A Study On Export Potential Of Indian Software

Satnam Kour Ubeja*
Dhara Jain**
*Assistant Professor, Prestige Institute of Management and Research, Indore
** Assistant Professor, Swami Vivekanand College of Engineering, Indore

Abstract

Despite higher growth rate, India's share in the world software market is very low, but India still enjoys an advantage over some of the other nations, which are trying to promote software exports. This is due to the fact that India possesses the world's second largest pool of scientific manpower which is also English speaking. Coupled with the fact that the quality of Indian software is good and manpower cost is relatively low, it provides India a very good opportunity in the world market. According to NASSCOM, software export is currently enjoying an increase of 13–15 %, estimating a rise of $99billion. India in the field of software and related export services acting as an IT super power. The current study also indicates the future strength of software industry by analyzing the export potential of Indian Software Industry. The analysis to this research indicates that data is collected for the duration of past 9 years from 2003- 2011 using secondary data, from different websites. The analysis of data through trend analysis indicates that export of software's shows a positive upward trend, meaning thereby that there lies potential for increase in the exports of software from India. Hence, a slight shift in the strategy from exporter's side and through government measures will go a long way in maximizing the exports from India.
Keywords: *Software, Export Potential, India, Growth.*

Introduction: The software industry is experiencing a major delocalization trend, from developed to developing countries. In this trend, MNC from both developed and developing countries are playing a major role. In the 1980s and 1990s, India took the lead in attracting this industry, due to its large pool of skilled low cost labor. Ireland and Israel followed suit. Since 2000, China and other developing countries have been entering this fast growing industry.

The Indian success story has, for the most part, been a combination of resource endowments, a mixture of benign neglect and active encouragement from a normally intrusive government, and good timing. The Indian software industry consists of a large and growing number of firms: using NASSCOM membership as a measure, the number of Indian software firms has grown from around 38 (accounting for 65% of industry revenue) in 1988 to over 545 (accounting for over 95% of industry revenue) in 1999. A few big companies dominate the industry, with the top 25 companies accounting for 58.67% share of software exports revenue in 1997–98, whereas nearly 125 firms, or over a quarter of all firms, had revenues below US$ 250,000.
One of the best-known software exporters, Infosys, was founded by a group of seven PCS managers who broke away from PCS. Infosys's first contract was a support and maintenance

contract with a client in the apparel industry for whom PCS had finished a large project. Many MNCs have set up liaison offices and subsidiaries as well. Initially, they intended to sell hardware and software in the Indian market, often in partnership with a domestic firm. Increasingly, however, the objective is to use India as a place for software development. Many MNCs have established software development centers in India, and are exporting packages or components of systems to other countries from India. As well, there are a number of US firms with large Indian operations that are very similar to Indian software firms. Firms such as Mastech, Information Management Resources (IMR), Syntel, Cognizant (a subsidiary of Dunn and Bradstreet) and CBSL use their India operations much in the way the Indians software export firms do, to tap a large pool of relatively cheap but skilled workforce for providing software services to US based clients.

There are a large number of multinational IT enterprises operating in India in sectors such as: Integrated Chip Design, System software, communication software, R&D Centres, Technology Support sector, captive support sector, BPO Sector etc reaping the cost and quality advantages.

These multinationals include Siemens/ Philips, Intel, Texas Instruments etc. (Chip Design); Siemens, Motoraola, Lucent Technologies, Sony, Nortel etc. (Communication Software); Google, Yahoo etc. (R&D Centres); Axa Business Services, Swiss Shared Services, Siemens Shared Services etc. (BPO Sector); Accenture, DELL, HSBC, GE Capital, Fidelity etc. (Captive Support Sector).

India has already established her brand equity in the global IT market. Indian IT software and services firms offer software product/packages; a wide spectrum of IT services including system management and maintenance, consultancy services, system integration, chip design, E-Governance, E-Commerce, IT enabled services covering banking/financial/insurance sector. Their IT enabled services also include CAD/CAM Multimedia, animation work, BPO (Business Process Outsourcing) assignments, Call centre related assignments, as well as Knowledge Process Outsourcing (KPO) / Legal process Outsourcing (LPO), medical lab, diagnostic and dental services, medical transcription services, e-publishing data conversion or digitization, type-setting, copy editing, content and design, graphics etc.

The software industry is not only growing exponentially, it is moving up the value chain. It is evolving, from the initial staffing to software development

- where it is currently the worlds major supplier of engineers
- towards integration and IT business consulting

Review of Literature:
Agarwal et. al (2004) discussed about The World Investment Report 2002 (UNCTAD) has classified manufactured products as low technology, medium technology and high technology.

Low technology products tend to have stable, well diffused technologies largely embodied in capital equipment, with low R&D and skill requirements and low economies of scale. Textiles, garments, footwear, other leather products, toys, simple metal and plastic products, furniture and glassware fall under this category. Medium technology products tend to have complex but not fast-changing technologies, with moderate levels of R&D but advanced engineering and design skills and large scales of production. Thus, there lies ahead a great opportunity to make a dent in the global technology trade market, provided a healthy government – industry partnership is established where industry plays a pro-active role, ably supported by conducive government policies.

Arora et al (2001) had studied that bulk of the Indian software exports have consisted of services like low level programming and maintenance. The marked reliance on access to low cost human capital has prompted considerable skepticism about the ability of the Indian software industry to sustain its performance, given the rapid growth in the demand for engineers and the relatively inelastic supply of engineers. This paper reports on the results of research on the Indian software industry. We use a variety of sources, including a questionnaire survey of Indian software firms, and field visits and interviews with industry participants, observers, and US based clients.

Barcenilla and Molero (2003) estimate the determinants of services export flows for 15 European countries for the years 1976-2000. Using traditional demand function, the study finds that foreign income is one of the important variables with the coefficient being more than one for 11 countries out of 15 countries. In addition to foreign income, 8 price and exchange rate are other important variables in explaining the services exports.

Illiyan A. (2005) stated that India has emerged as an 'IT Super power', especially in the field of software and related services export. The paper is an attempt to discern and delineate the growth performance, challenges and opportunities of such a promising sector of Indian economy. It has been observed that software export has registered an annual compound growth rate of 45 per cent during the last decade and continues to show robust growth even today. Growing respect for Indian software industry in the international market, continued rise in the offshore services, quality services, timely delivery, entry into new markets, Y2K data conversion business, international linkages and also due to various steps taken by the Government to promote software export such as simplifying procedures, tax concessions, establishments of software technology parks, more liberal foreign investment policies, possessement of second largest pool of scientific and skilled manpower which is also English speaking, low cost of labour, locational time difference with the western world enabling round the clock development, proactive ole by Nasscom (the software industry association), etc. are some of the factors that gave fillip to the faster growth of India's software export. Undoubtedly other developing countries can learn lessons from India's experience and can develop IT capabilities by mutual cooperation.

Levinthal et al(2006), had studies that, the conceptual apparatus of evolutionary economics either implicitly or explicitly underlies a considerable portion of recent research in business strategy. In particular, evolutionary economics allows one to simultaneously engage issues of firm differences in capabilities and the broader competitive dynamics of industries. Theories of business strategy must incorporate the presence of idiosyncratic firms operating in competitive markets and not only provide insight into the cross-sectional differences amongst firms but speak to their inter-temporal linkages as well. The attributes that make the firm a significant entity, worthy of theoretical attention, are its existing patterns of routine activity, its tangible and intangible assets, its recent history, the repertoires of actions available to the individuals involved and the terms in which these individuals conceptualize the firm and their participation in it.

Objective of the Study:
*   To analyze the export potential of Indian software.

Research Methodology:
A. The Study
The study is descriptive in nature to find the export potential of Indian software. Through this study the present data will be analyzed and the future trend of Indian software is analyzed.
B. The Sample
The past nine years data has been taken for the study i.e from 2003-2011.
C. The Tools
*   **For data collection**
    The study is based on secondary data that is collected from various websites and journals. The data is collected from commerce.nic.in.
*   **For data analysis**
    For the purpose of data analysis, trend analysis is carried out. Trend analysis is a component of time series analysis.

Data Analysis:
Data Showing Increasing Trend of Software Exports

Year	Exports(US $)	Trend Value
2003	9600	8536
2004	12800	14151.58
2005	17700	19767.17
2006	23600	25382.75
2007	31300	30998.33
2008	40300	36613.92
2009	46300	42229.5
2010	49705	47845.08

2011	47680	53460.67
2012		59076.25
2013		64691.83
2014		70307.42
2015		75923
2016		81538.58
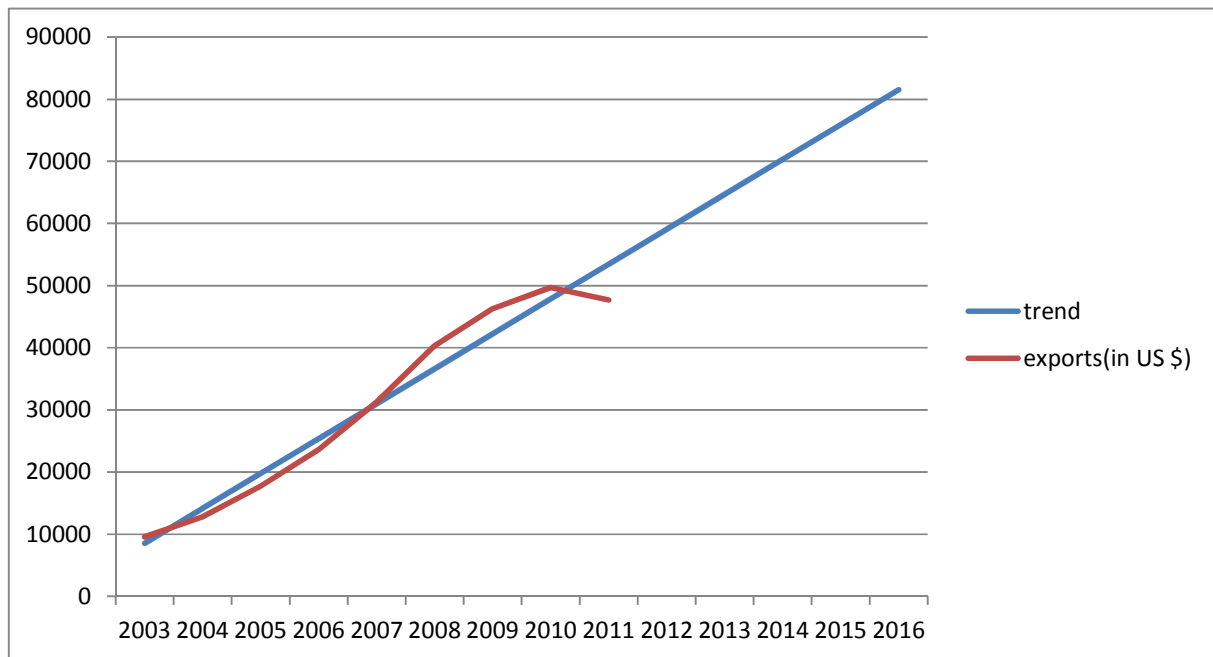
Results: The result of this project is dependent on the data collected and data is collected for last 9 years over which analysis has been done. The data is real in figures over which linear regression analysis has been applied, which shows that there is growing future of exports of software from India.

Discussion: The data that was collected and analyzed indicates the exports of software's from India. The data of past 9 years, which has been collected and analysed, forms the basis of future predictions i.e. helps in analyzing the trend for next few years and picture the pattern of growth/decrement (on the basis of trend analysis or regression linear analysis). Through this analysis, market conditions for software's can be assessed and key target market conditions for software's can be assessed and key target markets can be identified.

The 2010-11 data shows downfall due to recession impact which held in 2009 shows its post impact on exports done. This was due to a main feature of software exports that are executed in

future that is why Indian software industry could not able to accumulate the business in world economy.

However, the trend analysis paints the picture of future market on the basis of current scenario. The trend of next five year was determined through actual figures of market from 2003- 2011. The export of software's shows a positive upward trend, meaning thereby that there lies potential for increase in the exports of software from India.

Conclusion: If we see the objective of the study, it basically aims at identifying the international face of Indian software. The data collected shows that there has been gradual increase in the exports of software till 2010 but during 2011 there is sudden decline in the exports, which is majorly due to the recession which hit our economy. But from 2011 onwards there has been again increase in the exports of software. A slight shift in the strategy from exporter's side and through government measures will go a long way in maximizing the exports from India.

Suggestions: The suggestions to the Indian Government and the IT Firms are discussed below:
- To bring the bank interest on loans/advances/overdrafts down to the level applicable to other exports oriented thrust sectors.
- To allow special custom bonded warehouses facilities for all export oriented software houses.
- To allow tax holidays for the export oriented software and data processing services industry for 10 years (a unit will be considered export oriented) if atleast 70% of revenue comes from export.
- While exporting to other countries the Indian companies have to see the need and demand of the software in their field and the other benefits provided by the government.
- The high transportability of software products and the evolution of engineering quality practices in the production of software have led to the potential for lower cost producer. So the India has to take this advantage and can earn valuable foreign exchange.
- Software lacks clear identity and number of new start-ups firms, so evidence shows that innovation is embedded and important for every country to meet the international requirement.
- India has to concentrate on the technologies and markets in which it performs best. This will help to identify the India's strengths and matching them with technologies and markets that demonstrate the highest potential for growth.
- To aware about the software in the international market the Indian companies have to organize trade fair in the international market.

Implication: This study will be helpful to the software industry, Indian Government and the Researchers in the following ways:

Industry: This project will be helpful to the software Industry. It will help the exporters who deal in software to know the demand and type of the products they deal in, different markets and compare other market according to their potential and target them.

Government: This study has generated useful suggestions for the government. If the government implements the suggestions generated on the basis of the study, it will help to promote exports of software in various foreign markets.

Researchers: This will also help to the researchers who are interested in this field. The same methodology can also be used to explore the export potential of other products in the world market and in different countries.

References:
1. Agrawal S.P., Gupta A. and Gandhi G.P. (2004), A Survey of Technology Intensive Exports from India, *Technology Exports,* Vol. VI No. 4
2. Arora, A., Arunachalam, V. S., Asundi, J., Fernandes, R. (2001), 'The Indian Software Services Industry', *Research Policy*, 30 (8), 1267-1287.
3. Barcenilla, S., & Molero, J. (2003) Service Export Flows: Empirical Evidence for European Project SETI PROJECT.
4. Beck, T. (2003). Financial Dependence and International Trade. Review of International Economics, 11(2), 296-316.
5. Creswell J. W., 2008, Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research. Upper Saddle River, NJ. Pearson Education, Inc.
6. Denzin N. K., & Lincoln Y. S., 2000, Handbook of Qualitative Research (2nd ed.). Thousand Oaks, CA: Sage Publications.
7. Hausmann, R., Hwang, J., & Rodrik, D. (2007). What You Export Matters, Journal of Economic Growth, 12(1), 1-25.
8. Illiyan A. (2005), Performance, Challenges and Opportunities of Indian Software Export, *Journal of Theoretical and Applied Information Technology,* pg. 1088-1106.
9. Levinthal, D. (2006), 'The Neo-Schumpeterian Theory of the Firm and the Strategy Field', *Industrial and Corporate Change*, 15 (2): 391-394.
10. Nasir, S., & Kalirajan, K.(2013), Export Performance of South and East Asia in Modern Services, ASARC Working Paper 2013/07