their mean score.

Table 6.5: Preferences of migrated IT professionals

| FACTORS | MEAN SCORE (OUT OF 10) | STD DEV. | RANK |
|---|---------------------------|----------|------|
| <i>Indian Food</i> | 9.02 | 0.85 | 1 |
| <i>Hindi Movie</i> | 8.51 | 1.10 | 2 |
| <i>Present Country's Work Culture</i> | 8.49 | 0.68 | 3 |
| <i>Indian Social Culture</i> | 7.68 | 0.92 | 4 |
| <i>Indian Work Culture</i> | 6.52 | 0.86 | 5 |
| <i>Present Country's Social Culture</i> | 6.46 | 1.45 | 6 |
| <i>English Movie</i> | 5.68 | 0.97 | 7 |
| <i>European Food</i> | 5.47 | 1.18 | 8 |
| <i>American Food</i> | 5.10 | 1.30 | 9 |
| <i>Chinese Food</i> | 4.98 | 1.38 | 10 |
| <i>Regional Movie</i> | 3.48 | 1.50 | 11 |

(Source: Computed from Data Collected from the Respondents)

Table-6.5 shows the preferences of the migrated Indian *IT* professionals for different factors like different food habits, cultures and entertainments etc. They might have migrated to other countries but their liking towards *Indian Food* is much more than *Foreign Food*. Their greater affinity for '*Hindi movies*' compared to '*English/ Regional Movies*' and greater affinity for '*Indian Social Culture*' compared to '*Present Countries Social Culture*' are also evident. However, a striking revelation is that, as far as the *Work Culture* is concerned, the migrants prefer their present countries (i.e. foreign countries) more than India.

6.9: Factors Influencing Migration Decision

Table 6.6 summarises the responses obtained from the migrants regarding the importance of the role played by different decision makers in their migration decision. The averages of the scores of all the respondents have been obtained for each of the factors.

Table 6.6: Importance of role played by some decision makers in compelling the migrants to take migration decision

| FACTORS | MEAN SCORE (OUT OF 10) | STD DEV. | RANK |
|-----------------------------------|------------------------|----------|------|
| Ownself | 7.48 | 0.95 | 1 |
| <i>Previous Job Environment</i> | 7.23 | 0.96 | 2 |
| <i>Present Employer</i> | 6.36 | 1.41 | 3 |
| <i>Family</i> | 5.33 | 1.91 | 4 |
| <i>Previous Employer</i> | 3.61 | 1.02 | 5 |
| <i>Friends In Present Country</i> | 3.18 | 1.79 | 6 |
| <i>Friends In India</i> | 1.93 | 1.02 | 7 |
| <i>Teachers</i> | 1.63 | 1.53 | 8 |

(Source: Computed from Data Collected from the Respondents)

Table 6.6 reveals the migrated *IT* professionals consider themselves (ie. '*Ownself*') coupled with their '*Previous Indian Job Environment*' to be the main driving forces in taking the decision of migration. To some extent, their *Present Employer* (i.e. the employer in the foreign country) and their *Families* also played a considerable role in this regard. Other factors shown in the table have not played any significant role in encouraging the migrants to leave India.

6.10: Skills of migrated IT professionals, their Job Satisfaction and related matters

With the objective of developing an idea about the major skills of the migrated IT professionals one question was asked against which the respondents had to rate each of their different skills (i.e. managerial, developer, consultancy, customer care etc.) in a scale of ten. For each skill the averages of the scores obtained from different respondents have been calculated and displayed in Table 6.7.

Table-6.7: Skills of migrated IT professionals

| SKILLS | MEAN SCORE (OUT OF 10) | RANK |
|----------------------|---------------------------|------|
| <i>Managerial</i> | 7.27 | 2 |
| <i>Developer</i> | 4.55 | 5 |
| <i>Maintenance</i> | 4.68 | 4 |
| <i>Consultancy</i> | 7.59 | 1 |
| <i>Customer Care</i> | 4.9 | 3 |

(Source: Computed from Data Collected from the Respondents)

From Table-6.7 we see the respondents are handling all the responsibilities from 'Consultancy' to 'Software Development' as per the job design. However, according to the respondents their main skills are 'Consultancy' and 'Managerial Skills'. As is well known, the managerial skills and consultancy skills are mainly associated with professionals working in the upper level of the hierarchy. This is in consistency with the result obtained (displayed in Table-6.12) which shows that more than 50 percent of the migrated professionals have substantial experience and are hence expected to work in the upper level of the hierarchy.

Remittances sent, job satisfaction, age distribution of the migrants, their academic backgrounds and work experience are shown respectively in tables 6.8, 6.9, 6.10, 6.11 and 6.12.

Table 6.8: Remittances sent by the migrants to their home in India

| FRACTION OF SALARY THE MIGRANTS SEND HOME | NO. OF RESPONDENTS | PERCENTAGE |
|---|--------------------|------------|
| <i>Zero</i> | 0 | 0 |
| <i>One Fourth</i> | 34 | 23.1 |
| <i>Half</i> | 112 | 76.9 |
| <i>Three Fourth</i> | 0 | 0 |

(Source: Computed from Data Collected from the Respondents)

From Table 6.8 we see that 76.9 percent of the 146 respondents send half of their salaries to their homes in India.

Table 6.9: Job satisfaction of the migrants

| JOB SATISFACTION | MEAN SCORE (OUT OF 10) | STD. DEV. |
|--|------------------------|-----------|
| <i>Present Job Satisfaction</i> | 8.44 | 1.06 |
| <i>Job Satisfaction Before Leaving India</i> | 5.94 | 1.49 |

(Source: Computed from Data Collected from the Respondents)

From Table-6.9 it is seen that the ‘*Present Job Satisfaction*’ of the IT professionals is higher than the ‘*Job Satisfaction before Leaving India*’.

The table below displays the percentages of migrants who fall in each of the different age groups.

Table-6.10: Age distribution

| AGE (in years) | PERCENTAGE |
|----------------|------------|
| 20-25 | 34% |
| 25-30 | 42% |
| 30-35 | 18% |
| 35+ | 6% |

(Source: Computed from Data collected)

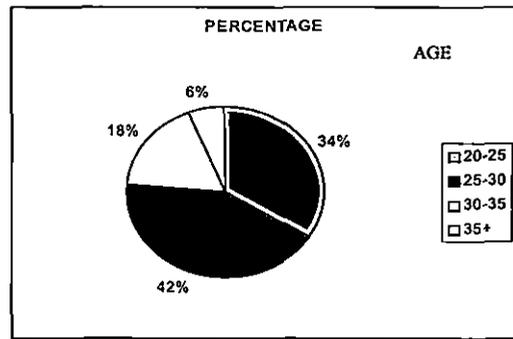


Fig: 6.1 Age distribution of the migrants

From Table 6.10 it is evident that the age group of 25-30 is having the highest frequency among the 147 respondents.

Table-6.11 displays the percentages of migrants who possess each of the different academic degrees mentioned.

Table 6.11: Academic background

| DEGREE | PERCENTAGE |
|------------------|------------|
| MS in CS | 44% |
| MS in EE/ECE | 19% |
| PhD in CS | 15% |
| Bachelors | 7% |
| Others (MCA etc) | 15% |

(Source: Computed from Data collected)

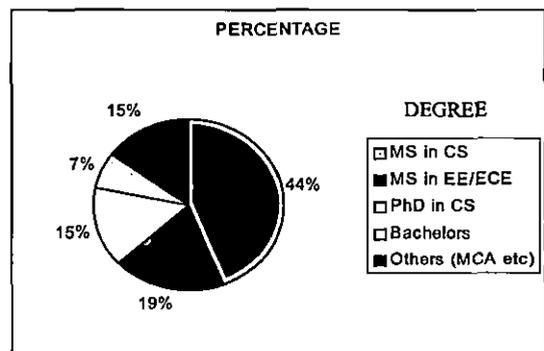


Fig: 6.2 Academic background of the migrants

From Table 6.11 we can see that most respondents are having the degree MS in Computer Science. A good number of IT professionals are having PhD in computer science.

Table 6.12: Work experience

| YEARS OF WORK EXPERIENCE | PERCENTAGE |
|--------------------------|------------|
| 0 | 22% |
| 0-1 | 22% |
| 1 to 3 | 26% |
| 3 to 5 | 15% |
| 5 to 10 | 13% |
| 10+ yrs | 2% |

(Source: Computed from Data collected)

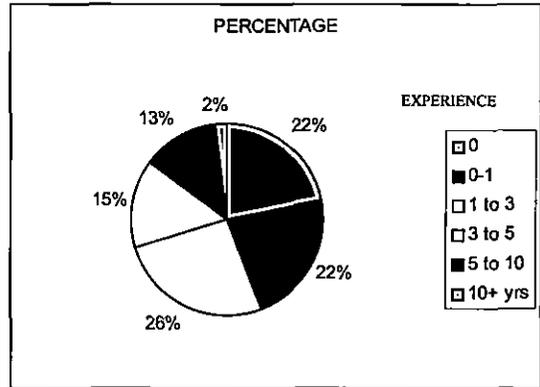


Fig 6.3 Work experience of the migrants

From Table 6.12 it is seen that out of 147 IT professionals, 26 percent are having 1 to 3 years work experience, 15 percent are having 3 to 5 years work experience and 13 percent are having 5 to 10 years experience.

6.11: The relationship between job satisfaction and mental satisfaction

A simple correlation coefficient between the scores given by the respondents on 'Present Job Satisfaction' and scores given on 'Mental Satisfaction' has been found out. The value of the said correlation coefficient is -0.091 , which is insignificant at 5 percent level of significance (P value is 0.27). That means the job satisfaction of the migrants who are working in foreign countries have no relation with their mental satisfaction. This implies that the mental satisfaction of the migrants is determined not by the standard and type of job that they are doing. Probably the fact that these migrants staying in a foreign country feel out of nostalgia, that they are missing some of the basic cultures, properties and traits of their mother nation. This is also proved by the filled up questionnaires where most of the respondents have shown their interest to return back to their homeland. This give rise to the scope for carrying out further research works to find out the major determinants of 'Mental Satisfaction' of migrated Indian IT professionals.

6.12: Hypotheses Testing and Findings

6.12.1: Factors influencing the relative job satisfaction of the Indian IT migrants in the foreign country with respect to home country:

In this section we want to assess the reasons for skilled human resource migration from Indian IT sector and impacts of different factors due to globalisation. The study has attempted to assess the trends in and potential demands for trained human resources from Indian IT sector to all over the world.

Globalisation has a strong impact on transnational differentials in wages, social benefits, skills, infrastructure, quality of work life, cost of living etc. (Tomer Broude, International Law Forum of the Hebrew University of Jerusalem Law Faculty, Research Paper, 2007). The labour migration is strongly associated with these variables. Due to globalisation a rapid development has been seen in the environmental, social and infrastructural areas in software sectors worldwide.

The specific research questions related to these variables are addressed by the study with special reference to Indian IT sectors are as follows.

1. The migration of IT professionals is influenced by the combination of the variables like *salary, achievement, cost of living in India, better opportunity of utilizing skill, better working environment, political turmoil etc.*
2. The migration of IT professionals is influenced by salary in the foreign countries.
3. The migration of IT professionals is influenced by *achievement of work* in the foreign countries.
4. The migration of IT professionals is influenced by *cost of living in India.*
5. The migration of IT professionals is influenced by *better opportunity of utilizing skill* in the foreign countries

6. The migration of IT professionals is influenced by *better working environment* in the foreign countries.

7. The migration of IT professionals is influenced by *political turmoil in India*.

8. Significant difference in the *Present job satisfaction* of the IT professionals and their *job satisfaction before leaving India*

The respondents were asked to express their present job satisfaction in the foreign country, as well as their job satisfaction before leaving India, each in scale of ten. The scores obtained for present job satisfaction is expressed as a percentage of scores obtained for job satisfaction before leaving India. This percentage (say variable *J*) may be treated as an indicator of the impact of migration on job satisfaction. The respondents were also asked to rate different factors according to their influences in causing migration in scales of ten. Then a multiple regression equation of '*J*' on different independent variables each representing the influences of different factors in causing migration is obtained with the help of SPSS. The different independent variables are as follows:

'The influence of *salary* in causing migration' - VAR 00002.

'The influence of *achievement* in causing migration' - VAR 00003.

'The influence of *cost of living in India* in causing migration' - VAR 00004.

'The influence of *better opportunity of utilizing skill* in causing migration' - VAR 00005.

'The influence of *better working environment* in causing migration' - VAR 00006.

'The influence of *political turmoil in India* in causing migration' - VAR 00007.

The results obtained as output of SPSS has been displayed in Table- 6.13 and Table-6.14.

Table 6.13 reveals that the multiple correlation coefficient between J (VAR00001) and the above mentioned independent variables (i.e. from VAR00002 to VAR00007) is found out to be $R_{1,234567}=0.342$ and the corresponding significant F is .007. This implies that the multiple correlation is significant at 1 percent level. However the coefficient of determination (i.e. the fraction of the total variation in J which is explained by the regression line) is given by $R^2=0.117$. This indicates that in addition to the variables considered by us there are other variables which affect the relative job satisfaction of the migrants.

From Table 6.14 it is observed that out of the variables considered by us, only 2 variables are having significant partial correlations (Level of significance being 5 percent) with J . The partial correlation coefficient between J and salary as the influencing factor is -0.178, which is significant at 5 percent level of significance. Also the partial correlation coefficient between J and better working environment is 0.215 which is significant at 1 percent level of significance. This throws light on an interesting implication like:

Those individuals who have been influenced more by salary to leave India and migrate to other countries are less satisfied with their jobs in the foreign country (since the partial correlation is negative). On the other hand those individuals whose migrations have been influenced more by their search of better working environment are more satisfied with their jobs in foreign countries.

Table 6.13: SPSS output

| | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|-------|------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|
| Model | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .342 | .117 | .079 | 40.9078 | .117 | 3.096 | 6 | 140 | .007 |

Predictors: (Constant), VAR00007, VAR00006, VAR00004, VAR00005, VAR00002, VAR00003
 (Source: Computed from Data collected from Respondents)

Table 6.14: Table of coefficients

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | Correlations | | |
|-------|------------|-----------------------------|------------|---------------------------|--------|------|--------------|---------|-------|
| | | B | Std. Error | Beta | | | Zero-order | Partial | Part |
| 1 | (Constant) | 48.694 | 45.846 | | 1.062 | .290 | | | |
| | VAR00002 | -5.678 | 2.648 | -.172 | -2.144 | .034 | -.167 | -.178 | -.170 |
| | VAR00003 | 4.877 | 3.430 | .115 | 1.422 | .157 | .071 | .119 | .113 |
| | VAR00004 | 4.534 | 2.605 | .139 | 1.740 | .084 | .138 | .146 | .138 |
| | VAR00005 | 2.382 | 1.778 | .107 | 1.340 | .183 | .100 | .112 | .106 |
| | VAR00006 | 8.067 | 3.095 | .208 | 2.606 | .010 | .214 | .215 | .207 |
| | VAR00007 | 2.332 | 2.121 | .089 | 1.099 | .273 | .068 | .093 | .087 |

Dependent Variable: VAR00001

(Source: Computed from Data collected from Respondents)

6.12.2: Testing of Hypotheses from SPSS Tables 6.13 and 6.14

Table 6.13 reveals that the multiple correlation coefficient between *J* (VAR00001) and the above mentioned independent variables (i.e. from VAR00002 to VAR00007) is found out to be $R_{1,234567}=0.342$ and the corresponding significant F is .007. This implies that the multiple correlation is significant at 1 percent level which states that the hypothesis- H_{01} is rejected.

That is there is a correlation between migration of IT professionals and the combination of these variables i.e. salary, achievement, cost of living in India, better opportunity of utilizing skill, better working environment, political turmoil.

It implies that the above said factors have influences on migration of IT professionals.

From Table 6.14 we can consider that for hypothesis H₀₂, B –co-efficient of *salary* (VAR00002) is -0.172 and the partial correlation between *migration* and *salary* is -0.178 I.e. at 5 percent level of significance the calculated value of B-co-efficient is $(100\% - 3.4\%) = 96.6\%$ which is greater than 95%. So the hypothesis is rejected.

This means that migration of IT professionals is correlated with salary in the foreign countries.

For hypothesis H₀₃, B –co-efficient of *achievement of work* (VAR00003) is .115 and the partial correlation between *migration* and *achievement of work* is .119 I.e. at 5 percent level of significance the calculated value of B-co-efficient is $(100\% - 15.7\%) = 84.3\%$ which is less than 95%. So the hypothesis is accepted.

This means that migration of IT professionals is not correlated with Achievement of work.

For hypothesis H₀₄, B –co-efficient of *cost of living* in India (VAR00004) is .139 and the partial correlation between *migration* and *cost of living* is 0.146 I.e. at 5 percent level of significance the calculated value of B-co-efficient is $(100\% - 8.4\%) = 91.6\%$ which is less than 95%. So the hypothesis is accepted.

This means that migration of IT professionals is not correlated with cost of living in India.

For hypothesis H₀₅, B –co-efficient of *better opportunity of utilizing skill* (VAR00005) is .107 and the partial correlation between *migration* and *better opportunity of utilizing Skill* is 0.112 I.e. at 5 percent level of significance the calculated value of B-co-efficient is $(100\% - 18.3\%) = 81.7\%$ which is less than 95%. So the hypothesis is accepted.

This means that migration of IT professionals is not correlated with *better opportunity of utilizing skill*

For hypothesis H₀₆, B –co-efficient of *better working environment* (VAR00006) is -0.208 and the partial correlation between *migration* and *better working environment* is 0.215 I.e. at 5 percent level of significance the calculated value of B-co-efficient is (100%-1%)=99 % which is greater than 95%. So the hypothesis is rejected.

This means that migration of IT professionals is correlated with better working environment in the foreign countries.

For hypothesis H₀₇, B –co-efficient of *Political Turmoil* in India (VAR00007) is .089 and the partial correlation between *Migration* and *Political Turmoil* of work is .093 I.e. at 5% level of significance the calculated value of B-co-efficient is (100%-27.3%)=72.7% which is less than 95%. So the hypothesis is accepted.

This means that migration of IT professionals is not correlated with *political turmoil* in India

For the hypothesis H₀₈, a Z-test is done where the mean score (μ_1) and standard deviation (σ_1) for *Present job satisfaction* are 8.44 and 1.06 and for *job satisfaction before leaving India* the mean score (μ_2) and standard deviation (σ_2) were 5.94 and 1.49.

$$S.E = \sqrt{\sigma_1^2/n_1 + \sigma_2^2/n_2}$$

$$\text{Diff.} = \mu_1 - \mu_2$$

$$|Z| = \text{Diff.}/S.E$$

The Z value is obtained as 16.5.

Since at 5 percent level of significance the table value of Z is 1.96, so the calculated value (=16.5) of Z is becoming more than the tabulated value (=1.96). So the hypothesis H_{08} is rejected.

This implies that there is significant difference in the *present job satisfaction* of the IT professionals and their *job satisfaction before leaving India*

The present job satisfaction of the IT professionals is much higher than the job satisfaction before leaving India.

CHAPTER-VII

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.1: Short Summary

The evolution of the Indian IT market in 1997–2003 especially after globalisation has been remarkable and the IT industry has contributed 7.5 percent to India’s GDP in 2008–09, compared with 1.22 percent in 1997–98. Thus, India’s IT sector has defied predictions that it would never outgrow “body shopping”—simple, low-cost software fixes done at the client’s site. Indian software companies have proven themselves and gone on to win bigger, longer-term, and more demanding contracts that they have fulfilled on time, on cost, and with high quality, thus reinforcing and cementing their dominant position in the world.

The total revenues of the Indian software and services industry in 2003–04 were \$15.9 billion, including domestic revenues of \$3.4 billion. Indian software and services exports registered a growth of 30.5 percent in 2003–04, clocking revenues of \$12.5 billion, and witnessed a roughly 30–32 percent increase in revenues totaling \$16.3 billion in 2004–05. North America, which accounts for more than 55 percent of global IT spending, represented approximately 70 percent of Indian software exports in 2003–04; Europe ranked second at 22.25 percent of total exports. North America remains the dominant market for ITES-BPO services, accounting for more than 80 percent of ITES-BPO business in India.

The world is increasingly becoming one globally integrated market, and highly educated and trained people are key elements of competitiveness. Each year 2–3 million IT professionals from India emigrate due to higher salaries and complementary aspects: research centers, access to finance, and the ease of setting up businesses. Weaknesses in home countries include low salaries and weak complementary aspects: little funding for R&D; under-equipped research centres; difficult access to capital especially to start up new high-tech businesses; access to finance; and an overregulated business environment for starting and running new businesses. The majority of emigrants go to just four host countries: the United States, Germany, Canada, and Australia.

Although this migration has several positive effects on host countries by increasing the stock of high-level personnel and stimulating innovative activity, the negative effects on home countries include loss of highly trained personnel and fiscal costs, because many receive education that is publicly financed. Offsetting effects to home countries include remittances, return of migrants with greater international experience, and potential to use this diaspora to access capital knowledge and markets. Remittances to developing countries have soared from \$17.7 billion in 1980 to \$30.6 billion in 1990 to nearly \$80 billion in 2000 (Kapur and McHale 2003). In India, between 1990 and 2000, remittances from abroad grew six fold from \$2.1 billion to \$12.3 billion. The destination of these remittances shifted significantly from Kerala and Gujarat to Karnataka and Andhra Pradesh, which are becoming centres of IT.

According to the U.S. Census of 2000, the Indian diaspora in the United States is growing rapidly and very wealthy. The Indian-American community now boasts 1.68 million people compared to 0.81 million in 1990—a growth of 106 percent! Their average per capita income is \$60,093 (compared to a U.S. average of \$38,885 in the 2000 census). They have a high level of education: more than 87 percent of Indian-Americans have completed high school and 62 percent have some college education (compared with just more than 20 percent for the U.S. population). They are represented in virtually all professions, including agriculture, biotechnology, business, economics, finance, IT, journalism, management, medicine, and various sciences. In 1997–98, 4,092 Indian professors were teaching in U.S. universities. In the same year, 33,818 students born in India were registered in 2,579 U.S. universities. In 1997 Indian students obtained 3.2 percent of the total number of doctorates granted by U.S. universities. The Diaspora is also very entrepreneurial, and Indians have come to enjoy a dominant position in the U.S. IT industry: approximately 300,000 Indian-Americans work in Silicon Valley, account for more than 15 percent of start-ups in the United States, and have an average annual income of about \$200,000.

7.2: Overall Conclusions

To the best of our awareness, this type of study is not common to the existing literatures. As a result, this work is a new attempt to explore the different aspects related to the migration of Indian *IT* professionals whose socio economic importance is bound to increase in the near future.

Our analysis reveals that the main reason influencing migration of Indian *IT* professionals to the other countries is the search of *improved infrastructure*, followed by *better working environment*, and then *salary*. *Political turmoil* in India is another factor which has influenced the migrants to migrate to other countries.

The study also throws light on different food habits, different cultures and entertainments of the migrated *IT* professionals. They might have migrated to other countries but their liking towards *Indian food* is much more than *foreign food*. Their greater affinity for '*Hindi movies*' compared to '*English/ Regional Movies*' and greater affinity for *Indian social culture* compared to *present countries social culture* are also evident. However, despite enjoying the better work culture, most of the migrants are nostalgic about their homeland and want to come back to India with a suitable job offer. Most of them have taken their decisions to go abroad by themselves only. High job satisfaction in foreign countries is unable to generate high mental satisfaction within most of the migrants.

From this study it is found that those individuals who have been influenced more by salary to leave India and migrate to other countries are less satisfied with their jobs in the foreign country, which is very interesting. On the other hand those individuals whose migrations have been influenced more by their search of better working environment are more satisfied with their jobs in foreign countries.

The study also analyses the roles played by different decision makers in compelling the migrants to take migration decision. It is observed that most of the *IT* professionals have taken the decision of migration out of their *own selves*. *Previous job environment* and '*Present Employer*' have also influenced the migrants' decision for migration.

Most of the migrants send half of their salary to their families in India. Among the respondents, 76 percent of the IT professionals are aged between 20 years and 30 years. Majority of them are having their Master Degrees in Computer Science. Bulk of these professionals (56 percent) is having 1 to 10 years job experience.

A striking revelation of this research is that, as far as the '*Work Culture*' is concerned, the migrants prefer their present countries (i.e. foreign countries) more than India. This is further reflected in the fact that the job satisfaction of the migrants is much more in foreign countries compared to their job satisfaction before leaving India.

It is also revealed that job satisfactions of the migrants who are working in foreign countries have no relation with their mental satisfaction. This implies that the mental satisfaction of the migrants is determined not by the standard and type of job that they are doing. The migrants working in a foreign country become nostalgic and feel that they are missing cultures, properties and traits of their homeland. This is also proved by the filled up questionnaires where most of the respondents have shown their interest to return back to their homeland. This give rise to the scope for carrying out further research works to find out the major determinants of '*Mental Satisfaction*' of migrated Indian *IT* professionals.

The launch of economic reforms in India in 1991 opened up new business opportunities for the Indian community in the United States and the other developed countries. They have had an important role to play in high-tech development in India, focused primarily on the software industry. Many IT professionals rely heavily on strengths back home—the huge pool of skilled computer experts and software professionals—to subcontract work to their country of origin, thus creating a “virtuous” cycle for the Indian IT sector and economy. As an example, in the software industry and IT-enabled services, investments of Diaspora members are quite limited (about 3 percent of FDI), but their contribution is mostly in the form of knowledge linkages, that is, with foreign markets, helping Indian firms to absorb technical and managerial knowledge. The initial impetus for outsourcing to India many times comes from employees of Indian origin. The success of the Indian Diaspora has also attracted the attention of major MNCs to India’s potential in the IT sector. India has attracted investment in many R&D centers wholly funded and

established by GE, Cisco, Sun Microsystems, Microsoft, IBM, and Hughes Software. Intel's R&D centers in Delhi, Bangalore, and Mumbai service its global operations. Oracle Corporation has two development centers in Bangalore and Hyderabad. Phoenix Technologies, ABB Group, IBM, America Online, and J. P. Morgan Chase are in the process of setting up new R&D centers, and Lucent Technologies is also making inroads into India.

Software industry is the sunrise industry in India. Though it is only about \$1 billion, which is much smaller than many traditional industries like steel, manufacturing, chemicals, etc., it has caught the imagination of the nation as the possible industry in which India can eventually dominate the world. It is also one of the few high-tech areas in which India has made its presence felt world wide, and this has helped change the perception of India with respect to technological advancement and has brought national pride. This has led to the desire by the nation and the government to support the industry even more.

The industry has been growing at about 40 percent per year. As the industry is highly labour intensive, its main raw material is the trained and highly skilled manpower. Nasscom estimates that the software industry will need about 20,000 people per year. Compare this to the total output in all engineering disciplines of the top 50 engineering institutes in the country, which is about 12,000 to 15,000! In this context, the brain-drain from engineering institutes like the IITs, primarily to the US, is a source of concern to the software industry. Besides brain drain, these institutes are also being put in the dock for not producing enough engineers to satisfy the needs of the software industry.

Though brain drain from these institutes and stagnant output of engineering colleges definitely contribute to the manpower shortage of the software industry, the software industry itself has contributed to brain drain and the shortage of manpower in no small measure by its short term approach to business.

It is well known that a good portion of the exports of software industry can be attributed to body shopping, in which people are placed on-site overseas for long periods of time and the software company placing them on-site makes a risk-free profit in dollars. This

has reduced over the years, and many companies have started doing more projects off-shore in India. Multinationals, which have started operations in India, have also helped in reducing this, as the very purpose of their opening offices here is to get work done in India. Still, a significant portion of exports, particularly of many smaller companies, can be attributed to body shopping.

Body shopping inevitably leads to brain drain. When people are placed for a long period of time in the US, it is inevitable that most of them will end up staying in the US, given our almost blinding attraction to the west. And it is well known that many of the people stationed abroad for long period of time generally do not return. The software industry knows this quite well, but to meet the short-term targets and to make easy money without really doing any work (other than find the person to place overseas), it still continues to engage in this, thereby hurting its own long-term interests.

The situation is worsened by small software companies, acting largely as placement agencies for sending software professionals abroad for clients (Bangalore, for example, is full of such companies). This active participation of the software industry in the brain drain from the country, and at the same time crying hoarse about the shortage of trained manpower, almost leads one to think that the industry is really seeking the extra output of engineers (at a cost to the tax payer and the government) only to export them outside and make a profit.

Let us try to estimate the contribution of the software industry to brain drain. Software industry currently employs about 70,000 engineers. The turnover in the industry is at least 20 percent, i.e. 20 percent of the employees quit their jobs to take up some other job. As a conservative estimate, 40 percent to 50 percent of these people who quit their jobs, take up jobs overseas, either by leaving the company when posted abroad or through these placement software companies. The quota for India for H-1 visa (the visa that is generally used by software companies when they want to post people in US for a long time) is 20,000. That is, the US consulates in India have put a limit of 20,000 on H-1 visas. It is fair to assume that 30 percent to 40 percent (if not higher) of the people given H-1 visa never return. From this, the estimate of the brain drain volume from the software industry comes to 6000-8000 persons this year - similar to the estimate from the turnover

percentage. Compare this number to the total brain drain from all the IITs this year, which, if we assume that half of the graduates will go abroad for higher studies, will be only about 1000 persons. In other words, the total brain drain from all the IITs will only be about 15 percent of the brain drain from the software industry.

Software industry has been growing at about 40 percent each year. As the output of the software industry is proportional to the engineers it employs, this means that the employment in the software industry in the previous three years was of the level 50,000, 35,000, and 20,000 respectively. Again, considering 10 percent loss to other countries (though in earlier years this figure is likely to be higher as more body shopping was being done earlier than now), we find that in 4 years (including 2009), the software industry has exported about 18,000 software engineers probably comparable to the brain drain from all the IITs in the last two decades. From the software industry point of view, this brain drain is more serious than the brain drain of fresh graduates from the academic institutions, as in the brain drain from the industry; it is people with experience who are lost. And as is well known in the industry, it is the middle level people that are in most short supply.

7.3: Recommendations

What should be done to reduce the brain drain by the software industry? Even though it can be argued that brain drain has also helped India by creating a pool of NRIs who can invest, act as ambassadors, etc., it should be clear that there is a need to reduce the brain drain. The long term solution to the general problem of brain drain is to create an environment (in terms of opportunities, living conditions, wealth creation, etc.), in India that can obviate the need for people to emigrate overseas. However, in the short and medium term some policies and strategies have to be deployed to reduce this. One obvious approach is to reduce the activities that lead to brain drain. That is, minimize the long term stay of software personnel on-site by doing more work off-shore in India. Some companies are already moving in this direction. However, a lot of software companies are not likely to do this, thereby hurting those companies that are willing to take a long term view. Even some of the large software companies are not likely to accept this approach. And organisations like NASSCOM are unlikely to support any such move, as many of its member companies do not agree with it.

As the industry itself is not likely to take steps to reduce this brain drain, one strategy to reduce this brain drain is to have proper policies imposed by the country in the larger interests of the nation and the software industry which restrict the brain drain. When the US wanted to put restrictions on H-1 visa, many policy makers and industry watchers believed that this would in the long run, benefit the software industry in India. However, the software industry lobbied hard against it. Perhaps, the Government of India, in the interest of the country, should lobby with the US to bring in tighter restrictions for long-term visas but more liberal policies for short-term visas so that body shopping is reduced and the bona-fide software service business being conducted from India is encouraged. The software industry itself should take active measures to reduce this brain drain and organizations like NASSCOM should regularly collect and publish data on the volume of brain drain from the software industry, just like it publishes the data about total volume of business and exports. And definitely the software organisations and the government should get together to identify and ban those software companies that are only placement agencies, and work out proper disincentives for exports that arise by people export. If some such measures are not taken, building a case for increased manpower production will not be perceived as serious, and the manpower shortage of the software industry will get more acute.

Some critical factors are always very crucial in brain drain. The creams of our society leave our country not only for money. They migrate to the other countries for different other factors. From this study it is clear that globalisation has a great impact on migration of IT professionals. Actually the rate of migration of IT professionals has increased drastically after globalisation. The causes of migration of IT professionals are also very interesting.

This situation has, in fact, reduced the transaction costs of moving across locations, thus giving rise the phenomenon of brain drain especially from the Indian continent.

Engineering education in India has been spreading through the state funded or privately funded institutions. The economy has been severely affected due to expenditure on such a purpose. The migration has also broadened the gap between the rich and poor countries of the world.

On the basis of our analysis and discussions we may make the following recommendations.

- i. The opportunities inside the country should be widened, lucrative and meaningful so that young talents aspiring for going abroad will be interested to serve their motherland.
- ii. Young talents should be given orientation in such a manner that they become country oriented people instead of individual oriented people.
- iii. Brain drain cannot be stopped completely, rather, it can be curtailed. This will help reducing unemployment problem and side by side raising foreign currency reserves as well as raising saving and investment basket of the country.
- iv. According to Amartya Sen (2005), a part of the Indian community, trained by the best institutes in India like that of IITs, IIMs, IISs, has been able to derive the opportunities offered in a very different culture and society. Professor Sen also remarks that “even within India, the size and speed of expansion of technology products (including software) have been quite extraordinary (Sen, 2005). The trained human resources can also make remarkable contribution to our economy and society if they get more support as well as have more freedom to boom within India.
- v. To become globally competitive effectively the development of human resources and capabilities in terms of educational expansion and of well-equipped training facilities and the development of infrastructural facilities should be undertaken in a much more comprehensive manner. This will help our country to make healthy and effective economic relations with the global players. This particular condition indeed calls for appropriate domestic policies by our government.

Under the situation of global meltdown India is on the cusp of a reverse brain drain. This is because of the fact that India has been able to withstand the global meltdown and due to this our great minds (engineers, managers, doctors etc) are flocking back to India. It is a great sign of the world's confidence in India and its recognition of Indian potentiality.

If our country is seriously thinking about how to resist the brain drain in IT sector then our Government must take some steps on some infrastructural and psychological issues of the IT professionals. Government of India may advice NASSCOM and the other IT companies on these factors like *infrastructural improvement, better working environment, better salary, less political interference in the industry, better opportunity of utilising skill, quality of work life, achievement schemes of the professionals, recognition of their work, research environment, social security etc.* According to former President of India APJ Abdul Kalam the process of reverse brain drain will start only when India becomes a developed nation in the future.

APPENDIX – A

An International Journal Since 2000

www.sajospsindia.com Vol. X No.1 July-December 2009

Sajosps

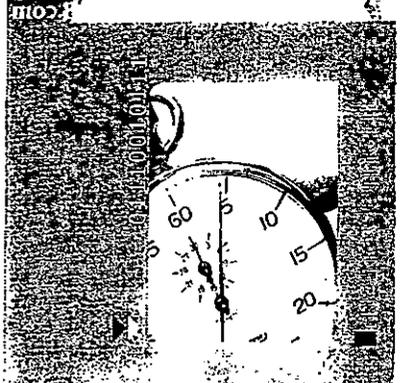
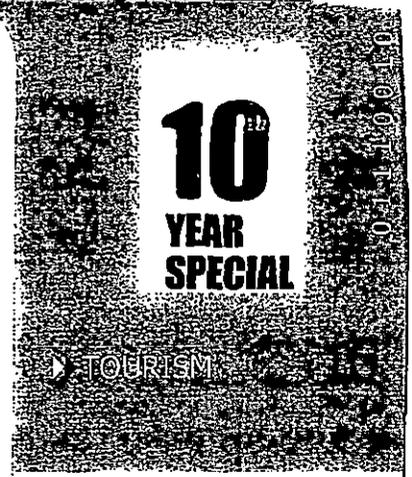
South Asian Journal of
Socio-Political Studies



Social Sciences
Management
Biotechnology
Information
Technology &
Tourism



This journal is being catalogued by the US Library of Congress (H53, S64 S66); Michigan University, USA (Hatcher Graduate +1 62.5.15.5688); Columbia University, USA (DS.331.5.673); University of West Indies, Cave Hill Campus Main Library (University of Pardubice, Czech Republic); Wikipedia Free Encyclopedia and listed in Inspec (MIMAS); The University of Manchester (M13 9PL); SOSIG, University of Bristol, UK. Articles appearing in this journal are indexed and abstracted by International Political Sciences Abstract, Paris; GIPL, AILSG and Centre for Media and Rural Documentation (CMRD) of NIIRD.



ISSN 0972-4613



Migration of Skilled Human Resources from Indian IT Sector : An Empirical Study

Durlav Sarkar, Lecturer, Department of Management, The University of North Bengal
Ranjan Kumar Gupta, Lecturer, Department of Management, The University of North Bengal &
Dr. Anil Bhuiamali, Professor, Department of Economics, The University of North Bengal

Skilled migration has become an extremely important form of migration in the modern world. Various globally important countries like USA, Canada, Australia, New Zealand, UK (Quaked, 2002) etc. have opened up immigration for the highly skilled professionals and the main criterion of selection of the migrants is their skills. Since the liberalization of Indian economy and particularly between 1999 and 2001 (Hira, 2004), India has become one of the powerful sources for skilled human resource migration. The migration from India increased due to increase of highly skilled professionals in Indian IT sector. Towards the end of 1990, there was a large increment in the number of work permits issued to the IT sector from India and this was in response to the hike in the global demand global demand of skilled human resources. However to the best of our knowledge, despite this consistent rise in the migration, till date very few studies have focused on the specific issues related to IT migrants.

The growing competition among themselves have necessitated the countries like the US, UK, Canada, Australia, New Zealand, Ireland, and Singapore, as well as non-English speaking countries like France, Germany, Netherlands and South Asian countries to look for the cream of Indian professionals. Data collated by the US Institute of International Education's *Open Doors 2005* survey revealed that in 2004-05 India retained its No. 1 position in the US university enrolment (followed by China, Korea, Japan, Canada, and Taiwan) for the fourth year in a row.

The IT professionals are in a huge demand in the developed countries. The German Green Card, the American H1-B visa, the British work permit, the Canadian investment visa, the Australian student visa, the New Zealand citizen-ship, all are encouraging to acquire Indian talents including skilled professionals as well as students. A new destination, that rapidly gained popularity, has been the Middle East. Some south-east countries like Malaysia became such destination later on.

II. Scenario Of Indian IT Professionals In USA

Almost 80 percent of Indian skilled human resources move to USA every year. Globally, India has become a powerful supplier of IT professionals and about 70,000 H1B visas (Khadria, 2001) were offered to IT specialists from India to USA in recent years. Before 2001, UK was the best option for migration for the Indian IT professionals. But after 2001 USA has become first preference (Hira, 2004) of the IT professionals for migration destination. In 2000, 19.7 percent of work permits granted by the UK went to the computer industry, which was the six times bigger than the numbers in between 1995 and 2000.

Information Technology (IT) industries can be an important source of economic growth and development for developing countries. The Indian software industry, which has been successful at exporting IT services, is the exemplar for developing countries. NASSCOM, the Indian software services industry association, estimates that the Indian IT industry has grown nearly eightfold from 1994 to 2001, with revenues in 2001 of approximately US\$13.5 billion and 2.87 percent share of India's GDP.

Many Central and Eastern European countries have similar pools of technically competent workers, and they liberalized their economies at approximately the same time as India did. Therefore, why has India been so much more successful than other countries, such as Romania or Russia? There are many explanations for India's recent success in IT. The most important reason is India's economic liberalization after 1991. Then intellectual mindset of Indian students, technically trained workers who are willing to work for low wages in foreign countries, good English skills. These are the reasons for what India has become a superpower in the field of Information Technology.

The number of IT professionals who migrate from India every year can be obtained from the statistics provided by Department of Labour, Govt. of India. For getting migration to US, H-1B visa is required. A study on H-1B visa will easily throw a light on migration scenario of Indian IT professionals every year.

1. H-1B and L-1 visa for migration of Indian IT professionals

Occupation like IT profession is a highly skilled profession, which requires theoretical and practical application of highly specialized knowledge and skills. It also requires a bachelor's degree from a recognized University. The H-1B visa has been the category of visa, which is most closely linked to the IT industry. The United States employs a variety of visa categories to admit foreigners for business, pleasure, study, work, or immigration. H-1B (Hira, 2004) is a temporary worker visa issued to employers to hire specialized occupation workers. From fiscal years (FY) 1991-1998 the maximum number of new H-1B visas had touched to 65,000. For FY 1999 and 2000, it was raised to 115,000 and for FY 2001-2003, it was raised to 195,000. For FY 2004, it again reverted to 65,000.

Table-1 shows the comparisons of occupational mix of H-1B beneficiaries between 1995 and 1998. IT has become the first preference in recent days H-1B beneficiaries.

Table-2 displays the names of the 16 employers/companies requesting H-1B visa for Indian IT professionals. There are a few large employers on the list such as Oracle, Lucent, and Motorola, but the list also includes software body shops such as Tata Consultancy Services (TCS) and Mastech. TCS is an Indian-based IT firm that was one of the first to penetrate the U.S. market.

By 2001, India was, by far, the largest source of H-1B petitions. Out of the 331,206 H-1B petitions approved by BCIS (Bureau of Citizenship and Immigration Services, USA Govt.) in 2001, 161,561 or 49 percent went to Indian nationals. The next closest country was China, with 27,331, or 8 percent, approved petitions. Almost all, precisely 92 percent, of the petitions for Indian workers were for computer-related or engineering occupations. It is clear that employers of Indian nationals with IT skills are the heaviest users of the H-1B visa.

On the other hand L-1 is an intracompany transfer visa used by multinational companies to move employees to the United States for temporary assignments. The employees are required to be executives, managers, or in

Table-1:

Top 5 H-1B occupations shift between 1995 and 1998

| 1995 | | 1998 | |
|----------------------|----------------------|----------------------|----------------------|
| Top 5 occupations | Percent of H-1Bs (%) | Top 5 occupations | Percent of H-1Bs (%) |
| Therapists | 54 | Computer specialists | 57 |
| Computer specialists | 25 | Therapists | 14 |
| University faculty | 2 | Accountants | 7 |
| Physicians | 2 | Electrical engineers | 3 |
| Accountants | 2 | Architects | 2 |

Source: US Dept. of Labour

Table-2:

Top H-1B petitioners, Oct. 1999–Feb. 2000

| Rank | Company | Rank | Company |
|------|---------------|------|-------------------------|
| 1 | Motorola | 9 | Wipro |
| 2 | Oracle | 10 | Tata Consultancy Svcs |
| 3 | Cisco Systems | 11 | Price WaterhouseCoopers |
| 4 | Mastech | 12 | People Com Consultants |
| 5 | Intel | 13 | Lucent Technologies |
| 6 | Microsoft | 14 | Infosys |
| 7 | Rapidigm | 15 | Nortel Networks |
| 8 | Syntel | 16 | Tekodge |

Source: US Dept. of Labour

2001 LCA requests by leading Indian IT firms

Table-3:

| Company | Number of employees requested on LCAs | Total LCA wages to be paid (US\$ millions) | Average wages paid per position per year (US\$) |
|---------|---------------------------------------|--|---|
| Wipro | 3120 | 158 | 50,648 |
| HCL | 3828 | 147 | 38,428 |
| Satyam | 8692 | 483 | 55,621 |
| Tata | 11,982 | 437 | 36,502 |
| Infosys | 12,211 | 657 | 53,880 |
| Totals | 39,833 | 1884 | 47,294 |

Source: U.S. DoL (LCA=Labour condition application)

other positions that require specialized knowledge like a Project Manager of a software developing firm. Executives and managers are able to stay up to seven years, while specialized knowledge workers can stay up to five. There is no annual number for L-1 visas and no prevailing wage requirement. These features may make the L-1 more attractive than the H-1B. Some Indian IT firms have increased their use of the L-1 more rapidly than the H-1B.

2. Uses of H-1B and L-1 visas by Indian IT firms

By the end of 2002, at the peak time of NASDAQ, Infosys had 2884 employees on temporary visas in the United States, a 200 percent increase from March 2000. H-1B and L-1 workers represented approximately 21 percent (NASSCOM, 2003) of Infosys' worldwide workforce.

The BCIS tracked the leading H-1B petitioners for a short window from October 1999 to February 2000, and the top 5 firms are shown in Table-3. Three of the top Indian IT firms, namely TCS, Wipro, and Infosys, are among the top H-1B petitioners (PTI, 2003).

Not only do the Indian IT firms use a large number of H-1B and L-1 visas, but they are also among the leaders in H-1B petitions.

3. Causes of USA being an attractive destination to Indian IT professionals

Labour cost is a major driver in winning business in the IT market, and, if H-1Bs are a cheaper alternative compared to American workers, then, those companies utilizing the H-1B will have a competitive advantage. Typically, for a TCS employee with five years experience who is migrated, the annual cost to the American company is \$60,000–70,000,

Table-4: Major reasons for migration of Indian IT professionals

| Reason | Percentage |
|-------------------------|------------|
| Improved Infrastructure | 12.5 |
| Better Work Environment | 11.8 |
| Salary | 10.2 |
| Cultural Differences | 9.7 |
| Better Quality of Life | 8.9 |
| Family Migration | 7.6 |
| Healthcare | 6.3 |
| Education | 5.1 |
| Political Stability | 4.8 |
| Climate | 3.5 |
| Language Barrier | 2.9 |
| Religious Freedom | 2.1 |
| Other | 1.4 |

Table-5: SPSS output 1

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|-------|----------------|----|-------------|-------|------|
| 1 | 12.500 | 6 | 2.083 | 1.234 | .290 |
| 2 | 11.800 | 6 | 1.967 | 1.178 | .312 |
| 3 | 10.200 | 6 | 1.700 | 1.023 | .356 |
| 4 | 9.700 | 6 | 1.617 | 0.978 | .389 |
| 5 | 8.900 | 6 | 1.483 | 0.901 | .423 |
| 6 | 7.600 | 6 | 1.267 | 0.768 | .478 |
| 7 | 6.300 | 6 | 1.050 | 0.634 | .534 |
| 8 | 5.100 | 6 | .850 | 0.514 | .590 |
| 9 | 4.800 | 6 | .800 | 0.483 | .612 |
| 10 | 3.500 | 6 | .583 | 0.354 | .701 |
| 11 | 2.900 | 6 | .483 | 0.293 | .756 |
| 12 | 2.100 | 6 | .350 | 0.214 | .812 |
| 13 | 1.400 | 6 | .233 | 0.143 | .868 |

Predictors: (Constant), VAR00007, VAR00006, VAR00004, VAR00005, VAR00002, VAR00003

Table-6: SPSS output 2

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|-------|----------------|----|-------------|-------|------|
| 1 | 12.500 | 6 | 2.083 | 1.234 | .290 |
| 2 | 11.800 | 6 | 1.967 | 1.178 | .312 |
| 3 | 10.200 | 6 | 1.700 | 1.023 | .356 |
| 4 | 9.700 | 6 | 1.617 | 0.978 | .389 |
| 5 | 8.900 | 6 | 1.483 | 0.901 | .423 |
| 6 | 7.600 | 6 | 1.267 | 0.768 | .478 |
| 7 | 6.300 | 6 | 1.050 | 0.634 | .534 |
| 8 | 5.100 | 6 | .850 | 0.514 | .590 |
| 9 | 4.800 | 6 | .800 | 0.483 | .612 |
| 10 | 3.500 | 6 | .583 | 0.354 | .701 |
| 11 | 2.900 | 6 | .483 | 0.293 | .756 |
| 12 | 2.100 | 6 | .350 | 0.214 | .812 |
| 13 | 1.400 | 6 | .233 | 0.143 | .868 |

Dependent Variable: VAR00001

while a local American employee might cost \$80,000-100,000. This (labour arbitrage) is a fact of doing work on-site.

Why would an Indian H-1B worker accept a lower salary than that of a comparably skilled American? Salaries for IT workers in India are significantly lower than in the United States and thus, the salary expectations of Indian workers are lower. Instead of getting low salary in America, Indian IT professionals want to stay back there for non-monetary benefits and possibility of getting permanent immigration in USA. While the cost of living in the United States is higher than in India, the H-1B's perception of his or her net pay is influenced by the substantial differences in purchasing power parity (PPP), an international cost of living index, between the United States and India. The World Bank has calculated a PPP of approximately 0.2 between India and the United States, which means that US\$10,000 in India has the same purchasing power as US\$50,000 in the United States. This PPP differential amplifies any

savings by the Indian H-1B workers.

III. Methodology

A questionnaire consisting of 20 questions was prepared and sent through e-mail to the IT professionals who are working in different organizations in different countries. The questionnaire comprised of some questions seeking responses in a scale of 10 (ten). Totally 200 such questionnaires were sent through snow-ball sampling technique to various IT professionals of different organizations like CTS, TCS, Motorola, RS Software, PWC etc. and ultimately

147 were filled up and received back through e-mail. The responses from the respondents were very much enthusiastic and carry ample scope for analysis. A part of the analysis was done by the statistical tool SPSS. This study is basically an empirical study.

IV. Data Collection And Analysis

With the help of the data obtained through the questionnaire, an effort has been made to illuminate the following:

1. Major reasons for migration of Indian IT professionals.
2. Factors influencing the relative job satisfaction of the Indian migrants in the foreign country with respect to home country.
3. Preferences of migrated IT professionals.
4. Importance of role played by some decision makers in compelling the migrants to take migration decision.
5. Present skills of migrated IT professionals.
6. Fraction of salary sent by the migrants to their homes in India.
7. Job satisfaction of the migrants.
8. Age distribution of the migrants.
9. Academic background of the migrants.
10. Work experience of the migrants.
11. The relationship between job satisfaction and mental satisfaction of the migrants.

1. Major reasons for migration of Indian IT professionals

Out of the questions asked in the questionnaire, there was one question in which the respondents were asked to give scores on the influences of some factors (in a scale of ten) in causing their migration. The averages of the scores of all the respondents have been obtained for each of the factors and are displayed in the Table-4. The factors are ranked according to their mean score.

From Table-4 it can be witnessed that out of these 12 factors the main factor influencing migration from India to other countries and staying there is 'Improved Infrastructure' in foreign countries. Improved infrastructure obviously implies the job infrastructure in foreign countries like

Table-7: Preferences of migrated IT professionals

| Country | Mean Score | Rank |
|----------------------------------|------------|------|
| Indian Food | 2.12 | 12 |
| Mobile | 1.50 | 13 |
| Present Country's Work Culture | 1.89 | 11 |
| Indian Social Culture | 2.68 | 10 |
| Indian Work Culture | 1.52 | 14 |
| Present Country's Social Culture | 1.46 | 15 |
| English Movie | 1.50 | 14 |
| Indian Health Food | 1.17 | 16 |
| American Food | 1.88 | 11 |
| Child's Education | 1.88 | 11 |
| Religious Freedom | 1.50 | 14 |

Table-8: Importance of role played by some decision makers in compelling the migrants to take migration decision

| Decision Maker | Rank | Score | Percentage |
|----------------------------|------|-------|------------|
| Ownself | 1 | 0.98 | 98.00 |
| Previous Job Environment | 2 | 0.96 | 96.00 |
| Present Employer | 3 | 0.91 | 91.00 |
| Family | 4 | 0.87 | 87.00 |
| Previous Employer | 5 | 0.82 | 82.00 |
| Friends in Present Country | 6 | 0.79 | 79.00 |
| Friends in India | 7 | 1.02 | 102.00 |
| Searcher | 8 | 1.58 | 158.00 |

The influence of *Salary* in causing migration'- VAR 00002.
The influence of *Achievement* in causing migration'- VAR 00003.
The

Table-9: Skills of migrated IT professionals

| Skill | Rank | Score | Percentage |
|------------------------|------|-------|------------|
| Software Development | 1 | 0.98 | 98.00 |
| Consultancy | 2 | 0.96 | 96.00 |
| Managerial Skills | 3 | 0.91 | 91.00 |
| Customer Care | 4 | 0.87 | 87.00 |
| System Administration | 5 | 0.82 | 82.00 |
| Network Administration | 6 | 0.79 | 79.00 |
| Quality Assurance | 7 | 1.02 | 102.00 |
| Project Management | 8 | 1.58 | 158.00 |

Influence of *Cost of Living in India* in causing migration'- VAR 00004.
The influence of *Better Opportunity of Utilizing Skill* in causing migration'- VAR 00005.
The influence of *Better Working Environment* in causing migration'- VAR 00006.
The influence of *Political Turmoil in India* in causing migration'- VAR 00007.

technological infrastructure, management support, job design, job responsibility etc. *'Better Working Environment'* gets the 2nd rank. Better working environment comprises of cozy working environment, less politics at the work place, recognition of work etc. *'Salary'* is found to be the 3rd influential factor for migration. *'Political Turmoil'* in India is ranked 4th for migration. The migrated IT professionals feel that political turmoil in India is not good for doing job in India. *'Better opportunity of utilizing skill'* and *'Quality of Work Life'* in foreign countries are jointly ranked 5th as the factors influencing the migration. *'Cost Of Living in India'* and *'Cost Of Living in Foreign Countries'* are the two least influential factors for migration.

2. Factors influencing the relative job satisfaction of the Indian migrants in the foreign country with respect to home country

The respondents were asked to express their present job satisfaction in the foreign country, as well as their job satisfaction before leaving India, each in scale of ten. The scores obtained for present job satisfaction is expressed as a percentage of scores obtained for job satisfaction before leaving India. This percentage (say variable *J*) may be treated as an indicator of the impact of migration on job satisfaction. The respondents were also asked to rate different factors according to their influences in causing migration in scales of ten. Then a multiple regression equation of '*J*' on different independent variables each representing the influences of different factors in causing migration is obtained with the help of SPSS. The different independent variables are as follows:

The results obtained as output of SPSS has been displayed in Table- 5 and Table- 6.

Table-5 reveals that the multiple correlation coefficient between *J (VAR00001)* and the above mentioned independent variables (i.e. from VAR00002 to VAR00007) is found out to be $R_{1,234567} = 0.342$ and the corresponding significant F is .007. This implies that the multiple correlation is significant at 1% level. However the coefficient of determination (i.e. the fraction of the total variation in *J* which is explained by the regression line) is given by $R^2 = 0.117$. This indicates that in addition to the variables considered by us there are other variables which affect the relative job satisfaction of the migrants.

From Table-6 it is observed that out of the variables considered by us, only 2 variables are having significant partial correlations (Level of significance being 5%) with *J*. The partial correlation coefficient between *J* and *Salary* as the influencing factor is -0.178, which is significant at 5% level of significance. Also the partial correlation coefficient between *J* and *Better Working Environment* is 0.215 which is significant at 1% level of significance. This throws light on an interesting implication like:

Those individuals who have been influenced more by salary to leave India and migrate to other countries are less satisfied with their jobs in the foreign country (since the partial correlation is negative). On the other hand those individuals whose migrations have been influenced more by their search of better working environment are more satisfied with their jobs in foreign countries.

3. Preferences of migrated IT professionals

One question was asked in which the respondents had to give scores (in a scale of

ten), which would reveal their preferences towards movies, foods, culture and work culture. The responses obtained are shown in Table-7. The factors are ranked according to their mean score.

Table-7 shows the preferences of the migrated Indian IT professionals for different factors like different food habits, cultures and entertainments etc. They might have migrated to other countries but their liking towards *Indian Food* is much more than *Foreign Food*. Their greater affinity for *'Hindi movies'* compared to *'English/ Regional Movies'* and greater affinity for *'Indian Social Culture'* compared to *'Present Countries Social Culture'* are also evident. However, a striking revelation is that, as far as the *Work Culture* is concerned, the migrants prefer their present countries (i.e. foreign countries) more than India.

4. Importance of role played by some decision makers in compelling the migrants to take migration decision

Table-8 summarizes the responses obtained from the migrants regarding the importance of the role played by different decision makers in their migration decision. The averages of the scores of all the respondents have been obtained for each of the factors.

Table-8 reveals the migrated IT professionals consider themselves (i.e. *'Ownself'*) coupled with their *'Previous Indian Job Environment'* to be the main driving forces in taking the decision of migration. To some extent, their *Present Employer* (i.e. the employer in the foreign country) and their *Families* also played a considerable role in this regard. Other factors shown in the table have not played any significant role in encouraging the migrants to leave India.

5. Present skills of migrated IT professionals

With the objective of developing an idea about the major skills of the migrated IT professionals one question was asked against which the respondents had to rate each of their different skills (i.e. managerial, developer, consultancy, customer care etc.) in a scale of ten. For each skill the averages of the scores obtained from different respondents have been calculated and displayed in Table -9.

From Table-9 we see the respondents are handling all the responsibilities from *'Consultancy'* to *'Software Development'* as per the job design. However, according to the respondents their main skills are *'Consultancy'* and *'Managerial Skills'*. As is well known, the managerial skills and consultancy skills are mainly associated with professionals working in the upper level of the hierarchy. This is in consistency with the result obtained (displayed in Table-14) which shows that more than 50% of the migrated professionals have substantial experience and are hence expected to work in the upper level of the hierarchy.

6. Fraction of salary sent by the migrants to their homes in India
Table-10: Remittances sent by the migrants to their home in India

| | |
|--------------|-------|
| Zero | 0% |
| One Fourth | 0% |
| Half | 76.9% |
| Three Fourth | 0% |

From Table-10 we see that 76.9% of the 146 respondents send half of their salaries to their homes in India.

7. Job satisfaction of the migrants

Table-11: Job satisfaction of the migrants

| | |
|--------------------------|-------|
| Present Job | 76.9% |
| Job before Leaving India | 23.1% |

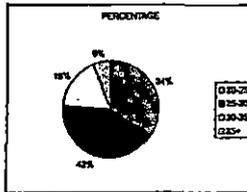
From Table-11 it is seen that the 'Present Job Satisfaction' of the IT professionals are higher than the 'Job Satisfaction before Leaving India'.

8. Age distribution of the migrants

The table below displays the percentages of migrants who fall in each of the different age groups.

Table-12: Age distribution

| | |
|-------|-----|
| 0-25 | 9% |
| 25-30 | 43% |
| 30-35 | 34% |
| 35+ | 14% |



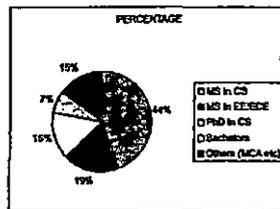
From Table-12 it is evident that the age group of 25-30 is having the highest frequency among the 147 respondents.

9. Academic background of the migrants

Table-13 displays the percentages of migrants who possess each of the different academic degrees mentioned.

Table-13: Academic background

| | |
|------------------|-----|
| MS in CS | 44% |
| MS in EE/CE | 19% |
| PhD in CS | 16% |
| Bachelors | 7% |
| Others (MCA etc) | 14% |

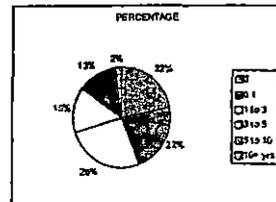


From Table -13 we can see that most respondents are having the degree MS in Computer Science. A good number of IT professionals are having PhD in computer science.

10. Work experience of the migrants

Table-14: Work experience

| | |
|---------|-----|
| 0 | 22% |
| 0-1 | 22% |
| 1 to 3 | 26% |
| 3 to 5 | 15% |
| 5 to 10 | 13% |
| 10+ yrs | 2% |



From Table -14 it is seen that out of 147 IT professionals, 26% are having 1 to 3 years work experience, 15% are having 3 to 5 years work experience and 13% are having 5 to 10 years experience.

11. The relationship between job satisfaction and mental satisfaction:

A simple correlation coefficient between the scores given by the respondents on 'Present Job Satisfaction' and scores given on 'Mental Satisfaction' has been found out. The value of the said correlation coefficient is -0.091 , which is insignificant at 5 percent level of significance (P value is 0.27). That means the job satisfaction of the migrants who are working in foreign countries have no relation with their mental satisfaction. This implies that the mental satisfaction of the migrants is determined not by the standard and type of job that they are doing. Probably the fact that these migrants are staying in a foreign country is compelling them to feel out of nostalgia, that they are missing some of the basic cultures, properties and traits of their mother nation. This is also proved by the filled up questionnaires where most of the respondents have shown their interest to return back to their homeland. This give rise to the scope for carrying out further research works to find out the major determinants of 'Mental Satisfaction' of migrated Indian IT professionals.

V. Conclusion

To the best of our awareness, this type of study is not common to the existing literature. As a result, this work is a new attempt to explore the different aspects related to the migration of Indian IT professionals whose socio economic importance is bound to increase in the near future.

Our analysis reveals that the main reason influencing migration of Indian IT professionals to the other countries is the search of *Improved Infrastructure*, followed by *Better Working Environment*, and then *Salary*. *Political Turmoil* in India is another factor which has influenced the migrants to migrate to other countries.

The study also throws light on different food habits, different cultures and entertainments of the migrated IT professionals. They might have migrated to other countries but their liking towards *Indian Food* is much more than *Foreign Food*. Their greater affinity for '*Hindi movies*' compared to '*English/Regional Movies*' and greater affinity for '*Indian Social Culture*' compared to '*Present Countries Social Culture*' are also evident. However, a striking revelation is that, as far as the *Work Culture* is concerned, the migrants prefer their present countries (i.e. foreign countries) more than India.

However, despite enjoying the better work culture, most of the migrants are nostalgic about their homeland and want to come back to India with a suitable job offer. Most of them have taken their decisions to go abroad by themselves only. High job satisfaction in foreign countries is unable to generate high mental satisfaction within most of the migrants. From this study it is found that those individuals who have been influenced more by salary to leave India and migrate to other countries are less satisfied with their jobs in the foreign country, which is very interesting. On the other hand those individuals whose migrations have been influenced more by their search of better working environment are more satisfied with their jobs in foreign countries.

The study also analyses the roles played by different decision makers in compelling the migrants to take migration decision. It is observed that most of the IT professionals have taken the decision of migration out of their *own selves*. *Previous job environment* and *Present Employer* have also influenced the migrants' decision for migration.

Most of the migrants send half of their salary to their family in India each month. Among the respondents, 76

percent of the IT professionals are aged between 20 years and 30 years. Majority of them are having their Master Degrees in Computer Science. Bulk of these professionals (56 percent) is having 1 to 10 years job experience.

A striking revelation of this research is that, as far as the *Work Culture* is concerned, the migrants prefer their present countries (i.e. foreign countries) more than India. This is further reflected in the fact that the job satisfaction of the migrants is much more in foreign countries compared to their job satisfaction before leaving India.

It is also revealed that job satisfactions of the migrants who are working in foreign countries have no relation with their mental satisfaction. This implies that the mental satisfaction of the migrants is determined not by the standard and type of job that they are doing. Probably the fact that these migrants are staying in a foreign country is compelling them to feel out of nostalgia, that they are missing some of the basic cultures, properties and traits of their mother nation. This is also proved by the filled up questionnaires where most of the respondents have shown their interest to return back to their homeland. This give rise to the scope for carrying out further research works to find out the major determinants of 'Mental Satisfaction' of migrated Indian IT professionals.

References:

1. R Hira (2004), *U.S. immigration regulations and India's Information Technology Industry*, Technological Forecasting & Social Change, vol.71, 837-854, January 2004.
2. S. Singh, *U.S. Visas are not a TCS Specific Issue*, Bus. World (2003 June 30).
3. *H1B Visa Reduction to Affect Indian IT Industry*, The Press Trust of India (2003 August 22).
4. N. Matloff (2003), *Needed Reform for the H-1B and L-1 Work Visas: Major Points*, unpublished, August 17, 2003, <http://heather.cs.ucdavis.edu/Summary.pdf>.
5. S. Rai, *Software success has India worried*, Section W, page 1, column 3, N. Y. Times (2003 February 13).
6. NASSCOM, *Indian Software and Services Exports*, 2003 September 10, unpublished.
7. Khadria, Binod (2002). *Skilled labour migration from developing countries: study on India*. ILO International migration papers vol. 49. Geneva, Switzerland: ILO.
8. Ouaked, Said (2002). *Transatlantic roundtable on high-skilled migration and sending countries issues*. International Migration, 40(4), 153-166.
9. Khadria, Binod (2001). *Shifting paradigms of globalization: The twenty-first century transition towards generics in skilled migration from India*. International Migration, 39(5), 45-71.
10. *U.S. Immigration and Naturalization Service, Statistical Yearbook of the Immigration and Naturalization Service*, Washington D.C., 1992, 1996, 2000, and 2001.
11. Khadria, Binod (1999). *The migration of knowledge workers: Second-generation effects of India's brain drain*. New Delhi, India: Sage.
12. R. Chanda (1999). *Movement of natural persons and trade in services: Liberalising temporary movement of labour under the GATS*, Working Paper No. 51, Indian Council for Research on International Economic Relations (1999)
13. R. Heeks (1998). *The Uneven Profile of Indian Software Exports*, vol. 3. Development Informatics Working Paper Series, Manchester, UK, October 1998.



Asian Institute of Development Research (AIDR) एसीआई अनुसंधान विकास संस्थान

(Reg.No. P-78/07)

Jaya's Nest, M.G.Road, Adoor, Pathanamthitta (District), Kerala, India. Pin: 691523.

Ph: +91 4734-229269 / +91 474-2765171 / +91 9847432062 / +91 9447534569

Asian Institute of Development Research (AIDR), is a voluntary, non-political and non-profit making autonomous research organisation registered under the Travancore - Cochin Literary, Scientific and Charitable Societies Registration Act 12 of 1955. AIDR is founded to provide a forum for the interdisciplinary study of contemporary issues which will help to encourage a closer interaction between the various branches of knowledge. It will also serve as a platform to share fresh thinking and to debate matters of national and regional concerns. AIDR's action-oriented and multifaceted research covers a wide spectrum of issues related to Decentralisation, Development, Democracy, Human Rights, Environmental Issues, Gender Studies, Issues of Marginalised Sections and issues related to Hospitality Industry, Management Sector, Biotechnology, Information Technology etc.

Other prominent activities of the AIDR are : 1) To publish Journals, books, monographs and occasional papers in the research areas carried out at the Institute. 2) To arrange lectures, seminars, conferences, symposia etc for the benefit of those who are interested in the core research subjects focused by the Institute. 3) To undertake consultancy assignments with a view to improve and develop organisational, managerial and operational efficiency. 4) Indicate areas of development research is to be promoted and adopt special measures for development of research in neglected or new areas. 5) To co-operate with other organisations in such manner as for such purposes as the Institution may determine and to undertake action projects in the areas of interest of the Institute. 6) To establish and maintain an information cum documentation service on the thrust areas of the Institute. 7) To make available a platform for the members of various organisation, agencies for exchange of views, ideas related to the core research areas of the Institute. 8) Co-ordinate research activities and encourage programmes for inter-disciplinary research. 9) To establish training centres, specialised area study centres etc.

Governing Body :- The management of the Institute is vested with a Governing Body which consist of a Chairman, Director (Member Secretary), Treasurer and four other trustees. The governing body is guided and assisted by a board of advisors drawn from various fields of Research, Training, Administration, Technology and Development.

Membership : The AIDR has the following types of Membership :

- a. Life Member** : By making a lump-sum payment of Rs. 10000/- a person can apply for Life Membership.
- b. Institutional Membership** : By making a lumpsum payment of Rs. 15,000, an institution can apply Institutional Membership.
- c. Associate Member** : A bonafide graduate/post - graduate/doctoral student interested in the activities of the institute can apply for Associate Membership by paying Rs. 1000 per year.
- d. Ordinary Membership** : The Annual subscription for Ordinary Membership is Rs. 500. An Ordinary Member may, at any time become a Life Member by making a lump-sum payment equal to 20 times of the amount of annual subscription. The services offered by the Institute to its Life Members would include free supply of Institute's Journal, News letter, occasional papers and participation in the Institute's activities. The Journal is supplied to its Associate and Ordinary Members on payment of 50% of the subscription of the journal.

APPENDIX - B

ISSN: 0973-2489

VOLUME 4

NUMBER 1-2

January-December 2008

South Asian Journal *of* Human Rights


SERIALS PUBLICATIONS

www.serialspublications.com

New Delhi, (India)

Online Migration Opportunity for Differently Abled 'It' Professionals: A Study

Durlav Sarkar

DEFINING DISABILITY

There is no universally agreed definition of disability. Disability is understood to be primarily a social phenomenon. It is society that disables people who have impairments, by failing to recognise and accommodate difference and through the attitudinal, environmental and institutional barriers that it erects against people with impairments. Disability thus arises from a complex interaction between health conditions and the context in which they exist.

In India, the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation Act, 1995) defines disability as one or more of the following: blindness, low vision, leprosy cured, hearing impairment, locomotor disability, mental retardation and mental illness. It says that to be considered disabled, a person must suffer from not less than 40 per cent of any disability, as certified by a medical authority. There are approximately 90 million disabled people in India. Disability was included in the census for the first time in 2001 (Table 1, 2 & 3), following a sustained campaign by the Indian disability movement. The census found that 2.2 per cent of the populations were disabled. However, this figure is contested by organisations working in the field, which estimate India's total disabled population at approximately six per cent or 70 million—a figure larger than the entire population of the United Kingdom.

According to some sources, as many as one person in ten has a disability. Three out of four of those are thought to live in developing countries. 'Disability limits access to education and employment, and leads to economic and social exclusion. Poor people with disabilities are caught in a vicious cycle of poverty and disability, each being a cause and a consequence of the other' (DFID, 2000: 1). The Indian National Sample Survey conducted two countrywide

Table 1
Disability Data For India

| <i>Item</i> | <i>Number</i> |
|-------------|---------------|
| Urban | 5,518,387 |
| Rural | 16,388,382 |
| Total | 21,906,769 |

Source: Government of India, 2001.

Table 2
State/ Union Territory Wise Population of Persons with Disabilities as per the Census 2001

| <i>States/Union Territory</i> | <i>Number of persons with disabilities</i> |
|-------------------------------|--|
| Jammu & Kashmir | 302670 |
| Himachal Pradesh | 155950 |
| Punjab | 424523 |
| Chandigarh | 15538 |
| Uttaranchal | 194769 |
| Haryana | 455040 |
| Delhi | 235886 |
| Rajasthan | 1411979 |
| Uttar Pradesh | 3453369 |
| Bihar | 1887611 |
| Sikkim | 20367 ¹ |
| Arunachal Pradesh | 33315 |
| Nagaland | 26499 |
| Manipur | 28376 |
| Mizoram | 16011 |
| Tripura | 58940 |
| Meghalaya | 28803 |
| Assam | 530300 |
| West Bengal | 1847174 |
| Jharkhand | 448377 |
| Orissa | 1021335 |
| Chhattisgarh | 419887 |
| Madhya Pradesh | 1408528 |
| Gujarat | 1045465 |
| Daman & Diu | 3171 |
| Dadra & Nagar Haveli | 4048 |
| Maharashtra | 1569582 |
| Andhra Pradesh | 1364981 |
| Karnataka | 940643 |
| Goa | 15749 |
| Lakshadwwe | 1678 |
| Kerala | 860794 |
| Tamil Nadu | 1642497 |
| Pondicherry | 25857 |
| Andaman & Nicobar Islands | 7057 |
| | <u>21906769</u> |

Table 3
Disability wise State-wise Number of Persons with Disabilities in the
Country as per the Census 2001

| State/UT | Visual disability | Speech disability | Hearing disability | Loco-motor disability | Mental disability | | Total | |
|----------------------|-------------------|-------------------|--------------------|-----------------------|-------------------|---------|--------|------------|
| | | | | | Rural | Urban | | |
| Jammu & Kashmir | 208,713 | 16956 | 14,157 | 37,965 | 24,879 | 18,959 | 5,920 | 302,670 |
| Himachal Pradesh | 64,122 | 12,762 | 15,239 | 46,512 | 17,315 | 15,975 | 1,340 | 155,950 |
| Punjab | 170,853 | 22,756 | 17,348 | 149,758 | 63,808 | 43,016 | 20,792 | 424,523 |
| Chandigarh | 8,422 | 882 | 607 | 3,828 | 1,799 | 163 | 1,636 | 15,538 |
| Uttaranchal | 85,668 | 16,749 | 15,990 | 56,474 | 19,888 | 15,082 | 4,806 | 194,769 |
| Haryana | 201,358 | 24,920 | 27,682 | 151,485 | 49,595 | 34,309 | 15,286 | 455,040 |
| Delhi | 120,712 | 15,505 | 8,741 | 64,885 | 26,043 | 1,543 | 24,500 | 235,886 |
| Rajasthan | 753,962 | 73,147 | 75,235 | 400,577 | 109,058 | 80,019 | 29,039 | 1,411,979 |
| Uttar Pradesh | 1,852,071 | 255,951 | 128,303 | 930,580 | 286,464 | 211,463 | 75,001 | 3,453,369 |
| Bihar | 1,005,605 | 130,471 | 73,970 | 512,246 | 165,319 | 145,153 | 20,166 | 1,887,611 |
| Sikkim | 10,790 | 3,174 | 3,432 | 2,172 | 799 | 715 | 84 | 20,367 |
| Arunachal Pradesh | 23,079 | 2,429 | 3,072 | 3,474 | 1,261 | 1,068 | 193 | 33,315 |
| Nagaland | 9,968 | 4,398 | 5,245 | 4,258 | 2,630 | 2,330 | 300 | 26,499 |
| Manipur | 11,713 | 2,769 | 2,994 | 6,177 | 4,723 | 3,190 | 1,533 | 28,376 |
| Mizoram | 6,257 | 2,006 | 2,421 | 2,476 | 2,851 | 1,655 | 1,196 | 16,011 |
| Tripura | 27,505 | 5,105 | 5,699 | 13,970 | 6,661 | 5,470 | 1,191 | 58,940 |
| Meghalaya | 13,381 | 3,431 | 3,668 | 5,127 | 3,196 | 2,604 | 592 | 28,803 |
| Assam | 282,056 | 56,974 | 51,825 | 91,970 | 47,475 | 41,309 | 6,166 | 530,300 |
| West Bengal | 862,073 | 170,022 | 131,579 | 412,658 | 270,842 | 181,981 | 88,861 | 1,847,174 |
| Jharkhand | 186,216 | 39,683 | 28,233 | 138,323 | 55,922 | 41,442 | 14,480 | 448,377 |
| Orissa | 514,104 | 68,673 | 84,115 | 250,851 | 103,592 | 87,319 | 16,273 | 1,021,335 |
| Chhattisgarh | 160,131 | 30,438 | 34,093 | 151,611 | 43,614 | 34,301 | 9,313 | 419,887 |
| Gujarat | 494,624 | 66,534 | 70,321 | 310,765 | 103,221 | 65,433 | 37,788 | 1,045,465 |
| Daman & Diu | 1,898 | 189 | 120 | 690 | 274 | 138 | 136 | 3,171 |
| Dadra & Nagar Haveli | 2,346 | 295 | 337 | 795 | 275 | 222 | 53 | 4,048 |
| Maharashtra | 580,930 | 113,043 | 92,390 | 569,945 | 213,274 | 124,748 | 88,526 | 1,569,582 |
| Madhya Pradesh | 636,214 | 75,825 | 85,354 | 495,878 | 115,257 | 78,280 | 36,977 | 1,408,528 |
| Andhra Pradesh | 581,587 | 138,974 | 73,373 | 415,848 | 155,199 | 116,909 | 38,290 | 1,364,981 |
| Karnataka | 440,875 | 90,717 | 49,861 | 266,559 | 92,631 | 62,325 | 30,306 | 940,643 |
| Goa | 4,393 | 1,868 | 1,000 | 4,910 | 3,578 | 1,972 | 1,606 | 15,749 |
| Lakshadweep | 603 | 207 | 147 | 505 | 216 | 126 | 90 | 1,678 |
| Kerala | 334,622 | 67,066 | 79,713 | 237,707 | 141,686 | 105,842 | 35,844 | 860,794 |
| Tamil Nadu | 964,063 | 124,479 | 72,636 | 353,798 | 127,521 | 67,483 | 60,038 | 1,642,497 |
| Pondicherry | 10,646 | 1,818 | 2,277 | 8,830 | 2,286 | 736 | 1,550 | 25,857 |
| Andman & Nicobar | 3,321 | 652 | 545 | 1,870 | 669 | 497 | 172 | 7,057 |
| | | | | | | | | 21,906,769 |

surveys in 1981 and 1991 to assess the number of people with disabilities. From these it was estimated that the population with a disability in India is approximately 90 million. Within this figure it is estimated that 12 million are blind, 28.5 million have limited vision, 12 million have speech and hearing impairments, 6 million are orthopaedically handicapped, 24 million have a cognitive disability, 7.5 million are mentally ill, and 1.1 million are disabled as a result of leprosy. Estimates vary greatly according to definitions and methods, but negative attitudes towards disability in most communities mean that these are probably underestimates. Many countries throughout the world have, in recent years, adopted policies aiming to promote the rights of people with disabilities to full and equal participation in society. This has often been in response to the ILO Convention No. 159 concerning Vocational Rehabilitation and Employment of Disabled Persons (1983) policy on employment opportunities for people with disabilities is frequently supported by legislation and implementation strategies as essential. The Ninth Five Year (1997-2002) Plan committed the Government to prepare a National Charter for Social Justice to provide equal opportunities for the disabled. It also proposed the earmarking of a certain percentage of benefits for the disabled under various poverty alleviation schemes, including 3 per cent under a scheme—'Swamajayanti Gram Swarozgar' (SGSY)—aiming to provide a 'sustainable income' to rural families below the poverty line through self-help groups and micro-enterprise development. Given the existence of such quotas and welfare benefits for the disabled, some may argue that their needs are already catered for and there is no need to modify other schemes and programmes to include people with disabilities. These arguments are based on rather a limited view of sustainable development, failing to recognise the role played in development by those who are not seen to be working in productive activities.

Now IT industries specifically BPO sectors are recruiting disabled persons as per their HR policies.

BPO SECTORS IN INDIA

Globalisation has accelerated creation of innovative business models and provided unprecedented benefits for economies of the world. The Indian IT-BPO sector had been a frontrunner for India and has played a pivotal role in securing the irreversibility of this trend. The Indian IT-BPO industry, which began based on the value proposition of cost advantage, has today evolved into a large knowledge-based industry. Multiple dimensions like productivity, value add, quality and security have become synonymous with this industry and in fact set global benchmarks for outsourcing. According to the Centre for Monitoring Indian Economy, the offshore IT and BPO industries accounted for nearly 95 per cent of the absolute growth in foreign exchange inflows associated with services industries between 2000 and

Today, the size of the Indian Software and services (exports+domestic) IT industry is \$ 39.6 billion, recording a growth rate of over 30 per cent in 2006-07, employing 1.6 million individuals. The industry is on course to achieve the growth target of \$ 60 billion in exports by 2010, employing 2.3 million individuals by then. What the Indian BPO industry has also achieved is providing employment to 553,000 individuals. It has changed the aspirations of the youth - brought down the criteria for employment and offers opportunity to graduates at the basic levels.

BPO INDUSTRY STARTS TO HIRE PHYSICALLY CHALLENGED PERSONS

The business processes outsourcing (BPO) industry, affecting from attrition rate of staffs, is reaching out to the disabled in the hope that they would be unlikely to job-hop. Till 2006, NASSCOM, Wipro BPO, TransWorks, Progeon Ltd and 24/7 Customer had not a single physically challenged employee on their rolls. But in 2007, each has about 15 and is gearing up to hire more. "The companies that have employed them (the disabled) are happy with their quality of work and loyalty," NASSCOM chief Kiran Karnik said. "To a certain extent, the appointments will offset attrition because these employees are stable and do not leave for a better salary."

The Indian ITES-BPO sector is expected to touch \$20 billion by 2008-09, and employs around one million people. But the non-availability of talent and high attrition rates are driving companies to discover new sources of talent. One such option is the recruitment of disabled people, say industry experts. However, software companies deny they are using disabled people as an alternative. The company does not keep a separate record for staff with disabilities or treat them differently, but it does create the infrastructure needed for their comfort. However, this situation is likely to change soon. Information technology (IT), IT-enabled services (ITES) and business process outsourcing (BPO) firms are seriously considering employing a greater number of disabled people. The reasons include increasing attrition levels in IT (10-25 per cent), and ITES/BPO (35-50 per cent) firms. Corporate Social Responsibility (CSR) is also driving firms to recruit disabled people. Some software firms say 5-10 per cent of their staff comprises disabled people. At Chennai-based Laser Soft Infosystems, 10 per cent of the 500-plus employees are physically challenged. It was no surprise then that at a recent job fair held on 17th November, 2006 in Chennai for disabled people, over 30 companies screened around 700 candidates. The fair drew good response from the ITES sector, while participation from the IT sector was minuscule - only one company. However, the BPO companies are only now waking up to the prospect of employing disabled people. "For the physically challenged, the ITES/BPO industry promises a level playing field", says Ranjit Pisharoty, Senior Vice-President, and Lason India. At the entry level, apart from basic data processing skills, what is required is discipline, diligence, the ability to work in a team and

and an eye for detail. So, all other things being equal, recruiting disabled people in a BPO industry happens by design, and not due to a human resource crunch, he says. "We do not see this as a social or community cause. It is a part of our business delivery model," adds Pisharoty. ValueLabs, a US-based BPO and software services company, has employed three disabled persons at its Hyderabad offshore development centre.

Infosys actively seeks to hire and train persons with disabilities. In 2006 and 2007, Infosys BPO received the Helen Keller award for the best employer from the National Centre for Promotion of Employment for Disabled People (NCPEDP). On December 3rd, Infosys BPO, the business process outsourcing subsidiary of Infosys Technologies, celebrated to commemorate The World Disability Day. In Celebrating Diversity Week, a series of internal and external events were organised across Infosys BPO centers in Pune, Jaipur, Gurgaon and Bangalore. It seeks to communicate to employees and to the general public Infosys BPO's Equal Opportunity Policy of inclusion and diversity and to invite all to express solidarity for the cause of the differently abled. Infosys BPO encourages differently enabled persons to apply for roles/positions and supports them with the right tools and environment that in turn helps them realize their full potential as contributors to society. The industry has neither earmarked a chunk of jobs for the handicapped nor evolved special norms for recruiting them. The disabled candidates are chosen like others. They are chosen after a communication test and technical test followed by an interview," said S. Varadarajan, vice-president (talent engagement and development), Wipro BPO.

Trans Works (an Aditya Birla Group company offering customer care and BPO services) and 24/7 Customer (a Bangalore-headquartered BPO company) have a couple of employees who were trained at EnAble India, an NGO in Bangalore for the differently abled persons. Progeon Ltd (subsidiary of Infosys Technologies Ltd) has listed the services of the National Society for Disabled, New Delhi, for a training curriculum for handicapped youth looking for openings in the BPO sector. This organisation has helped the organization by training 15 physically challenged staff. The firms plan to hire people with disabilities for tasks such as quality control, email processing, data entry, transaction processing or voice and accent trainers. Openings in administration, training and human resource wings, too, are a certainty. According to the experiences of the BPO executives the people with disabilities are on a par with other employees. EnAble identified job opportunities in the industry and mapped the tasks and the methods a disabled person would employ to handle them overcoming barriers of technology, attitude and ability. The industry, however, is divided on whether such recruitment can offset attrition. The study shows that the growing gap between the demand and supply of trained manpower can be balanced if Industries like BPO go for differently abled

prohibits a company from diverting its lease line to homes, Karnik the NASSCOM President said. "Our telecom policy is an inhibiting factor for the physically challenged to work from home. We have brought this to the notice of the government," the NASSCOM president said. Most recruiters find physically challenged candidates confident and assertive. Some demonstrate a high level of maturity in stressful situations, which comes handy in customer service jobs.

NO DIFFERENTIAL TREATMENT

ITES companies find differently abled people loyal and hard working and have no problem hiring them as long as their disability does not affect work. Knowledge-based industries hire disabled people because they bring complementary skills to the table. The industry does not differentiate them from other candidates. Disabled people are not given differential treatment, but the company keeps in mind basic considerations such as holding a meeting close to the person's seat, outdoor travel accompanied by spouse (if possible) and so on. In the BPO world, delivery is demanded at accuracies of 99.995 and assurance levels bordering on Six Sigma—a process must produce no more than 3.4 defects per million opportunities. Here, Lason India finds its disabled personnel an asset as they apply themselves single-mindedly to their work.

The company, a subsidiary of the US-based Lason Inc, was one of the organisers at the job fair. Partnering with the Ability foundation, the company designed a BPO training programme for the disabled. Lason trainers learnt sign language, for example, to impart data processing instructions. The first batch of trainees has found gainful employment. Lason recruited 12 of them, says Pisharoty. Vivek Tripathi, Senior HR Manager, Adobe Systems India, which has recruited one disabled person, says the company does not give any concession to candidates with physical disability. Many ITES companies have created special facilities at their campuses such as customised computers, ramps, chairs and rest rooms. Disabled persons are also given preference for day shifts. ValueLabs' Reddy says the company plans to construct a ramp in its new building, as also specially designed toilets.

TYPES OF MIGRATION OF IT PROFESSIONAL: BODY SHOPPING AND ONSITE LABOUR

Basically there are two types of IT professionals who are migrated to other countries. One is called the Body Shoppers and another is called as Onsite Labour. Body shoppers or Body Migration means the physical migration. The people hired through body shopping, requiring physical presence of software professionals at the site of work. Body shopping is essentially when people are sitting in some kind of recruitment shops in India. Whereas On-line Labor or On-line IT professionals can have three types of features:

- (i) the programmers in India are connected to clients' machines in the US through 64 Kbps and above satellite links and Internet/e-mail;

- (ii) where the situation demands, the client is able to monitor the progress on a continuous basis, implement quality checks and communicate with the programmers and analysts, as if they were on site;
- (iii) since the US and India have an average 12-hour time zone difference, the client enjoys—for certain software projects—virtual round-the-clock office hours. Lots of companies in India organize programmers to provide on-line software labor to the companies in the United States and other countries. By December 1998, more than 109 Indian software firms had acquired international quality certification (NASSCOM 1999). Some well-known U.S. firms that figure in the client list of these Indian firms are Intel, Merrill Lynch, AT&T, and IBM among many others. According to *The Economist* (1996, p. 32), “More than 100 of America’s top 500 firms buy software services from firms in India, where programmers are typically paid less than a quarter of the American rate.” By 1998, Indian software providers have already captured an 18.5 per cent market share in global cross-country customized software work, and the Indian IT sector has consistently achieved more than 50 per cent compounded annual growth rate since 1991 (NASSCOM 1999). Earnings from software exports are projected to gross \$9 billion by the year 2001-02, while the National Task Force on Information Technology—a support arm of the Indian government—has set a target of \$50 billion of exports by 2008 (NASSCOM 1999). It must be noted that these US dollar earnings assume even bigger proportions on conversion into the Indian currency (Rupee) in terms of their purchasing power. The software relationship between India and the U.S. is particularly significant. Just as India is becoming the largest supplier of software labor to the United States both in terms of body shopping and of online labor.

ONLINE MIGRATION OPPORTUNITIES FOR THE DISABLED IT PROFESSIONALS

Migration of disabled professionals from India to other countries is very difficult. Some of the countries do not permit work visa for physically or mentally handicapped people. But in BPO sector the disabled IT professionals are getting job opportunity by which they are getting online migration opportunity. Basically they are working for the other countries through online consultancy, online customer care and online technical support. The disabled IT professionals may be sitting in India but actually they are working for the companies in USA, Canada, UK, Australia etc. They are treated as ‘onsite labour’ for these countries. It means a lot for them. They feel important as the other migrated IT professionals who have physically migrated to various countries. And they are getting the salaries at par with the other ‘Body Shopper’ migrated candidates who are physically working in foreign countries.

CONCLUSION

Since globalisation the demand for the skilled IT professionals from India has gone up. But the BPO sectors in India are providing the same opportunity for the disabled persons also. ITES companies are finding differently abled people who are loyal and hard working and these companies have no problems hiring them as long as their disability does not affect work. Knowledge-based industries hire disabled people because they bring complementary skills to the table and reduce the attrition rate. The industry does not differentiate them from other candidates. Disabled people are not given differential treatment in these companies. They are handling consultancy, customer care, technical support jobs through online. They are treated as onsite labour for the foreign countries. They are providing consultancy, customer care, technical support to the foreign companies. Lots of companies in India organize programmes to provide on-line software labour to the companies in the United States and other countries. The disabled IT professionals in BPO sectors are fulfilling these features and enriching their skills and their lives. The industry, however, is hoping that such recruitment can offset attrition. Because the overall attrition rate in IT and ITES companies is very high. Recruitment of differently abled persons can reduce the growing gap between the demand and supply of skilled manpower.

REFERENCES

- Shelley Singh (2003), "Keeping 'em from Straying," *Business World*, August, p. 25-27.
- R. Raghavendra (2003), "BPO Firms Head Hunt in Smaller Cities", *The Economic Times*, 8th October, p. 10.
- Sharvari Joshi (2003), "BPOs have Undergrads in their Sights", *Times of India*, 17th December, p. 1.
- Shelley Singh (2003), "Keeping 'em from Straying," *Business World*, August, p. 25-27.
<http://www.disabilityindia.org>
- Arundhuti Dasgupta (2002), "Global Call", *Indian Management*, Vol. 41, Issue 6, p. 31-35.
- Rajas Kelkar (2002), "India, Ireland Turn Outsourcing Hubs", *The Economic Times*, 20th December, p. 1.
<http://economictimes.indiatimes.com/cms.dll/html/uncomp/articleshow?msid=53221>
<http://economictimes.indiatimes.com/articleshow/247047.cms>
<http://www.nasscom.org>
<http://economictimes.indiatimes.com/articlesshow/286800.cms>
- John K. Shank, Eric A. Spiegel (1998), "Strategic Value Analysis for Competitive Advantage an Illustration from the Petroleum Industry," *Mckinsey Quarterly*, First Quarter, Issue 10, p. 32-39.
<http://www.indiastat.com>
<http://www.callcenterservicesindia.blogspot.com>

SELECT BIBLIOGRAPHY

Akhilesh, K. B., & Mathew, M. (1991). Technological change and emerging HR issues: An analysis. *Personnel Today*, XII (2), 29–37.

Akhilesh, K. B., & Nagaraj, D. R. (1990). *HRM 2000*. India: Wiley Eastern.

Akhilesh, K. B., Sekar R., & Mathew, M. (1991). Personnel profession as perceived by young personnel executives: A national survey, in role, performance & challenges for young personnel executives, back ground conference papers, NIPM, pp. 6–25.

Aminuzamman. S. M. (2007), “Migration of Skilled Nurses from Bangladesh: An Exploratory Study”, Development Research Centre on Migration, Globalisation and Poverty University of Sussex.

Amiya Kumar Bagchi, “Globalisation, Liberalisation and Vulnerability India and Third World”, *Economic and Political Weekly* November 6, 1999.

Anderson, J.E., Schwager, P.H., Kerns, R.L., (2006). The drivers for acceptance of tablet PCs by faculty in a college of business. *Journal of Information Systems Education* 17 (4), 429–440.

Aneesh, A. (2000): “Rethinking Migration: High-Skilled Labor Flows from India to the United States”, The Center for Comparative Immigration Studies CCIS, University of California, San Diego.

Angel-Urdinola, Diego F. et al. (2008), “Student Migration to the United States and Brain Circulation-Issues, Empirical Results, and Programmes in Latin America”. In Andres Solimano, ed., *The International Mobility of Talent: Types, Causes and Development Impacts*. Oxford University Press.

Archev, William T. and Matloff, Norman. 1998. "Should More Foreign High-Tech Workers Be Allowed into the United States? (Pro and Con)." *CQ Researcher* 8(16): 377.

Azjen, I., (1991). *The Theory of Planned Behavior*. *Organizational Behavior and Human Decision Processes* 50 (2), 179–211.

Azjen, I., Fishbein, M., 1980. *Understanding attitudes and predicting social behavior*. Prentice Hall, Inc., Englewood Cliffs, NJ.

Babita Gupta , Subhasish Dasgupta , Atul Gupta ,”Adoption of ICT in a government organization in a developing country: An empirical study”, *Journal of Strategic Information Systems* 17 (2008),p 140–154,2008.

Bach, Steven. (2008), “International Mobility of Health Professionals: Brain Drain or Brain Exchange?” In Andres Solimano,ed., *The International Mobility of Talent: Types, Causes and Development Impacts*. Oxford University Press.

Bae, J., & Lawler, J. J. (2000). Organizational and HRM strategies in Korea: Impact on firm performance in an emerging economy. *Academy of Management Journal*, 43(3), 502–517.

Bae, J., Chen, S., Wan, T. W. D., Lawler, J. J., & Walumbwa, F. O. (2003). Human resource strategy and firm performance in Pacific Rim countries. *International Journal of Human Resource Management*, 14(8), 1308–1332.

Bae,J., Chen, S.-J., & Lawler, J. J. (1998). Variations in human resource management in Asian countries: MNC home-country and host-country effects. *International Journal of Human Resource Management*, 9(4), 653–670.

Bagga, R.K., 2004. Issues in bridging the digital divide in India. In: Gupta, M.P. (Ed.), *Promise of E-Governance*. Tata McGraw-Hill, New Delhi, India, pp. 114–119.

Bartlett, A. C., & Ghoshal, S. (1989). *Managing across borders*. USA: Harvard business School Press.

Becker, S.A., 2005. E-government usability for older adults. *Communications of the Association for Computing Machinery* 48 (2), 102–195.

Beine, M., F. Docquier, and H. Rapoport. 2001. "Brain Drain and Economic Growth: Theory and Evidence." *Journal of Development Economics* 64(1): 275–89.

Belanger, J., Edwards, P., & Wright, M. (1999). Best HR practice and the multinational company. *Human Resource Management Journal*, 9(3), 53–70.

Ben J.R., "Rural-Urban Migration: On the Harris-Todaro Model" Centre universitaire de Vannes, 1 Rue de la Loi, 1998.

Bhagwati, J. "The Brain Drain". *International Social Science Journal*, vol. 28, no.4: (1976) 691-729.

Bhagwati, J. and Koichi H. "The Brain Drain, International Integration of Markets for Professionals and Unemployment". Working Paper No.102. Cambridge: M.I.T. Department of Economics, 1973.

Bhargava, T. (2010), "*Brain Drain in India*". from <http://ezinearticles.com>.

Bhatnagar, S., 2000. Social implications of information and communication technology in developing countries: lessons from Asian success stories. *Electronic Journal on Information Systems in Developing Countries* 1 (4), 1–9.

Bibek Debray, "H-1B visa for Indian IT professionals and recent problems", *Anandabazar Patrika*, 28th May, 2009.

Biemans, M., Swaak, J., Hettinga, M., Schuurman, J.G., 2005. Involvement matters: the proper involvement of users and behavioural theories in the design of a medical

teleconferencing application. In: Proceedings of the 2005 International ACM SIGGROUP Conference on Supporting Group Work, Sanibel Island, FL, pp. 304–312.

Borjas, G. J. and R. V. Freeman. 1992. *Immigration and the Work Force: Economic Consequences for the United States and Source Areas*. Chicago: The University of Chicago Press.

Böröcz, József. 1997. *Doors on the Bridge: the Border As Contingent Closure*. American Sociological Association Annual Meetings. August 1997, Toronto.

Boyd, M. 1989. "Family and Personal Networks in International Migration: Recent Developments and New Agendas." *International Migration Review* 23:638-70.

Brown, I., Hoppe, R., Muger, P., Newman, P., Stander, A., 2004. The impact of national environment on the adoption of Internet banking: comparing Singapore and South Africa. *Journal of Global Information Management* 12 (2), 1–26.

Budhwar, P. (2003). Employment relations in India. *Employee Relations*, 25(2), 132–148.

Budhwar, P., & Boyne, G. (2004). Human resource management in the Indian public and private sectors: An empirical comparison. *International Journal of Human Resource Management*, 15(2), 346–370.

Budhwar, P., Luther, H., & Boyne, J. (2006). Dynamics of HRM systems in BPOs operating in India. *Journal of Labor Research*, 37, 339–360.

Budhwar, P., Varma, A., Singh, V., & Dhar, R. (2006). HRM systems of Indian call centres: An exploratory study. *The International Journal of Human Resource Management*, 17(5), 881–889.

Burawoy, M. 1976. "The Function and Reproduction of Migrant Labor: Comparative Material From Southern Africa and the United States." *American Journal of Sociology* 81:1050-87.

Burn, J., Robins, G., 2003. Moving towards e-government: a case study of organisational change processes. *Logistics Information Management* 16 (1), 25–35.

Carlsson, C., Carlsson, J., Hyvonen, K., Puhakainen, J., Walden, P., 2006. Adoption of mobile devices/services – searching for answers with the UTAUT. In: 39th Hawaii International Conference on Systems Sciences, Hawaii, pp. 1–10.

Carpenter, M. A., Sanders, W. G., & Gregersen, H. B. (2001). Bundling human capital with organizational context: The impact of international assignment experience on multinational firm performance and CEO pay. *Academy of Management Journal*, 44(3), 493–511.

Carter, L., Belanger, F., 2003. The influence of perceived characteristics of innovating on e-Government adoption. *Electronic Journal of e-Government* 2 (1), 11–20.

Castells, Manuel. 1975. "Immigrant Workers and Class Struggle in Advanced Capitalism: the Western Europe Experience." *Political Sociology* 533-66.

Catherine L. Mann (Dec 2003) ," Globalization of IT Services and White Collar Jobs: The Next Wave of Productivity Growth", *International Economy policy brief*, Number PB03-11,2003.

Chattopadhyay, U. (2004). Organizational designs for patent productivity in the ICT sector. Unpublished Doctoral thesis, Department of Management Studies, Indian Institute of Science, Bangalore, India.

Chen, Y.N., Chen, H.M., Huang, W., Ching, R.K.H., 2006. E-Government strategies in developed and developing countries: an implementation framework and case study. *Journal of Global Information Management* 1 (14), 23–46.

Chesnais, F. 1986. "Science, Technology and Competitiveness." *Science Technology Industry Review* 185-129.

Cleveland, J. N., Gunnigle, P., Heraty, N., Morley, M., & Murphy, K. R. (2000). US multinationals and human resource management: Evidence on HR practices in European subsidiaries. *IBAR – Journal of the Irish Academy of Management*, 21(1), 9–28.

Cohen, J. (2001) "Transnational Migration in Rural Oaxaca, Mexico: Dependency, Development, and the Household," *American Anthropologist*; vol. 103(4), pp.: 954-967. Washington: Dec 2001.

Collyer, M. (2004) "The Development Impact of Temporary International Labour Migration on Southern Mediterranean Sending Countries: Contrasting Examples of Morocco and Egypt", Sussex Centre for Migration Research (working paper).

Cornelius, W. A., P. L. Martin and J. F. Hollifield (eds). 1994. *Controlling Immigration: A Global Perspective*. Stanford, CA: Stanford University Press.

D'Costa, Anthony P. (2008), "The International Mobility of Technical Talent: Trends and Development Implications." In Andres Solimano, ed., *The International Mobility of Talent: Types, Causes and Development Impacts*. Oxford University Press.

Danny M. Leipziger (2008) , "Brain Drain and the Global Mobility of High-Skilled Talent", *Poverty Reduction and Economic Management Network*, World Bank, Number 123, September 2008.

Davis, F.D., 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly* 13 (3), 319–340.

Davis, F.D., Bagozzi, R.P., Warshaw, P.R., (1989). User acceptance of computer technology: a comparison of theoretical models. *Management Science* 35 (8), 982–1003.

Davis, F.D., Bagozzi, R.P., Warshaw, P.R., (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology* 22 (14), 1111–1132.

Devadoss, P.R., Pan, S.L., Huang, J., (2002). Structural analysis of e-government initiatives: a case study of SCO. *Decision Support Systems* 34 (3), 253–269.

Dicken, Peter. 1992. *Global Shift: The Internationalization of Economic Activity*. London: Paul Chapman Publishing Ltd.

Docquier and Bhargava. (2006), Docquier and Marfouk. 2004, Kannankutty, Nirmala, and Joan Burrelli. 2007. "Why Did They Come to the United States: A Profile of Immigrant Scientists and Engineers." Infobrief NSF 07-324. National Science Foundation, Arlington, VA.

Doria Pilling, Paul Barrett and Mike Floyd (2004), "Disabled people and the Internet Experiences, barriers and opportunities", Joseph Rowntree Foundation, first published, 2004.

Doria Pilling, Paul Barrett and Mike Floyd, "Disabled people and the Internet Experiences, barriers and opportunities", Joseph Rowntree Foundation, First published, 2004

Doz, Y., & Prahalad, C. K. (1986). Controlled variety: A challenge for human resource management in the MNC. *Human Resource Management*, 25(1), 55–71.

Dunning, J. H. (1980). "Towards an Eclectic Theory of International Production: Some Empirical Tests." *Journal of International Business Studies* 119-31.

Ebrahim, Z., Irani, Z., (2005). E-government adoption: architecture and barriers. *Business Process Management Journal* 11 (5), 589–611.

Economist, The. (1996). A Survey of the World Economy (supplement). 9-28-1996.

Edwards, P., Ferner, A., & Sisson, K. (1996). The conditions for international human resource management: Two case studies. *The International Journal of Human Resource Management*, 7(1), 20–40.

Edwards, T. (1998). Multinationals, labor management and the process of reverse diffusion: A case study. *International Journal of Human Resource Management*, 9(4), 696–709.

Elbeltagi, I., McBride, N., Hardaker, G., (2005). Evaluating the factors affecting DSS usage by senior managers in local authorities in Egypt. *Journal of Global Information Management* 13 (2), 42–65.

Elson, D. (1988). "Transnational Corporations in the New International Division of Labor: a Critique of 'Cheap Labor' Hypothesis." *Manchester Papers on Development* IV352-76.

Espenshade, T.J. and K. Hempstead. (1996). Contemporary American Attitudes Toward U.S. immigration," *International Migration Review*, 30 (2): 535-570.

Espenshade, T.J. and V.E. King. (1994). "State and Local Fiscal Impact of U.S. Immigrants: Evidence from New Jersey." *Population Research and Policy Review*, 13: 225-256.

Ferner, A., & Quintanilla, J. (1998). Multinationals, national business systems and HRM: The enduring influence of national identity or a process of 'Anglo-Saxonization'. *International Journal of Human Resource Management*, 9(4), 710–731.

Ferner, A., & Varul, M. Z. (2000). Internationalization and the personnel function in German multinationals. *Human Resource Management Journal*, 10(3), 79–96.

Friedberg, R. and J. Hunt. (1995). "The Impact of Immigrants on Host Country Wages, Employment and Growth." *Journal of Economic Perspectives*, 9 (2): 23-44.

Gefen, D., Rose, G.M., Warkentin, M., Pavlou, P.A., (2005). Cultural diversity and trust in IT adoption: a comparison of potential e-voters in the USA and South Africa. *Journal of Global Information Management* 13 (1), 54–78.

Gilbert, D., Balestrini, P., Littleboy, D., (2004). Barriers and benefits in the adoption of e-government. *The International Journal of Public Sector Management* 17 (4/5), 286–301.

Goswami, S. (2005). Innovation measurement and organizational competencies in IT organizations. Unpublished Doctoral thesis, Department of Management Studies, Indian Institute of Science, Bangalore, India.

Goswami, S., & Mathew, M. (2005). Definition of innovation revisited: An empirical study on Indian information technology industry. *International Journal of Innovation Management (IJIM)*, 9(3), 371–383.

Grant, G., Chau, D., (2005). Developing a generic framework for e-government. *Journal of Global Information Management* 13 (1), 1–29.

Gronlund, A., Horan, T.A., (2005). Developing a generic framework for e-government. *Communications of the Association for Information Systems* 15, 713–729.

H1B Visa Reduction to Affect Indian IT Industry, *The Press Trust of India* (2003 August 22).

Heerink, M., Kroese, B., Wielinga, B., Evers, V., (2006). Human–robot user studies in eldercare: lessons learned. In: *International Conference on Smart Homes and Health Telematic (ICOST)*, Belfast, pp. 31–38.

Hiroshi O et. al. (2005), "Gender Differences In Information Technology Usage: A U.S.-Japan Comparison", Vol. 48, Issue 1, pp. 105-133, ISSN 0731-1214, electronic ISSN 1533-8673,2005.

Hong, W., Thong, J.Y.L., Wong, W., Tam, K., 2001/2002. Determinants of user acceptance of digital libraries: an empirical examination of individual differences and system characteristics. *Journal of Management Information Systems* 18 (3), 97–114.

Horwitz, M. F., & Smith, D. A. (1998). Flexible work practices and human resource management: A comparison of South African and foreign owned companies. *International Journal of Human Resource Management*, 9(4), 590–607.

Hunger, U. "The 'Brain Gain' Hypothesis: Third World Elites in Industrialized Countries and Socioeconomic Development in Their Home Country." Working Paper No. 47, The Center for Comparative Immigration Studies, UCSD: Jan 2002.

In Andres Solimano, ed.(2008), *The International Mobility of Talent: Types, Causes and Development Impacts*. Oxford University Press. World Bank. 2008. *Global Economic Prospects2008*. Washington, DC: World Bank.

International Migration of the Highly Skilled: Demand, Supply, and Development Consequences in Sending and Receiving Countries. La Jolla: Center for Comparative Immigration Studies, U.C.S.D., 2001.

Jain, H. C. (1991). Is there a coherent human resource management system in India? *International Journal of Public Sector Management*, 4(3), 18–30.

Jhunjhunwala, B., "Who's afraid of visa fees?" *The Statesman*, 16th September, 2010.

Kapur, D. (2002), "The Causes and Consequences of India's IT Boom. *India Review*", vol. 1, no. 2, April 2002, pp. 91-110.

Kapur, D. and John M. "Sojourns and Software: Internationally Mobile Human Capital and High-Tech Industry Development in India, Ireland, and Israel." Working Paper, Software and Development Conference, Carnegie Mellon University, 2002.

Khadria, B. (2006): "India: Skilled Migration to Developed Countries, Labour Migration to The Gulf", Segundo semester.

Khadria, B.(1991), *The Migration of Knowledge Workers: Second Generation Effects of India's Brain Drain*. New Delhi: Sage Publications, 1999.

Khadria, Binod (1999), "Migration of Human Capital to United States", *Economic and Political Weekly*, p1784-1794, 1990.

Khadria, Binod (1999). *The migration of knowledge workers: Second-generation effects of India's brain drain*. New Delhi, India: Sage.

Khadria, Binod (2001). Shifting paradigms of globalization: The twenty-first century transition towards generics in skilled migration from India. *International Migration*, 39(5), 45–71.

Khadria, Binod (2002). *Skilled labour migration from developing countries: study on India*. ILO International migration papers vol. 49. Geneva, Switzerland: ILO.

King, R., "Return Migration and Regional Economic Development: An Overview" in *Return Migration and Regional Economic Problems*. Beckenham (Kent: Croom Helm), 1986.

Kochar, 2006. *India: e-governance market to have an explosive growth by 2007*. Retrieved from: <http://www.digitalopportunity.org/article/view/125575/1/> (retrieved September 14, 2006).

Kuznetsov, Yevgeny, and Charles Sabel.(2008), “Global Mobility of Talent from a Perspective of New Industrial Policy: Open Migration Chains and Diaspora Networks.” In Andres Solimano, ed.,*The International Mobility of Talent: Types, Causes and Development Impacts*. Oxford University Press.

Levitt, P., “Social Remittances: Migration Driven Local-Level Forms of Cultural Diffusion”. *International Migration Review*, 32(4): 926-948, 1998.

Mary Mathew and Harish C. Jain, “International Human Resource Management in the Indian Information Technology Sector: A Comparison of Indian MNCs and affiliates of Foreign MNCs in India”, Emerald Group Publishing Limited, Volume 21, p267–297, 2008.

Massey, D.S, et al. “Migration and Community Development,” in *Worlds in Motion: Understanding International Migration at the End of the Millennium*. Oxford: Clarendon Press, 1998.

Moira Herbst,” The H-1B visa rush is on! “, *Business Week*, April 3, 2009.

N. Matloff (2003), *Needed Reform for the H-1B and L-1 Work Visas: Major Points*, unpublished, August 17, 2003,<http://heather.cs.ucdavis.edu/Summary.pdf>.

NASSCOM, *Annual Report (2007-08)*, International Youth Centre, Chanakyapuri, New Delhi-12, 2008.

NASSCOM, *Indian Software and Services Exports*, 2003 September 10, unpublished.

NASSCOM, *Strategic Review, “The IT Industry in India”*, 2006.

Ostergaard.E. K.,“The Politics of Migrant’s Transnational Political Practices”. Working Paper No. 40, The Center for Comparative Immigration Studies, UCSD: Nov 2001. (FIX CITATION).

Ouaked, Said (2002). Transatlantic roundtable on high-skilled migration and sending countries issues. *International Migration*, 40(4), 153– 166.

Parsons, R. and Ronald, S. (2007): “Quantifying International Migration: A Database of Bilateral Migrant Stocks”, World Bank Policy Research Working Paper 4165.

Pesola, H. (2007): “Foreign Ownership, Labour Mobility and Wages”, Helsinki Centre of Economic Research

Poverty and Social Policy Team Economic and Social Policy Division (2005): “The Globalization of Labour Markets: Challenges, Adjustment and Policy Response for the Informal Sector in Africa “, United Nations Economic Commission for Africa

Powell, W., “Neither Market or Hierarchy: Network Forms of Organization,” *Research in Organizational Behavior*, vol. 12, 1990.

R. Chanda (1999), Movement of natural persons and trade in services: Liberalising temporary movement of labour under the GATS, Working Paper No. 51, Indian Council for Research on International Economic Relations (1999)

R. Heeks (1998), The Uneven Profile of Indian Software Exports, vol. 3. Development Informatics Working Paper Series, Manchester, UK. October 1998.

R.Hira (2004), U.S. immigration regulations and India’s information Technology Industry, *Technological Forecasting & Social Change*, vol.71, 837-854, January 2004.

Ratha, Dilip, Sanket Mohapatra, and Sonia Plaza. (2007), “Beyond Aid: New Sources and Innovative Mechanisms for Financing Development in Sub-Saharan Africa.” Policy Research Working Paper 4609. World Bank, Washington, DC.

Rauch, J., “Business and Social Networks in International Trade,” *Journal of Economic Literature*, XXXIX, Dec, 2001.

Sen, Amartya., et. al. (2005), "The Augmentative Indian", Penguin Books.

S. Rai, Software success has India worried, Section W, page 1, column 3, N. Y. Times (2003 February 13).

S. Singh, U.S. Visas are not a TCS Specific Issue, Bus. World (2003 June 30).

Saxenian, AnnaLee. (2008), "The International Mobility of Entrepreneurs and Regional Upgrading in India and China." In Andres Solimano, ed., *The International Mobility of Talent: Types, Causes and Development Impacts*. Oxford University Press.

Singh, S. (2003): "Economic Impact of Return Migration of Highly Skilled I.T. Professionals from the United States to India", Thesis Draft.

Thorn, Kristian, and Lauritz B. Holm-Nielson.(2008),"International Mobility of Researchers and Scientists: Policy Options for Turning a Drain into a Gain."

Times of India, "Migration and Remittances" 19th Feb., 2010.

U.S. Immigration and Naturalization Service, Statistical Yearbook of the Immigration and Naturalization Service, Washington D.C., 1992, 1996, 2000, and 2001.

Wets.J. (2006):"Skilled Migration: Transfer of Skills and Knowledge", Conference Report on Migration and Development, International Organization for Migration (IOM).

Wickramasekara, P. (2002):"Policy responses to skilled migration: Retention, return and circulation", Conference Report on International Migration Programme, International Labour Office Geneva.

INDEX

- A**
Age Distribution 182
Academic background 182
- B**
Brain-Drain 1, 62
Bureau of Citizenship and Immigration Services (BCIS) 6
Banking and Financial Services 30
Body Shopping 112
- C**
Cost to company 5
Conclusion 192
- D**
Differently abled 'IT' Professionals 157
Disabilities in India 158
Data Analysis 177
- E**
Economic Characteristics 151
- F**
Female Migration 150
Factors of Globalisation 177
- G**
Globalisation 1, 92
Green Card 5
General Agreement on Trade in Services (GATS) 93
GDP 94
Gender Discrimination 145
- H**
Healthcare 31
Hypotheses 51
High Tech Migration 111
H-1B Visa 123
- I**
Information & Communication Technology (ICT) 68
Information Technology (IT) 9
ITES Sector 16
Influencing Factors of Migration 178
- J**
Job Satisfaction 183
- L**
Limitations 52
L-1 Visa 125
Labour condition application 176
- M**
Migration 44
Migration Pattern 102
Migrant 44
Manufacturing 31
Mental satisfaction 183
Multiple correlation coefficients 186
- N**
NASSCOM 11
North American Free Trade Agreement 70
- O**
Ordinary Least Squares 66
O-Visa 70
Overseas Indian workers 80
Objective 49
Online Labor Migration 112,167
- P**
Push Factors 46
Pull Factors 47
Preferences of migrated IT professionals 179

Q
Questionnaire 52

R
Retail 31
Recommendation 198
Remittances 181

S
Sample Size 52
Software Export 98
Skilled Migration 105
Semi skilled Migration 106
Skills of IT Professionals 181
SPSS output 187
Summary 192

T
Temporary migrants 9
Telecom 31

U
US Citizenship and Immigration Services
(USCIS) 6

V
Virtual Migration 59

W
WTO 93
Women in IT 133
Women employment 138

